

Sunset Public Hearing Questions for
WATER AND WASTEWATER OPERATORS CERTIFICATION BOARD
Created by Section 68-221-905, *Tennessee Code Annotated*
(Sunset Termination June 2016)

1. Provide a brief introduction to the Water and Wastewater Operators Board of Certification, including information about its purpose, statutory duties, staff and administrative attachment.

Purpose:

The General Assembly established the operator certification program and created the Water and Wastewater Operator Certification Board in 1971. In 2013, the act that authorizing the Tennessee operator certification program was amended and is now known as the Water and Wastewater Operator Certification Act (WWOCA). The Water and Wastewater Operator Certification Act became effective July 1, 2013. As stated in T.C.A. §68-221-902, the Board's purpose is to administer a program of certification for operators of water and wastewater systems that will ensure proper operation of such systems and protect the public and environment.

Duties:

Duties of the Board are specified in TCA 68-221-906:

- (1) Implementation and enforcement of rules necessary for proper program administration;
- (2) Holding at least one (1) examination annually;
- (3) Advertising and promoting the program;
- (4) Encouraging operators to become certified besides those required by law;
- (5) Distributing applications and notices;
- (6) Receiving and evaluating applications;
- (7) Preparing, conducting and grading examinations;
- (8) Setting up a system of fees and late penalties for applicants;
- (9) Maintaining all records of the program, and maintaining a register of certified operators;
- (10) Promoting and scheduling regular training schools and programs;
- (11) Hearing appeals from orders or ruling issued by the Commissioner;
- (12) Recommending to the Commissioner the staff required to effectively administer the program.

Funding:

Funding for the Water and Wastewater Operator Certification program is provided by program fee revenues and federal moneys from the Safe Drinking Water Act State Revolving Fund.

Staff:

Staff consists of a Technical Secretary, who also serves as Director of the Fleming Training Center, a Certification Program Coordinator, whose time is devoted entirely to the administration of the program, an Administrative Secretary, whose time is devoted entirely to data entry, generation of notices, renewal cards and certificates, and a clerk/receptionist, whose time is divided between certification activities and Fleming Training Center activities.

In accordance with Board Rules, the Commissioner of Environment and Conservation is to certify operators after considering Board recommendations and may initiate the process to revoke certification for cause. Enforcement responsibilities are centered in the Department and carried out by personnel of the Division of Water Resources.

2. Provide a list of current board members and describe how membership complies with Section 68-221-905(b), *Tennessee Code Annotated*. Are there any vacancies on the board? If so, what steps have been taken to fill the vacancies?

The Board consists of five members appointed by the Governor for terms of three years or until a successor has been appointed. The board shall be composed of the following:

- One member (holding a certificate of the highest class) shall be currently employed as certified operator, may recommended by interested water and wastewater groups including but not limited to, the Tennessee Water and Wastewater Association.
- One member (a certified operator of a water or wastewater utility district) that may be recommended by interested utility district groups including, but not limited to the Tennessee Association of Utility Districts.
- One member shall be a person knowledgeable about water or wastewater systems with experience working for such systems and may be recommended by interested municipal groups including, but not limited to e Tennessee Municipal League.
- One member shall be a faculty member of a college, university, or state technical institute whose major field is related to water or wastewater systems and may be recommended by interested engineering groups including but not limited, to the Tennessee Society of Professional Engineers.
- The Commissioner of the Department of Environment and Conservation or his designated representative shall serve as ex-officio member.

Board Member

Membership Compliance

J. Darryl Green	Certified operator of the highest class; recommended by the Tennessee Water and Wastewater Association.
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Randal Braker	Certified operator recommended by the Tennessee Association of Utility Districts.
Alan C. Cranford	Chairman; representing Municipal Government; recommended by the Tennessee Municipal League.
Dr. Larry W. Moore	Representing University Faculty; recommended by the Tennessee Society of Professional Engineers.
Jennifer Dodd	Ex-Officio member; Deputy Director of Division of Water Resources and .representing the Department of Environment and Conservation.

3. Does the board’s membership include public/citizen members? Female members? Members of racial minorities? Members who are 60 years of age or older??

The membership does not include a public/citizen member or a member of a racial minority. The membership does include one female member and one member 60 years of age or older.

4. How many times did the board meet in fiscal years 2013 and 2014 and to date in fiscal year 2014? How many members were present at each meeting?

The Board met at four regularly scheduled meetings in each of fiscal years 2013, 2014 and 2015 and held one specially called meeting to consider rulemaking in FY 2013-14.

Date of Board Meeting	No. Members Present
FY 2012-2013	
July 19, 2012	5
September 27, 2012	4
January 24, 2013	5
April 4, 2013	5
FY 2013-2014	
July 18, 2013	5
October 3, 2013	5
January 23, 2014	5
April 3, 2014	5
April 22, 2014 (Specially called for rules)	4
FY 2014-2015	
July 17, 2014	5
October 2, 2014	4
January 22, 2015	4
April 2, 2015	4

5. What per diem or travel reimbursement do members receive? How much was paid to board members during fiscal years 2013, 2014 and to date on fiscal year 2015?

Each member, other than the ex officio member and any other members who are employed by the state, is allowed a per diem of fifty dollars per meeting and reimbursement for travel expenses. For the current fiscal year, the board has paid a total \$1692.85 in travel and \$750 in per diem for the current board members.

6. What were the board's revenues (by source) and expenditures (by object) for fiscal years 2013 and 2014 and to date for fiscal year 2015? Are fees and late penalties charged by the board sufficient to support the expenses of the program as mandated at Section 68-221-906(a)(8), *Tennessee Code Annotated*?

The fees the Board had established for the program are authorized by the Water and Wastewater Operator Certification Environmental Health Act TCA §68-221-906(a)(8) and the Environmental Protection Fund TCA §68-203-101 et. seq. Revenues are generated as a result of exam application fees, certificate renewal fees, and late payment fees.

Expenditures: All expenditures for the board are per diem and travel related

7. Is the board subject to Sunshine law requirements (Section 8-44-101 et seq., *Tennessee Code Annotated*) for public notice of meetings, prompt and full recording of minutes and public access to minutes? If so, what procedures does the board have for informing the public of its meetings, who keeps the official minutes of board meetings and what steps are taken to make the minutes available to the public?

The Water and Wastewater Operator Certification Board is subject to Sunshine law requirements for public notice of meetings, prompt and full recording of minutes, and public access to minutes. The Board informs the public of its meetings by posting the notice on the Department of Environment and Conservation website. (<http://www.tn.gov/environment/ppo/>). The official minutes are public record and are available for review through Board staff at the Fleming Training Center. Anyone wanting to read or receive a copy of the minutes from any meeting can do so upon request.

8. How does the Board ensure that its members are operating in an impartial manner and that there are no conflicts of interest? If the board operates under a formal conflict of interest policy, please attach a copy of that policy.

The Water and Wastewater Operator Certification Board operates under the Tennessee Department of Environment and Conservation's policy on conflict of interest. The Policy is attached as **Attachment A**.

9. Has the board promulgated rules as authorized at Section 68-221-905(a)(2), *Tennessee Code Annotated*? If so please cite the reference.

In January of 2013 the board began the rulemaking process to move the rules from Chapter 1200-05-03 to Chapter 0400-49-01, to repeal Chapter 1200-05-06, which was no longer needed, and to edit the document to correct typos and incorrect references. In addition to moving the rules to a new Chapter it became necessary to also amend the rules due to the 2013 statutory amendments to the Act. The Water and Wastewater Operator Certification Act authorizes a system of certification of operators and penalties for non-compliance. The purpose of the Act is to prevent inadequate operation of water and wastewater systems. The 2013 amendments changed, among other things, the procedure for revocation of an operator's certification. Rule 1200-05-03-.11 was in conflict with the Act as amended. This rulemaking resolved the conflict and outlined a procedure in Rule 0400-49-01-.11 that complies with the Act and the Uniform Administrative Procedures Act, T.C.A. § 4-5-320 Proceedings Affecting Licenses. Rules were adopted and became effective on August 19, 2014.

Chapter Number	Chapter Title
0400-49-01	Rules Governing Water and Wastewater Operator Certification
Rule Number	Rule Title
0400-49-01-.01	Application for Certificate
0400-49-01-.02	Examinations
0400-49-01-.03	Fees
0400-49-01-.04	General
0400-49-01-.05	Definitions
0400-49-01-.06	Classifications of Water Treatment Plants and Water Distribution Systems
0400-49-01-.07	Classifications and Qualifications of Water Treatment Plant Operators and Water Distribution System Operators
0400-49-01-.08	Classification of Wastewater Treatment Plants and Wastewater Collection Systems
0400-49-01-.09	Classifications and Qualifications of Wastewater Treatment Plant Operators and Wastewater Collection System Operators
0400-49-01-.10	Continuing Education
0400-49-01-.11	Summary Suspension and Revocation of Certificate
0400-49-01-.12	Civil Penalties

Chapter Number	Chapter Title
1200-05-03	Rules Governing Water and Wastewater Operator Certification
Rule Number	Rule Title
1200-05-03-.01	Application for Certificate
1200-05-03-.02	Examinations
1200-05-03-.03	Fees
1200-05-03-.04	General
1200-05-03-.05	Definitions

1200-05-03-.06	Classifications of Water Treatment Plants and Water Distribution Systems
1200-05-03-.07	Classifications and Qualifications of Water Treatment Plant Operators and Water Distribution System Operators
1200-05-03-.08	Classification of Wastewater Treatment Plants and Wastewater Collection Systems
1200-05-03-.09	Classifications and Qualifications of Wastewater Treatment Plant Operators and Wastewater Collection System Operators
1200-05-03-.10	Continuing Education
1200-05-03-.11	Revocation of Certificate
1200-05-03-.12	Civil Penalties
1200-05-03-.13	Repealed

10. Does the board have a website? If so, please provide the web address. What kind of public information is provided on the website?

The board's website is located at http://www.tn.gov/environment/board_water-and-wastewater-operators-certification.shtml. The website provides information on meeting dates, board characteristics, board members and contact information.

11. How many applications for certification did the board evaluate during fiscal years 2013 and 2014 and to date in fiscal year 2014? Of those, how many were forwarded to the Commissioner of Environment and Conservation for certification?

In FY2012-2013, the Board processed 760 applications for exams. Of these, 212 applicants passed their examinations and were issued certificates by the Commissioner. The Board processed 10 applications for certification by reciprocity and 7 were issued certificates by the Commissioner.

In FY 2013-2014, the Board processed 761 applications for exams. Of these, 316 applicants passed and were issued certificates by the Commissioner. The board processed 14 applications for certification by reciprocity that resulted in 12 certificates being issued by the Commissioner.

In FY2014-2015, the Board processed 783 applications for exams. Of these, to date 172 applicants passed and were issued certificates by the Commissioner. The results of the May 2015 certification exams are not available at this time. The Board processed 15 applications for certification by reciprocity and 13 were issued certificates by the Commissioner.

12. How many certifications were revoked during fiscal years 2013 and 2014 and to date in fiscal year 2015? What were the reasons for revocation?

The Board has upheld the revocation of two drinking water certificates belonging to two operators in the past two years for submission of false data and reports. The Division of Water Resources and Department of Environment and Conservation initiated both the revocation actions.

Name	Certificate	Reason
Elma Alison	Grade I Distribution System	Failure to use reasonable judgment in the operation of systems and submitting false information to the Division of Water Supply.
James A. Mosley	Grade III Water Treatment Plant	Failure to use reasonable judgment in the operation of systems and submitting false information to the Division of Water Supply.

Revocation of operator certificates is one of the enforcement mechanisms provided in statute; it is used only when it is the view of the Department and the Board that the operator was clearly disregarding his/her responsibility. The Division of Water Resources has elected to pursue a civil penalty enforcement action to address violations incurred by public systems without the services of a certified operator and certified operators who have committed less serious violations.

13. What types of training schools and programs does the board promote and schedule under provisions of Section 68-221-906(a)(10), *Tennessee Code Annotated*? Does the board or the Department of Environment and Conservation conduct training schools and programs or is the training conducted by outside parties? If conducted by parties outside the department, how is the board assured of the quality of the training? Is there a certification standard for training programs?

The Department of Environment and Conservation conducts training activities at the Fleming Training Center in Murfreesboro and in other locations across the state. A regularly updated schedule of classes by topic for the 2015 training year is available at:
http://www.tn.gov/environment/water/fleming_schedule.shtml

Other parties conduct training activities but not at the direction of the Board.

Regardless of what party conducts the training, before training can be used for continuing education credit (to renew a certificate) or operating experience credit (to qualify to sit for an exam), it must be reviewed and approved by the Board. Each activity is evaluated for content, qualifications of instructor, and length of time of activity before approval is granted. The Board has adopted formal policies to be used in the approval of training activities.

Attachment B is Board’s policy for approval of continuing education activities and **Attachment C** is the policy for approving comprehensive training activities that eligible for operating experience.

14. Section 68-221-907, *Tennessee Code Annotated*, directs the board to classify all water treatment plants, wastewater treatment plants, water distribution systems and wastewater collection systems “according to the skill, knowledge and experience that the operator must have to supervise successfully the operations of the plant or system.” Describe the different classifications and the number of facilities in each classification. Are there sufficient certified operators in the state to properly and safely supervise the facilities currently operating? Are any facilities being operated by uncertified operators or operators with incorrect or incomplete certification? If so, how many?

Water plants and distribution systems, and wastewater plants and collection systems are rated according to their size and complexity. The following is a listing, in descending order of size and complexity, of water treatment plants, distribution systems, wastewater treatment plants and collection systems. Sufficient numbers of operators exist to adequately supply the demand; however, the location of the available operators may not match the location of the demand.

Classification	Number In TN	Number of plants or systems without adequately certified operators
Water Treatment Plants		
Grade 4 Water Plants	84	0
Grade 3 Water Plants	120	0
Grade 2 Water Plants	93	0
Grade 1 Water Plants	67	6
Small Water Systems	262	0
Distribution Systems		
Grade 2 Distribution Systems	106	0
Grade 1 Distribution Systems	355	3
Wastewater Treatment Plants		
Grade 4 Wastewater Plants	64	0
Grade 3 Wastewater	81	1

Plants		
Grade 2 Wastewater Plants	6	0
Grade 1 Wastewater Plants	202	0
Biological/Natural Systems	324	0
Collection Systems		
Grade 2 Collection Systems	21	0
Grade 1 Collection Systems	461	1

These numbers include all active Community, Non-transient non-community, and Non-community Public Water Systems.

15. Are any facilities operating without an operator under the provisions of Section 68-221-912, *Tennessee Code Annotated*? Have any, now or within the last five years, gone beyond the one year provided for in the statute?

No water treatment and distribution systems have gone beyond the one-year provided in statute.

No wastewater treatment and collection systems have gone beyond the one year provided in statute.

16. Section 68-221-906(a)(11), *Tennessee Code Annotated*, provides that the board will “hear appeals from any order or ruling issued by the commissioner, and affirm, modify or revoke such order or ruling....” How many, if any, such cases have been appealed to the board during each of the last five fiscal years? How many were heard? In how many was the commissioner’s action upheld? Modified? Reversed? How many appeals are currently pending?

CASE NUMBER	RESPONDENT	VIOLATION	ENFORCEMENT ACTION
WEH09-0001	Andrew Houston Howell, Certified Operator McEwen Water Dept. PWSID 0000420	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Director’s Order and Assessment issued and Appealed: Agreed Order issued with civil penalty including a payment plan January 21, 2010.

WEH10-001	Elma Allison Former Certified Operator for Cookeville Boat Dock Road Utility District	Failed to use reasonable care, judgment or the application of knowledge with regards to the operation of the water system	Director's Order with revocation of license and a penalty of \$4,150.00 civil penalty. Director's Order and Assessment issued on August 25, 2010.
WEH10-002	Ivan Brad Hutchinson on Certified Operator Lakewood Water Department	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Agreed Order October 7, 2010. issued for a civil penalty of \$2,560
WEH10-0003	Phillip Howe For E.I. DuPont	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Director's Order and Assessment issued on August 26, 2010 is an upfront civil penalty of \$5,000.
WEH11-0001	Billy Puckett, Certified Operator Billy's Cold One PWSID 0 004940 Hey Hey Club PWSID 0 004943	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Director's Order and Assessment issued on August 10, 2011 with a civil penalty of \$2,000.00.

WEH12-0001	Glen Chapman, Certified Operator for Friendsville Water Department PWSID 000249	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Director's Order and Assessment issued on June 19, 2012 with a civil penalty of \$3,200.00.
WEH11-001	Billy Puckett, Certified Operator for Billy's Cold One and Hey Hey Club	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Agreed Order and Assessment issued February 1, 2013 with a civil penalty of \$500.00
WEH13-0002	James Alan Mosley, Certified Operator for Mount Pleasant Water System Department PWSID 000488	Failed to use reasonable care, judgment or the application of his knowledge with regards to the operation of the water system	Director's Order and Assessment issued on November 19, 2013 with revocation of certification and a civil penalty of \$6,400.00.

17. Section 68-221-915, *Tennessee Code Annotated*, provides that a person may file with the commissioner a complaint against any person allegedly violating any provisions of the "Water Environmental Health Act." The act further provides that if the complainant or the alleged violator disagree with the commissioner's response to the complaint, or if the commissioner fails to act, the complaint may be appealed to the board for a disputed case hearing. How many, if any, of the appeals listed in your response to question 16 above, grew from complaints filed under this provision of the code? How many were heard? In how many was the commissioner's action upheld? Modified? Reversed? How many appeals are currently pending?

No complaints were received. None of the hearings listed in item 16 were this type of case.

18. What reports does the board prepare on its activities, operations and accomplishments? Who receives the reports? Please attach copies of all such reports issued during fiscal years 2013 and 2014 and to date in fiscal year 2015.

The program generates a report for EPA on its activities operations and accomplishments related to the drinking water aspects of the program, but not wastewater aspects as required by EPA. This report is attached as **Attachment D**.

19. Has the board developed and implemented quantitative performance measures for ensuring it is meetings its goals? (Please answer either yes or no). If the board has developed and implemented quantitative performance measures, answer questions 20 through 27. If the board has not developed quantitative performance measures, proceed directly to questions 28.

Yes, the Board/Commission has developed and implemented quantitative performance measures for ensuring its goals are met.

20. What are your key performance measures for ensuring the board is meetings its goals? Describe so that someone unfamiliar with the program can understand what you are trying to measure and why it is important to the operation of your program.

The Water and Wastewater Operator Certification program is housed at the Fleming Training Center and uses a web-based application for the tracking of the operator certification program that was developed by TDEC Information Systems. The tracking system maintains certified water and wastewater operators information, tracks the continuing education requirements of certified operators, maintains a database of operators applying for certification and tracks their progress through the certification process; tracks operators applying for certification exam and the results of exams given; and tracks the receipting of all monies as required by the certified operator program.

The program monitors three key program performance measures to ensure that the certification program is meeting the need that facilities and employers in Tennessee have for trained, competent personnel to operate water and wastewater facilities.

- 1) The number of certified operators in TN emphasizing growth in the number of operators
 - This measure is important to monitor the current supply of operators meets the need that industries, municipalities and utility districts have for these highly skilled professionals. As of this writing, there are 4040 operators holding 6039 certificates with an average growth rate in the number of certificates of 7.9% and an average annual growth rate of operators of 7.8%
- 2) Applications for certification exam and applications approved

- This measure is important to monitor both the interest in the field that the community has as well as to ensure that the future supply of operators will meet anticipated need. As of this writing the program averages 735 applicants per year over the last 20 years, however the program has been averaging 768 applications in the last 3 years with 783 last year

3) Exam pass rates

- This measure is important to assess the effective ness of the training programs offered and to help assess if the future supply of operators will meet anticipated demand. As of November 2014 the pass rate stood at 52.29%

21. What aspect(s) of the program are you measuring?

As noted in #20 above, our performance measures monitor the primary focus of the program, ensuring an appropriately trained workforce is available for municipalities, industries and utility districts in Tennessee.

22. Who collects relevant data and how is this data collected (e.g, what types of information systems and/or software programs are used) and how often is the data collected? List the specific resources (e.g., report, other document, database, customer survey) of the raw data used for performance measure.

These data are collected by certification program staff as part of the basic program operations and presented to the board at their regularly scheduled meetings.

23. How is the actual performance measure calculated? If a specific mathematical formula is used provide it. If possible, provide the calculations and supporting documentation detailing your process for arriving at the actual performance measure.

Percentages are calculated for exam pass rates and actual data is used for all other measures.

24. Is the reported performance measure result a real number or an estimate? If an estimate, explain why it is necessary to use an estimate. If an estimate, is the performance measure result recalculated, revised, and formally reported once the data for an actual calculation is available?

All performance measures are real numbers.

25. Who reviews the performance measures and associated data/calculations? Describe any process to verify that the measure and calculations are appropriate and accurate.

The performance measure data is generated by the certification program staff then reviewed and presented to the Board by the Program Manager.

26. Are there written procedures related to collecting the data or calculating and reviewing/verifying the performance measure? Provide copies of any procedures.

No such procedures exist as of this writing.

27. Describe any concerns about the commission's performance measures and any changes or improvements you think need to be made in the process.

None noted.

28. Provide an explanation of any items related to the board that may require legislative attention including your proposed legislative changes.

None at this time.

29. Should the board be continued? To what extent and in what ways would the absence of the board affect the public health, safety, or welfare of the citizens of the State of Tennessee? The Water and Wastewater Operator Certification Board should be continued.

The product of the certification board's efforts are the 4040 certified operators, serving the citizens and visitors of Tennessee, protecting the public health and the quality of the environment thru the correct operation of water and wastewater systems. Certification is required for that operator in charge of the treatment plant, but seeing the benefits of trained and certified employees, many cities and utilities have encouraged many of their employees to become certified.

On February 5, 1999, Final Guidelines for the Certification and Recertification of the Operators of Community and Nontransient Noncommunity Public Water Systems, 64, Fed. Reg. 5916 (1999) was issued by the United States Environmental Protection Agency. The guidelines specify the minimum standards for the certification and recertification of operators of community and nontransient noncommunity public water systems. EPA requires compliance with federal operator certification guidelines in order for the Department of Environment and Conservation to avoid a twenty percent reduction in federal funds it is entitled to receive in the Drinking Water State Revolving Fund (DWSRF) capitalization grants under section 1452 of the Safe Drinking Water Act. A twenty percent reduction in DWSRF funds beginning in 1999 would have amounted to \$9,332,560 that Tennessee water systems would not have had available for needed construction projects.

The Tennessee Operator Certification program received USEPA approval on January 30, 2001. USEPA requires annual program submittals for verification ongoing program implementation and compliance with federal guidelines. Annual program submittals of the Tennessee Certification program were approved by USEPA, June 2002, June 2, 2003 and May 24, 2004. June 2005, June 2006, May 2007, June 2008, May June 2009, June 2010, May 2011, June 2012, June 2014, October 2014 and 2015 approval pending.

30 .Please list all board programs or activities that receive federal financial assistance and, therefore are required to comply with Title IV of the Civil Rights Act of 1964. Include the amount of federal funding received by program/activity.

None as of this date.

If the board does receive federal assistance, please answer questions 31 through 38. If the board does not receive federal assistance, proceed directly to question 37.

31 Does the board prepare a Title VI plan? If yes, please provide a copy of the most recent plan.

TDEC has a Title VI Plan that is developed for and applicable to all TDEC programs.

32 Does your board have a Title VI coordinator? If yes, please provide the Title VI coordinator's name and phone number and a brief description of his/her duties. If not, provide the name and phone number of the person responsible for dealing with Title VI issues.

TDEC has a Title VI Coordinator and Complaint Officer.

Coordinator: Costin Shamble (615-253-8337) - Facilitate Title VI compliance activities; review data and make recommendations of actions to enhance Title VI compliance; conduct Title VI training programs; compile Department's Title VI Implementation Plan; represent TDEC at meetings on Title VI.

Complaint Officer: Hoda Guirguis (615-253-3400) - Receives Title VI complaints; conducts an investigation of complaints; facilitates a remedy of Title VI concerns; makes recommendation(s) of actions needed to resolve complaints.

33.To which state or federal agency (if any) does the board report concerning Title VI? Please describe the information the board submits to the state or federal government and/or provide a copy of the most recent report submitted.

TDEC is required to submit an annual Title VI Implementation Plan to the Tennessee Human Rights Commission. Additionally, the Plan is submitted to and reviewed by the Title VI Legislative Sub-Committee of the State Legislature. A public hearing is conducted annually on the Plan. Disadvantaged business participation is submitted to the Environmental Protection Agency.

34 Describe the board's actions to ensure that association staff and clients/program participants understand the requirements of Title VI.

Internally within TDEC:

- Mandatory Civil Rights training of TDEC staff included Title VI
- TDEC Title VI brochure distributed to Department staff
- Periodic discussions with staff, Title VI related actions/activities
- Staff participation in training programs offered by state and federal agencies

External actions by TDEC:

- Participation in Community Title VI workshops and conferences
- Contract language includes Title VI compliance
- Posting of Civil Rights posters
- Distribution of Title VI brochure

35 Describe the board's actions to insure if it meeting Title VI requirements. Specifically, describe any board monitoring or tracking activities related to the Title VI, and how frequently these activities occur.

Minority participation in TDEC programs and activities is reviewed by the Title VI Coordinator. Activities reviewed include: representation on boards, disadvantaged business participation, and public participation. Meetings with the Commissioner's staff are held to discuss minority participation issues at least quarterly.

36 Please describe the board's procedures for handling Title VI complaints. Has the board received any Title VI-related complaints during the past two years? If yes, please describe each complaint, how each complaint was investigated and how each complaint was resolved (or, if not yet resolved, the complaint's current status).

The following steps should be taken to file a Title VI complaint:

- It should be written and include your name, address and telephone number. Your complaint must be signed and filed within 180 calendar days of the alleged discriminatory act. If you are filing on behalf of another person, include your name, address, telephone number and your relation to that person (for example: friend, attorney, parent, etc.).
- The name and address of the agency, institution or department you believe discriminated against you.
- How, why and when you believe you were discriminated against. As much background information as possible should be included about the alleged acts of discrimination. Include names of individuals who you allege discriminated against you, if you know them, as well as any other relevant information.
- The names of any persons, if known, that the investigating agency could contact for additional information to support or clarify your allegations.
- All complaints must be signed by the complainant.
- The complaint should be sent to the TDEC Title VI Complaint Officer, Hoda Guirguis, William R. Snodgrass TN Tower, 312 Rosa L. Parks Blvd., 10th Floor, Nashville, TN 37243. TDEC's toll free hotline (1-888-891-8332), accessible statewide, is maintained and available for complaints.

Upon receipt of the complaint, the Title VI staff will determine its jurisdiction, acceptability, and need for additional information, as well as investigate the merit of the complaint. If the complaint is filed by an internal party, TDEC does not have jurisdiction to hear such a complaint. Therefore,

TDEC will forward internal complaints to the appropriate agency having jurisdiction to review the complaint. If TDEC has jurisdiction to investigate the issues raised, TDEC’s Complaint Officer will investigate and adjudicate the complaint and notify parties of the final decision in writing. If the investigation indicates that a violation did not occur, the department will notify the parties of the final decision in writing.

If complainant is not satisfied with the results of the investigation of the alleged discrimination and practices the complainant will be advised of the right to appeal to EPA (or appropriate federal agency).

Complainants have the option to file a complaint with the appropriate Federal agency no later than 180 calendar days after the alleged discrimination occurred.

PLEASE NOTE: Title VI complaints alleging discrimination on the basis of race, color or national origin against any State of Tennessee department or agency (recipient) or sub-recipient receiving federal financial assistance may also be filed with the Tennessee Human Rights Commission (“THRC”). For more information, please contact THRC via U.S. Postal Mail at William R. Snodgrass Tennessee Tower, 312 Rosa L Parks Ave, 23rd Floor, Nashville, TN 37243 or by phone at (615)741-5825 or toll free at 1(800) 251-3589.

Citizen suits remain an option in this process.

TDEC received one Title VI Complaint during fiscal years 2012-2013 and 2013-2014. The complaint was filed on August 26, 2014. The complainant filed a Title VI complaint against a TDEC sub-recipient utility company for not accepting his cash payment because of his color. Through interviews and document review, the TDEC investigator found that the sub-recipient’s rule of not accepting cash payments was not a violation of Title VI of the Civil Rights Act of 1964. This decision was issued in September 2014.

37 Please provide a breakdown of current board staff by title, ethnicity, and gender.

Board Staff	Ethnicity	Gender
Brandon Hulette, Director Fleming Training Center	Caucasian	Male
Sherry Messick, Certification Program Coordinator	Caucasian	Female
Gloria Lillard, Administrative Secretary	African- American	Female
Melissa Carrier, Clerk	Caucasian	Female

38 Please list all board contracts, detailing each contractor, the services provided, the amount of the contract and the ethnicity of the contractor/business owner.

The board does not have any contracts.

Attachment A- Conflict of Interest

TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION POLICY ON CONFLICT OF INTEREST (JUNE, 1993; AMENDED MAY 31,1996; AMENDED OCTOBER 30, 1997; AMENDED JANUARY 27,2003; AMENDED MAY 3, 2005; Re-Adopted March 7,2011)

1. **PURPOSE OF POLICY** --First, this policy is to assure the department's interest is not compromised by employee activity which may diminish the employee's ability to perform his/her duties without bias. The second purpose of this policy is to assure that career service employees are not subjected to unwarranted disclosure requirements as a result of a Specific Job Assignment (See Definitions).
2. **SCOPE OF POLICY** --This policy applies to all full-time employees of the Department of Environment & Conservation (the Department). The Department reserves the right to investigate suspected conflicts whether or not they have been disclosed.
3. **POLICY**

3.1 An employee shall not have a Direct Conflict of Interest. (See definitions).

3.2 An employee who has an Indirect Conflict of Interest (see definitions) shall make proper disclosure of such interest to the Commissioner and, either obtain approval or eliminate the conflict. (See 7.2)

3.3 An employee required to maintain a license as a condition of employment shall not participate in any activity which violates the licensing authority's code of ethics regarding conflict of interest.

3.4 An employee shall not violate any applicable state laws concerning conflict of interest.

3.5 It is not the intent of the Department to curtail all outside activities of its employees. Those that do not involve any conflicts of interest may continue. This policy also contains two provisions for "exceptions" in case the application of every letter of this policy would result in an undue hardship or in the case of certain Indirect Conflicts of Interest. (See 4.8 and 6.2)

4. AN EMPLOYEE SHALL NOT HAVE A DIRECT CONFLICT OF INTEREST

4.1 An employee shall not accept or maintain outside employment with a business that is regulated in any manner by the employee's organizational unit as defined in 8.5.

4.2 An employee shall not serve on the board of directors or advisory board, or act as an unpaid consultant to a non-state agency which receives or seeks to receive funds from the employee's organizational unit, or is regulated in any manner by the employee's organizational unit.

4.3 An employee shall not participate in any employment or any activity which is considered to be a conflict of interest under federal requirements which are applicable to the employee's organizational unit.

4.4 An employee shall not have a controlling interest in or engage in any financial transaction for personal gain with an entity regulated by or doing business with the employee's organizational unit.² 4.5 An employee shall not receive supplementation of their departmental salary from a private source as compensation for the employee's services to the Department.

4.6 An employee shall not violate any state law governing conflicts of interest.

4.7 An employee shall not accept honoraria or other compensation for activities which are, or should be, performed as part of their official duties, except as provided by Comprehensive Travel Regulations of the Department of Finance and Administration. 1

4.8 An employee who has, or is considering an activity that would be a Direct Conflict of Interest as set forth in 4.1 through 4.7 and 3.1, but who feels that the application of this policy to the situation would result in unfair results or undue hardship, may disclose the conflict to the Commissioner and seek an exception to this policy using the same procedure as outlined in 7.2. In considering such a request, the Commissioner will evaluate all relevant factors including, but not limited to, any appearance of impropriety, the present job duties and responsibilities of the employee, the nature of the outside activity, and the potential for the different interests to actually conflict.

5. AN EMPLOYEE SHALL NOT HAVE AN INDIRECT CONFLICT OF INTEREST UNLESS SUCH INTEREST HAS BEEN DISCLOSED TO AND APPROVED BY THE COMMISSIONER

5.1 An employee shall not accept or maintain outside employment with a business which receives funds from or is regulated in any manner by the Department, unless such interest has been disclosed to and approved by the Commissioner.

5.2 An employee shall not serve on the board of directors or advisory board, or act as an unpaid consultant to a non-state agency which is regulated in any manner by the Department, unless such interest has been disclosed to and approved by the Commissioner.

5.3 An employee shall not have controlling interest or engage in any financial transaction in any entity regulated by or doing business with the Department, unless such interest has been disclosed to and approved by the Commissioner.

5.4 An employee shall not serve on the governing board of any nonprofit agency which seeks to influence decisions of the Department, unless such interest has been disclosed to and approved by the Commissioner.

6. EFFECT OF CONFLICTS OF INTEREST ARISING FROM SPECIFIC JOB ASSIGNMENT

Career service employees who do not

(a) regulate, inspect, audit, procure goods or services or administer tax laws;

(b) have authority over those who regulate, inspect, audit, procure goods or services or administer tax laws; and

(c) have a Direct or Indirect Conflict of Interest as set out in sections 3,4, and 5 of this policy, but solely as the result of a Specific Job Assignment have a Potential or Actual Conflict of Interest which involves a Financial Interest of the employee or a member of his/her immediate family, are subject to having the Specific Job Assignment reassigned.

7. EFFECT OF OTHER CONFLICTS OF INTEREST

7.1 An employee who has a Direct Conflict of Interest must immediately eliminate such conflict except as provided in 4.8. An employee with a Direct Conflict of Interest is subject to disciplinary action in accordance with Department of Personnel rules and regulations.

7.2 An employee who has an Indirect Conflict of Interest must disclose such conflict in writing to the Commissioner, through the employee's immediate supervisor, to participate in such activity. The disclosure must contain all pertinent information concerning the entity or activity which is regulated or does business with the Department and the nature of the activity the employee will be performing, compensation, if any, obtained, extent of involvement with the entity, and the time the activities are performed. An employee who fails to make proper disclosure is subject to disciplinary action in accordance with Department of Personnel rules and regulations. If the Commissioner does not approve the employee's activity, the employee shall eliminate the conflict of interest. The employee is subject to disciplinary action in accordance with Department of Personnel rules and regulations for failure to do so.

7.3 An employee whose conduct creates an appearance of a conflict of interest, shall follow the process set forth in section 7.2 for an Indirect Conflict of Interest, including disclosure to the Commissioner and, if

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necessary, termination of the conduct or activity. Failure to do so will subject an employee to disciplinary action in accordance with Department of Personnel rules and regulations.

7.4 An employee who has violated a licensing requirement pertaining to conflict of interest as determined by the appropriate licensing agency, is subject to disciplinary action in accordance with the Department of Personnel's rules and regulations.

7.5 An employee who violates a statutory conflict of interest is subject to all sanctions provided in the statute and is also subject to disciplinary action in accordance with Department of Personnel rules and regulations.

8. DEFINITIONS

8.1 Actual Conflict of Interest --It is a conflict of interest which fully exists at the time the matter is being considered. A Potential Conflict of Interest may become an Actual Conflict of Interest.

8.2 Direct Conflict of Interest --It is a Direct Conflict of Interest for any employee to engage in the activities listed in section 4 or to have a direct private interest in any activity, contract, employment or work in which (s)he has a public duty to vote for, let out, over look, or superintend in any manner the contract, work or activity or regulate, inspect, perform, undertake or engage in any activity or work in which the Department shall or may be interested. Direct private interest means any activity, employment, work, involvement or contract between the employee and any business in which the individual is the sole proprietor, a partner, or the person having the controlling interest. "Controlling interest" means the legal or beneficial ownership often percent (10%) or more of the stock of a corporation, or where the company is a business entity which does not use

stock for ownership, the legal or beneficial ownership of ten percent (10%) or more of the business.

8.3 Financial Interest --It is any interest having a value exceeding \$5,000.00 whether the interest is currently possessed, to be received in a lump sum, or to be received through a series of transactions.

8.4 Indirect Conflict of Interest --It is an Indirect Conflict of Interest for any employee to engage in the activities listed in section 5 or to have a private interest in any activity, contract, employment or work in which (s)he has a public duty to vote for, Jet, overlook, or in any manner to superintend the contract, work or activity or regulate, inspect, perform, undertake engage in any activity in which the Department shall or may be interested, but indirectly so, unless the individual discloses the interest to and receives approval from the Commissioner. Indirect interest means any activity employment or contract in which the individual has an interest other than a direct interest as defined in 8.2.

8.5 Organizational Unit --It is a subdivision designated by the Commissioner for administrative purposes. The organizational units for purposes of this policy, unless otherwise expressed in writing by the Commissioner, are set forth in the Appendix to this policy.

8.6 Potential Conflict of Interest --It is a situation, condition or relationship from which an Actual Conflict of Interest could arise in a normal course of events.

8.7 Specific Job Assignment --It is a specific task assigned by a superior. It is a task that may fall within the scope of the job description but is not specifically required under the job description and therefore its assignment is discretionary. An example of a Specific Job Assignment would be the requirement to inspect the XYZ Company for regulatory compliance.

9. CONSTRUCTION AND INTERPRETATION OF POLICY

9.1 This policy shall be construed and interpreted in such a manner to assure the public's interest is protected by preventing employees from unfairly benefiting from public employment and the public trust in the Department's activities is maintained and is beyond reproach.

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9.2 The items described in sections 4 through 7 are considered examples of behavior which constitute a conflict of interest, and shall not be construed to encompass every type of activity which could violate the general policy expressed herein.

9.3 Employees should make every effort to avoid even the appearance of a conflict of interest. For instance, if an employee enjoys a close personal relationship with an entity over whom the employee has regulatory responsibility or a consultant who works with entities regulated by the employee's unit this relationship should be disclosed to the Commissioner through the supervisor. Also, if an employee receives items of value such as sports tickets at a reduced price, or free trips from such persons, these should be disclosed to the Commissioner through the supervisor.

The Conflict of Interest Policy is re-adopted and effective as amended this 7th day of March 2011.

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Attachment B

POLICY OF CONTINUING EDUCATION

Statement of Rule

0400—49—01—.10 Continuing Education.

At least once during every continuing education period each certified operator shall satisfactorily complete the required number of continuing education hours approved by the Board for the particular type of certificate he/she holds. The continuing education period for a certified operator shall begin either with the date the certified operator obtained his/her certificate or the date the certified operator last satisfactorily completed the required number of continuing education hours and shall end at the conclusion of the annual continuing education term three calendar years thereafter. An annual continuing education term shall begin each year on October 1 and shall end on September 30 of the following year. The failure of an operator to satisfactorily complete the required number of continuing education hours approved by the Board Secretary during his/her continuing education period shall be grounds for the denial of his/her application for the renewal of his/her certificate. An operator shall notify the Board Secretary upon his/her satisfactory completion of the continuing education requirement by furnishing appropriate documentation of course completion. Notification by the operator is not necessary in those cases where an agency notifies the Board Secretary of such activity. An operator that fails to satisfactorily complete the required number of continuing education hours during his/her continuing education period due to an unusual event such as an incapacitating illness or similar unavoidable circumstances may make a written request to the Board for an extension of time to do so. All requests by an operator for an extension of time to meet the continuing education requirement must be made in writing to the Board either within two months of the elapsed continuing education period or by the date of return of the operator to active employment, whichever is later. All such requests must be accompanied by complete supporting documentation of the circumstances causing the failure to meet the continuing education requirement.

POLICY

Purpose

The Rules Governing Water and Wastewater Operator Certification require completion of continuing education requirements as a prerequisite for renewal of certificates issued by the Board. The purposes of this policy are to prescribe the basic continuing education requirements for present and future certificate holders; and to establish standards by which continuing education programs will be evaluated.

Basic Requirements

At least once during every three-year continuing education period, a certified operator possessing a Grade III or Grade IV certificate shall satisfactorily complete twelve (12) contact hours of continuing education for each certificate he/she holds. Certified operators possessing a Grade I, Grade II, a Small Water System, or a Biological/Natural System certificate shall satisfactorily complete 6 (six) contact hours of continuing education for each certificate he/she holds during every three year continuing education period. The continuing education must be relevant to the classification in which the operator is certified. It must include information that is relevant to the Need –To-Know. Credit for program attendance will be awarded on the first attendance only, unless the program has been substantially revised. Credit hours in activities that are generic (approved for any certificate) will be attributed only to one certificate. Credit toward a certificate can only be given after the Board, or its designated agent, has approved the program. Activities must be completed in their entirety in order for the certified operator to receive credit.

Qualifying Activities

- A. To request approval, an **Application for Approval of Continuing Education Activity** must be completed and submitted sixty (60) days prior to the activity, including:
1. A Need-To-Know checklist for the classification for which approval is sought.
 2. A schedule outlining the activity parts and the time attributed to each, and
 3. an instructor or lecturer biographical sketch illustrating that he/she possesses background, training, education and experience in the subject.
- B. To qualify for approval:
1. The activity must be structured, with an instructor and detailed outline.
 2. The activity must contribute directly to the competence of the certified operator.
 3. The activity must be relevant to the Need-To-Knox for the classification for which approval is sought. To be relevant the activity must address one or more of the following areas as it relates to the Need-To-Knox subjects; process, operation, maintenance, general or basic knowledge, procedures, data interpretation, public health, math, science, safety, or any applicable state or federal rules.
 4. The activity must be a minimum of 60 minutes in length.
 5. The provider must agree to record and submit attendance rosters of certified operators, including certificate numbers, and (for operators holding more than one certificate) identification of the certificate to apply credit to.
 6. The provider must develop and communicate to Board staff, a method of identifying certified operator attendance at the entire activity, beginning to end.
 7. The provider must agree to allow representatives of the Board to monitor the activity without cost or notice.
 8. The certified operator may request continuing education approval for activities where the provider does not seek approval. The certified operator must comply with all applicable requirements of this policy.
- C. Subject to compliance with paragraphs A and B, the following are qualifying programs.
1. Professional development programs of industry related organizations.
 2. Technical sessions provided by industry related organizations.
 3. University or college courses.
 4. Organized in-firm or in-house educational programs presented for employees and

others, and

5. Others recognized by the Board.
- D. Correspondence or other individual study programs, including those administered via computer, which require registration and provide evidence of satisfactory completion may qualify for continuing education credit in an amount to be determined by the Board.

Instructor Allowance

Continuing education will be allowed for service as an instructor or speaker at any program for which participants are eligible to receive continuing education credit. Credit for such service will be awarded on the first presentation only, unless the program has been substantially revised.

Provider Responsibility

It is the responsibility of the Provider to ensure that the subject matter of each continuing education activity is provided as described in the submittal.

The provider shall send a complete and signed roster of all students who successfully complete the activity. It is the provider's responsibility to confirm that all persons identified on the roster attended the complete activity, beginning to end. The signature of the provider on the roster will attest to successful completion and full attendance of the certified operator.

Board and Staff Responsibility

- A. The technical secretary shall report to the Board any approved or disapproved activities at the meeting following the approval or disapproval.
- B. Any entity requesting approval of a continuing education activity shall be informed in writing of the technical secretary's decision. Any conditions of approval or reasons for disapproval will be provided in the response. Providers of training activities disapproved by the technical secretary shall be informed that the technical secretary's decision may be appealed to the Board.
- C. The technical secretary shall maintain a current listing of all approved continuing education activities.

Policy adopted by the Board October 4, 2001.

Attachment C
POLICY
BOARD SANCTIONED COMPREHENSIVE TRAINING

Board sanctioned comprehensive training is defined as a specialized training activity that provides a reasonable understanding relative to the Board-Need-To- Know-Criteria, understanding of the essential processes, procedures and facts that are necessary to plant or system operations.

(b) Board approved specialized training:

The Board shall evaluate and when deemed appropriate approve training activities for the purpose of satisfying operating experience requirements. The activity must be approved by the Board 30 days in advance. The following information must be provided by the facilitator prior to Board approval:

- a. Training objectives
 - b. Training outline
 - c. Training material, textbooks, etc.
 - d. Instructor credentials
 - e. Student evaluation methods (*post test score*)
 - f. Successful completion of the training activity will be defined and documented by the training facilitator.
 - g. Training activities must provide 3 days (minimum 1080 minutes) of contact time to be considered for substitution as operating experience.
 - h. Activities approved as a 1 day intensive training, one – two subject(s) for each day, 360 minutes) must be grouped as a minimum of 3 one day activities to receive operating experience credit. The 3 days are not required to be consecutive days. Upon the completion of 3 days, one-day increments may be added for each approved intensive training activity completed for Grade IV certifications.
- 2 . Approved academic study satisfactorily completed at an accredited college or university may be approved for each two semester hours, or three quarter hours equal to one month of the operating experience required as a qualification of a certified water/wastewater treatment plant operator to a maximum equivalency of three months. College transcripts, if needed to document experience credit, must be submitted directly from the college and/ or university to the Board.

Credit will not be given prior to successful completion of any Board sanctioned comprehensive training. Credit will only be granted to an applicant upon verification that he/she satisfactorily

completed all training or program requirements. When training credit is requested, a copy of a training attendance card, a class roster, or a certificate of completion must be submitted to the Board. The completion date of a multi-day training is the last day of the training.

The Technical Secretary of the Board for Certification of the Water and Wastewater Operators is authorized to approve comprehensive training activities for operating experience as required by the Rules Governing Operator Certification in accordance with the preceding guidelines.

This policy has been approved and accepted by the Board on August 9, 2007 and becomes effective at the October 4, 2007 meeting.

Statement of Rule:

Water Treatment and Wastewater Treatment

Rule 0400-49-01-.07 (1)(a)(2) states in part: Water Treatment IV

Within the discretion of the Board, college training work in related science or engineering trainings satisfactorily completed or Board sanctioned comprehensive training in chemistry, bacteriology, and the fundamentals of water treatment satisfactorily completed through schools for operators, correspondence trainings, or other special training may be credited toward the required operating experience to a maximum equivalency of thirty-six months.

Rule 0400-49-01-.09(1)(a)(2) states in part: Wastewater Treatment IV

Within the discretion of the Board, college training work in related science or engineering trainings satisfactorily completed, or Board sanctioned comprehensive training in chemistry, bacteriology, and the fundamentals of wastewater treatment satisfactorily completed through schools for operators, correspondence trainings, or other special training may be credited toward the required operating experience to a maximum equivalency of thirty-six months.

Rule 0400-49-01-.07(1)(b)(1), (1)(c)(1), (1)(d)(1)

Rule 0400-49-01-.09(1)(b)(1), (1)(c)(1), (1)(d)(1), (1)(e)(1) state in part:

Board sanctioned comprehensive training in chemistry, bacteriology, and the fundamentals of water treatment satisfactorily completed through schools for operators, correspondence trainings, or other special training programs may be credited toward the required operating experience to a maximum equivalency of three months.

Rule 0400-49-01-.07(3):

- (c) For subparagraph part (1)(a)2 of this rule, the Board may approve for each one semester hours, or one and one half quarter hours, of academic study satisfactorily completed at an accredited college or university in related science or engineering trainings as equal to one month of the operating experience required as a qualification of a certified water treatment plant operator.
- (b) For subparagraph parts (1)(a)2, (1)(b)(1), (1)(c)(1), (1)(d)(1), and (1)(f)(1) of this rule, each day of Board sanctioned comprehensive training, satisfactorily completed, through schools for operators, correspondence trainings, or other special training programs may be equal to one month of the operating experience required as a qualification of a certified water treatment plant operator.

Rule 0400-49-01-.09(3)

- (d) For subparagraph part (1)(a)2 of this rule, the Board may approve for each one semester hours, or one and one half quarter hours, of academic study satisfactorily completed at an accredited college or

university in related science or engineering trainings equal to one month of the operating experience required as a qualification of a certified wastewater treatment plant operator.

- (b) For subparagraph parts (1)(a)2, (1)(b)(1), (1)(c)(1), (1)(d)(1), (1)(e)(1), and (1)(f)(1) of this rule, each day of Board sanctioned comprehensive training satisfactorily completed through schools for operators, correspondence trainings, or other special training programs may be equal to one month of the operating experience required as a qualification of a certified wastewater treatment plant operator.

Attachment D

Tennessee’s Annual Certification Report

April 28, 2015

- 1. Authorization: A new Attorney General’s certification is not necessary unless a state makes statutory and/or regulatory changes to its program.**

In 2013, the act that authorizes the Tennessee operator certification program, the Water Environmental Health Act was amended and is now known as the Water and Wastewater Operator Certification Act (WWOCA). The Water and Wastewater Operator Certification Act became effective July 1, 2013.

Re numbered rules were effective in August of 2014. An Attorney General’s certification was provided with the previous year’s submittal for the rule and statute change.

- 2. Classification of Systems, Facilities, and Operators: The total number of systems in the state that are required to have a certified operator and the number of systems without an Operator in Responsible Charge (ORC). This could include a brief discussion of how a state is working with those systems to obtain a certified operator. For states that have added systems that are required to have a certified operator because of EPA’s Guidelines, this could include a brief discussion of the progress the state has made working with those systems to obtain a certified operator. Information on how the state is implementing its “provisional” or “temporary” certification options could also be included.**

All public water systems are classified in accordance with regulations promulgated by the Board. Water system facilities (treatment plants) are broken into 5 different categories based on the source of water and treatment provided while distribution systems are broken into 2 categories based on size of the system. The Division of Water Resources has been granted the authority to classify public water systems based on the regulations. Systems are classified during final construction inspections and during sanitary surveys. Water systems that disagree with the plant or system classification determination made by the Division of Water Resources may appeal that decision to the Board, which has final authority on system classification, and has the authority to adjust the classification of any system due to unique circumstances. The state has classified all of its public water systems including transient non-community systems. The following table represents the existing classifications and the number of systems required certification:

SYSTEM TYPE	CERTIFICATION TYPE	NUMBER of SYSTEMS
C & NTNC	PLANT	374
C & NTNC	DISTRIBUTION	444
NC*	PLANT	54
NC*	DISTRIBUTION	15
C & NTNC	PLANT or DISTRIBUTION	504

*** These systems are not covered by federal requirements.**

Current as of February 27, 2015, there are four non community public water systems that do not have a properly certified operator.

3. **Operator Qualifications: For states that are using the grandparenting option, a brief discussion on the progress that is being made. For example, how many systems are eligible for grandparenting and how many of those systems' operators are certified?**

Grandparenting is not allowed under the Tennessee Certification Program.

4. **Enforcement: A brief description of any actions taken against system owners and operators.**

During the past year, the Division of Water Resources as taken or continued enforcement action against no (0) water system and their owners for failure to have a certified operator. There were eight (8) enforcement orders written for water systems. There were no new enforcement orders written for operators in 2014.

The Division of Water Resources completed enforcement action against one (1) certified operator for such things as failure to comply with monitoring or reporting requirements, failure to operate the system as designed, unlawful discharge of waste, or falsification of data or information to the state. In January of 2014 the Board heard and adopted an agreed order in Case No. WEH13-0002 revoking the operator's water treatment certification and assessing civil penalties.

5. **Certification Renewal: A brief description of the state's training program, including any suggestions under consideration or changes that will be made based on stakeholder input and program review.**

Certified operators are required to complete a specific required number of continuing education hours every three years. The operator must complete the required number of training hours approved by the Board for the particular type of certificate he/she holds every three years and for each certificate that he/she holds. The continuing education date begins either with the date the operator obtains the certificate or the date of the operator's last completed continuing education activity. Any operator failing to complete a continuing education activity will not be eligible to renew that certificate. (0400-49-01-.10)

Each continuing education activity is evaluated by the Board for content, applicability to the classification, qualifications of instructor, and length of time of activity before approval is granted.

Reference: TDEC Rule 0400-49-01-.10

- In 2014, the Board reviewed and approved 351 continuing education activities.
- From January 2, 2014, until December 31, 2014 , 2,704 water treatment and water distribution certificates were attributed continuing education credits for the completion of approved

- In 2014, the program had 4, 040 certified operators. The water and wastewater operator certification program tracked 5,843 active certificates, 3,529 were water treatment and water distribution certificates.

5. Resources Needed to Implement the Program: Any major changes in program resources, including an update on development of new databases, etc.

Program fee revenues and federal moneys provide funding for the Water and Wastewater Operator Certification Program. The Certification Program shares a budget with the TDEC Fleming Environmental Training Center.

The Board fees are authorized by the Water and Wastewater Operator Certification Act TCA68-221-906(1)(8) and the Environmental Protection Fund TCA 68-203-101 et. seq. Revenues are generated as a result of exam application fees and renewal fees.

The certification fees are used to defray costs associated with review of applications for certification by examination and reciprocity, management of annual certification renewal applications, administering certification examinations, preparing recommendations for review and approval or disapproval of continuing education training programs, issuing and tracking new certificates and annual renewal cards, collecting fees, tracking operator status, tracking continuing education credits, and maintaining communication and information services for operators and to provide other administrative services determined by the Board.

6. Stakeholder Involvement: A brief discussion on any type of stakeholder meetings or board meetings that were held during the reporting period.

The General Assembly originally established the operator certification program and created the Water and Wastewater Operator Certification Board under Chapter 205 of the Public Acts of 1971. In 2013, the act that authorizes the Tennessee operator certification program, the Water Environmental Health Act was amended and is now known as the Water and Wastewater Operator Certification Act. As stated in T.C.A. 68-221-902, the Board's purpose is to administer a program of certification for operators of water and wastewater systems that will ensure proper operation of such systems and protect the public and environment.

The Water and Wastewater Operator Certification Board consists of five members appointed by the Governor for terms of three years or until a successor has been appointed. Two members (one holding a certificate of the highest class) must be currently employed as certified operators, one of whom is to be recommended by the Tennessee Water and Wastewater Association and one of whom is to be recommended by the Tennessee Association of Utility Districts. One member is required to be from municipal government and is to be recommended by the Tennessee Municipal League. One member must be a faculty member of a college, university, or state technical institute whose major field is related to sanitary engineering and is to be recommended by the

Tennessee Society of Professional Engineers. The Commissioner of the Department of Environment and Conservation or his designated representative serves as ex-officio member.

The Board is composed of representatives of major stakeholder groups, including individual certified operators with specified experience and expertise levels. This composition maintains ongoing stakeholder involvement into the policy, procedure, program operations and rulemaking functions of the Board.

Board Members	Membership Compliance with T.CA. 68-221-905(b):
J. Darryl Green	Operator of the highest class representing certified operators; recommended by the Tennessee Water and Wastewater Association.
Randal Braker	Operator representing certified operators; recommended by the Tennessee Association of Utility Districts.
Alan Cranford	Represents Municipal Government; recommended by the Tennessee Municipal League.
Dr. Larry W. Moore	Represents University Faculty; recommended by the Tennessee Society of Professional Engineers.
Jennifer Dodd	Ex-Officio member; Deputy Director of Water Resources, represents the Department of Environment and Conservation.

- The Board held four regular business meetings on the following dates: January 23, 2014, April 3, 2014, July 17, 2014 and October 2, 2014.
At these meetings the Board reviewed applications for certification by examination and reciprocity, reviewed administration of the program, heard certified operator requests for extensions of time to meet continuing education requirements and heard requests from public utilities on extension of time to replace a certified operator. The Board also reviewed inquiries concerning certification program exam results, reviewed examination questions after each examination to ensure accuracy, relevance, and validity, examination security.
- The Water and Wastewater Operator Certification Board is subject to Sunshine law requirements (Section 8-44-101 et. seq., *Tennessee Code Annotated*) for public notice of meetings, prompt and full recording of minutes, and public access to minutes. The Board informs the public of its meetings by providing the notice to twenty-five individuals and corporations and to fifty papers across the state. Upon request, anyone can be added to the list. Additionally, notice of the meeting is present on the Department of Environment and Conservation’s Website (www.state.tn.us/environment/). The minutes are public record and are available for review through Board staff at the Fleming Training Center. Anyone wanting to read or receive a copy of the minutes from any meeting can do so upon request.

6. Program Review: A brief discussion on any program review that was held during the reporting period and the outcome of the review.

The administration of the operator certification program is reviewed by the Board at each meeting. The Board’s review includes budget, administrative procedures, record keeping, the processing of applications and renewals, examination results, maintenance of exam question databases, the development of new exam questions, the “Need-to-Know”, development of exam design for each certification, and the review of training programs requesting approval for continuing education. The following attachments are documents developed as a result of program review held during regular Board meetings:

- Minutes of the Board Meetings (Attachment 1)
- Continuing Education Activities approved by the Board (Attachment 2).
- Exam results from the May 2014 and November 2014 certification examinations (Attachment 3).
- The Board reviewed 775 applications for certification examination and 11 applications for certification by reciprocity in 2014. In 2014, 322 new certificates were issued of these 176 new water treatment and water distribution operators were issued certificates of competency.

Internal Review

The adequacy of budget and staffing are reviewed annually as a part of the regular budgeting process within the Department of Environment and Conservation.

The Division for Water Resources – this division includes programs from Water Pollution Control, Water Supply and Groundwater Protection - was a part of an organizational assessment to streamline the department’s structure and produce greater management efficiencies. Ms. Tisha Calabrese Benton is now the Director of Water Resources as of 2014. The Fleming Training Center and Operator Certification Program are a part of the Division of Water Resources.

- The following revenue information for the Fleming Training Center and the Operator Certification Program was provided to the Board.

FTC – FY13-14 Revenues	Amount
EPF Revenue collections (Certification and Training Fees)	\$608,000.00
Drinking Water Set-Aside for Small Water Systems.	\$176,500.00

External Program Review

In the fall of 2014 a survey was conducted of certified water treatment and water distribution system operators to determine training interest needs to facilitate development of any needed training. Training classes are being developed and implemented as the result of this survey. The questionnaire used in the survey and results can be found in Attachment 4. As a result of the

survey new training activities in math, laboratory, enforcement and homeland security are being developed and implemented in 2015.

Additionally, in 2014, improvements were made to the Fleming Training Center, The State's primary training facility for water and wastewater operators, including improved internet capabilities and wi-fi access throughout the facility for students and staff, additional laboratory equipment and physical improvements to the facility.

Moreover, in 2014 the Fleming Training Center entered into a first of its kind partnership with Columbia Southern University, an accredited online university based in Orange Beach, AL (www.columbiasouthern.edu). As part of this partnership, CSU reviewed all FTC courses and where applicable now grants college credit to certified operators and certification candidates for successful completion of FTC courses at no additional charge. CSU also offers numerous relevant courses at the Associate's Bachelor's and Master's level in their Environmental Management concentration within the Department of Occupational Safety and Health. This partnership expands the available training offerings for operators and other water sector personnel in Tennessee. Additionally, operators can use this earned credit to dramatically decrease the time and cost required to complete a degree program.

On September 17, 2014, several FTC staff along with other TDEC staff and partners from across the state and several federal agencies participated in an exercise and outreach program for the Tennessee Water/Wastewater Resource Network. Agencies, Members and other water utilities networked, and heard presentations on recent disasters that affected water systems in Tennessee as well as best practices for responding to these events and lessons learned.

On December 17 2014, TDEC/FTC staff participated in an exercise with the Tennessee Department of Health, Tennessee Department of Homeland Security, Tennessee Emergency Management Agency to assess the preparedness status and response capabilities of Water systems in Tennessee and system operators. The scenario used to evaluate the water systems was a terrorist attack using a biological agent. All available real world data on systems and response framework was used, and actual preparedness and response activities were evaluated, with lessons learned communicated to relevant water sector partners across Tennessee and the Water and Wastewater operator certification board.

9. Implementation Schedule Update: A brief discussion on progress that is being made on newly implemented segments of the program.

- In May of 2012 the Department contracted with the Association of Board of Certification to develop customized examinations for the certification program. The Association of Boards of Certification (ABC) is the national professional membership agency for all bodies certifying water and/or wastewater operators. The move to customized exams, help to ensures that the state exams administered are validated, meet or exceed industry standards, are technically correct and address the changing technology.

- In 2014 the Board assessed the need to add new technologies to the operator “need to know” for each certification exam and adjusted the exam topics accordingly. The certification exams were modified to add the new technologies to exams for water treatment and water distribution operators in 2014.

Some of the Water Treatment Topics approved by the Board to be added are:

- Disinfection is listed as a broad category. Because of the newer disinfection technologies, specific sub-topics to be added:
 - Gaseous chlorine (all levels)
 - Sodium hypochlorite (all levels)
 - Chlorine dioxide disinfection (all levels)
 - Ozone disinfection (upper levels)
 - Ultraviolet disinfection (upper levels)
 - On site chlorine generation
 - Filtration is listed as a broad category. Because of the variety of technologies, specific sub-topics to be added:
 - Membrane filters (ultra-, nano-, and reverse osmosis)(all levels)
 - Pressure filtration (all levels)
 - Gravity filtration (all levels)
 - Direct filtration (all levels)
 - Microscreens (upper levels)
 - Biological filtration (upper levels)
 - Establish and follow Emergency Preparedness Plan (all levels)
 - Facility upset
 - Natural disasters
 - System contamination
 - Evaluate characteristics of source water (all levels)
- In 2014, the Board began working with ABC to implement computer based certification examinations. Computer examinations will begin in May of 2015.
 - Training opportunities specifically tailored for operators of small water systems to meet continuing education requirements were held July 24, 2014 at the Johnson City Environmental Field Office, on June 4, 2013 the Knoxville Environmental Field Office. and September 4, 2014 in Murfreesboro at the Fleming Training Center. **Attachment 5** is agenda of the small water system seminars.

Special Training Activities developed and conducted to address the needs of the water industry are;

- To assist public water systems on compliance with provisions of the Surface Water Treatment Rule monitoring under Subpart H of 40 CFR §141.74 for residual disinfection concentrations, training was held across the state on method detection level for total chlorine. The training was held in Murfreesboro, Chattanooga, Knoxville, Jackson and Memphis. **Attachment 6** is the agenda of the water treatment seminar.

- A “Backflow Prevention Assembly Repair Class” was held March 4, 2014 in Murfreesboro, TN.
- **Attachment 7** is the 2014 Fleming Training Center schedule.
- All expense reimbursement grant funds were expended by 2011.

Attachment 1 Minutes

MINUTES

Water and Wastewater Operator Certification Board

January 9, 2014

Board Members Present:

Mr. Alan Cranford, Chairman
Mr. Randal Braker
Ms. Jennifer Dodd
Mr. Darryl Green, Vice Chairman
Dr. Larry Moore

Others Present:

Ms. Sherry Messick, Certification Program Coordinator, Murfreesboro, TN
Ms. Gloria Lillard, Certification Secretary, Murfreesboro, TN
Mr. Eric J. Watts, Grade IV Wastewater Operator, Nashville, TN
Ms. Stacie Bush Williams, Smokey View Campground, Dandridge, TN
Mr. Steve Palmer, Lake Cove Resorts, Dandridge, TN
Ms. Amanda Carter, FTC, Murfreesboro TN
Ms. Shannon Pratt, FTC, Murfreesboro, TN
Mr. Dennis Conger, FTC Murfreesboro, TN
Mr. Dewayne Culpepper, TAUD, Murfreesboro TN

The meeting convened at 9:30 a.m.

Mr. Robert Cox with the Office of General Counsel presented an Agreed Order in the matter of WEH13-002 in the matter of James Allen Mosely. Ms. Dodd recused herself from voting on the order. Mr. Green moved to adopt the order with the recommended changes. Motion carried.

Mr. Cranford suspended the agenda to allow persons in attendance, which wished to address the Board to do so.

1. Mr. Eric Watts addressed the Board regarding the renewal of his Grade IV Wastewater Treatment Plant Operator certificate. Mr. Green moved to table the request until the April board meeting. Motion carried.
2. Ms. Stacie Williams addressed the Board requesting an upgrade in her Small Water System certificate to a Grade I Water Treatment and Grade I Distribution System due to the incorrect classification of her campground. Mr. Green moved to reclassify the Smokey View Campground as a small water system. Motion failed. Ms. Dodd recused herself from voting on the motion. Mr. Braker moved to table the requested until the April Board meeting and requested that more information be provided by the Division of Water Resources on the matter. Motion carried.

3. Mr. Steve Palmer addressed the Board requesting an extension of time to meet the continuing education requirements for his Small Water System certificate. Dr. Moore moved to grant an extension of time until April 1, 2014 to meet the continuing education requirement. Motion carried.
4. Ms. Amanda Carter, FTC instructor addressed the Board requesting that the certification examinations be given over a two day period, with water treatment and distribution on Thursday, May 1, 2014 from 1 to 5 pm and wastewater treatment and collection exams to be given on Friday, May 2, 2014 from 8-12 am. Mr. Braker moved to approve the two days for examinations. Motion carried.

Item A: Approval of the October 3, 2013 Minutes

1. Dr. Moore moved to approve the minutes of the October 3 2013 meeting. Motion carried.

Item B: Recommendations for Certification by Reciprocity

- 1 Staff presented a listing with one applicant recommended to be disapproved, Mr. Stephen Pulsford applicant for CS2. Mr. Braker moved to disapprove the applicant for certification by reciprocity. Motion carried. (**Attachment 1**)

Item C: Requests for Board Consideration

1. Requests for Time Extension to Acquire a Certified Operator
None
2. Extension of time to acquire continuing education.

- a) Mr. Jimmy Hayes requested an extension of time to meet the continuing education requirements for his DS1 certification. One of the online courses he completed was not approved for continuing education credit. The online provider allowed Mr. Hayes take and complete another course. The course was completed after the September 30 deadline. Mr. Braker moved to grant the extension of time and approve the request. Motion carried.
- b) Mr. Hoyte G. Raines requested an extension of time to meet the continuing education requirements for his SWS certificate. Mr. Rains completed a cross connection renewal class after the September 30 deadline. Mr. Green moved to grant an extension of time. Motion carried.
- c) Mr. Steven Palmer– Handled in previous Board action.
- d) Mr. Bob Keast requested an extension of time to meet the continuing education requirements for his SWS certificate. Mr. Green moved to grant the extension. Motion carried.
- e) Mr. Charles A. Thomas requested an extension of time to meet continuing education requirements for his WW3 and DS2 certificates due to health problems. Mr. Green moved to table the request until the April 2014 meeting and to request Mr. Thomas to provide a medical statement from his doctor. Motion carried.
- f) Mr. Robert Brent Davis requested an extension of time to meet the continuing education requirements for his WT4 and DS2. Mr. Braker moved to table the request until the April 2014 board meeting and to request Mr. Davis to provide the information concerning the need for this extension. Motion carried.

3. Other Requests

- a) Ms. Stacie Williams request handled in previous action.
- b) Mr. Brandon W. Roberts and Mr. Guy Ragsdale requested the Board to extend their applications from the November 2013 exam to the May 2014 examination and to allow them

to submit their GED for the upcoming exam. Mr. Green moved to deny the request, and that operators must submit a new application and fee to be considered for the May examination. Motion carried.

Item F: Examination Question Review

1. Questions: The Board reviewed questions challenged at the November 2013 examinations

Page 1 Mr. Green moved to remove question 50. Motion carried.

Page 1 Mr. Green moved to remove questions 19 and 32. Motion carried.

Page 3 Mr. Green moved to remove number 85. Motion carried.

Page 5 Mr. Braker moved to remove question 91 from this exam and to rewrite the question. Motion carried.

2. Exam Grids – the Board reviewed exam question grids.

Mr. Green moved to approve the WT3 and WT4 grids. Motion carried.

Mr. Green moved to approve the WW3 and WW4 grids. Motion carried.

Item G. Board Discussion

1. References

The Board reviewed the suggested references provided by ABC for the BNS exam. Mr. Green moved to approve the references with the addition of rules and regulations. Motion carried.

Item H. Staff Reports

1. Staff presented a report on the November 2013 exam results (**Attachment 3**).
2. Staff presented the Environmental Protection Fund Processing Update. Staff informed the Board that applications are processed with 5 days of receipt and renewals are processed within ten days of receipt due to issues with the citizenship requirement.
3. Staff provided a listing of Continuing Education Activities approved since the last Board Meeting (**Attachment 4**).
4. Ms. Dodd updated the Board on the posting of the FTC manager's position.

Mr. Green moved to adjourn the meeting. Motion carried. The meeting was adjourned at 11:25 am, January 9, 2014.

Approved April 3, 2014

Alan Cranford, Chairman

MINUTES
Water and Wastewater Operator Certification Board
April 3, 2014

Board Members Present:

Mr. Alan Cranford, Chairman
Mr. Randal Braker
Ms. Jennifer Dodd
Mr. Darryl Green
Dr. Larry Moore

Others Present:

Ms. Sherry Messick, Certification Program Coordinator, Murfreesboro, TN
Ms. Gloria Lillard, Certification Secretary, Murfreesboro, TN
Ms. Stacie Bush Williams, Smokey View Campground, Dandridge, TN
Mr. Steve Palmer, Lake Cove Resort, Dandridge, TN
Mr. Eric Watts, Operator, Nashville, TN
Ms. Anna Rollins, Division of Water Resources, Nashville, TN
Mr. David Money, Division of Water Resources, Columbia, TN

The meeting convened at 9:30 a.m.

Item A: **Approval of the Minutes**

1. Dr. Moore moved to approve the minutes of the January 9, 2014 Board meeting as amended.
 Motion carried.

Chairman Cranford suspended the agenda to allow member of the audience to address the Board.

5. Ms. Stacie Williams addressed the Board requesting an upgrade in her Small Water System certificate to a Grade I Water Treatment and Grade I Distribution System due to the incorrect classification of her campground.
 Ms. Anna Rollins and David Money with the Division of Water Resources addressed the board regarding the classification of the small water systems.

Dr. Moore moved to upgrade her license to a WT1 and give her one year to get her DS1 license. Dr. Moore amended his motion to upgrade all Small Water Systems impacted to Grade I Water Treatment Plant Operator certificates and to allow one year to obtain the Grade I Distribution

System certificate by examination. Ms. Dodd recused herself from voting on the motion. Motion carried.

6. Mr. Eric Watts, requested the Board to grant an extension for his Grade IV Wastewater Treatment Plant Operator's certificate and to allow for late renewal payment for the certificate. Mr. Braker moved to grant an extension of time for continuing education until 9/30/2014 and to allow Mr. Watts to renew at the standard rate. Motion carried.

Item B: **Applications for Certification by Examination**

Ms. Messick presented the approval, deny and no recommendation lists of applicants for certification by examination.

1. Applicants Recommended for Approval

Mr. Green moved accept staff recommendation and to approve the applicants on the "Recommendation to Approve" listing (Attachment A) to sit for the May examination. Motion carried.

2. Applicants Recommended for Disapproval

Mr. Braker moved to accept staff's recommendation and to disapprove the applicants on the "Recommendation to Disapprove" listing to sit for the May examination. Motion carried.

3. Request for Late Application Review

- a) **Mr. Brian Rose**, with Town of Monteagle requested acceptance and approval of his application for WT3 examination after the deadline. Dr. Moore moved to accept and approve the applicant to sit for the May examination. Motion carried.
- b) **Mr. Joel K. Johnson and Mr. Lance C Wright**, with Shelbyville Power, Water and Sewer requested acceptance and approval of their applications for DS2 examination after the deadline. Mr. Braker moved to accept the applications and approve the applicants to sit for the May examination. Motion carried.
- c) **Mr. Christopher B. Luss** with the Memphis Maxson WWTP requested acceptance and approval of his application after the deadline. Mr. Braker moved to accept the applications and approve the applicant to sit for the May examination. Motion carried.
- d) **Mr. Christopher Bryant**, with Accurate Energetic System requested acceptance and approval of his application for SWS examination after the deadline. Mr. Green moved to accept the application and approve the applicant to sit for the May examination. Motion carried.

4. **The "No Recommendation" listing (Attachment C) was reviewed.**

- a) Operating experience

Mr. Phillip R. Bassett, City of Atlanta and Chattanooga, applied for CS2 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried

Mr. Travis W. Howell, City of Columbia, applied for CS2 examination. Mr. Greene moved to approve the applicant to sit for the examination. Motion carried.

Mr. Charles D. Hudgens, Metro Water Services applied for WT4 examination. Dr. Moore moved to disapprove the applicant to sit for the examination. Motion carried.

Ms. Jessica Langstaff, UT-Battelle ORNL, applied for WW3 examination. Mr. Greene moved to approve the applicant to sit for the examination. Motion carried.

Mr. Michael C. Patrick, City of Chattanooga Moccasin Bend WWTP, applied for WW4 examination. Mr. Braker moved to disapprove the applicant to sit for the examination. Motion carried.

Mr. Norman C. Smith, City of Mitchellville, applied for CS2 examination. Mr. Braker moved to approve the applicant to sit for examination. Motion carried.

Mr. Charles D. Vinyard, City of Grand Junction, applied for BNS examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.

- b) Training activities completed for operating experience that were completed after the application deadline.

The applicants listed below asked the Board to accept the completion of training activities after the application deadline, to be used for operating experience and grant approval to sit for the examination.

Mr. Jared W. Dunbar, Huntingdon Public Utilities applied for CS2 examination.

Mr. William A. Pollock, Murfreesboro Water & Sewer applied for WW4 examination.

Mr. Deannie E. Watkins, Rutherford Water System applied for WT2 examination.

Mr. Green moved to accept the training and to approve the applicants to sit for the examination pending successful completion of the training classes. Motion carried.

- c) The applicants listed below reviewed by the Board had operating experience at non-classified treatment facilities:

Mr. Geoffrey Overman, Tyson Foods applicant for WW3 examination.

Mr. Terry J. Shaputis, General Mills, applicant for WW2 examination.

Mr. Stephen Warf, Johns Manville, Inc. applicant for WW1 examination.

Mr. Green moved to approve the applicants to sit for the examination. Motion carried.

- d) The applicant listed below was reviewed by the Board for the requirement of high school diploma.

Mr. Mike G. Henley, City of Ridgetop applicant for CS1 examination. Mr. Green moved to disapprove the applicant to sit for exam because the high diploma does not meet the requirements set in board policy. Motion carried.

Item C: **Recommendations for Certification by Reciprocity**

1. Staff presented listing of applicants to be approved for certification by reciprocity. (Attachment D)

Mr. Braker moved to approve the listing of applications to be approved for reciprocity. Motion carried.

2. Staff presented a listing of applicants with no recommendation for certification by reciprocity. Mr. Brent Stauffer applicant for WW4 by reciprocity. Mr. Braker moved to disapprove the application for certification by reciprocity. Motion carried.

Item D: **Requests for Board Consideration**

1. Requests for Time Extension to Acquire a Certified Operator
 - a. Hiwassee College requested an extension of time to retain a Grade I Distribution System Operator. Dr. Moore moved to grant an extension of time until May 31, 2014. Motion carried.
2. Extension of time to acquire continuing education.
 - a. Mr. Robert Valentine requested an extension of time to meet the continuing education requirements for is WW4 certificate. Mr. Braker moved to grant the extension of time until September 30, 2014. Motion carried.
 - b. Mr. Charles Thomas requested an extension of time to meet continuing education requirements for his WW3 and DS2. Mr. Thomas provided proof of completion of all required training. Mr. Green moved to approve the extension to time and to allow Mr. Thomas to renew the certificates at the standard rate. Motion carried.
 - c. Mr. Robert Davis's request for an extension was moved to from the January to the April meeting to allow Mr. David to provide addition information regarding the request. No additional information was received. Mr. Braker moved to deny the request for an extension of time. Motion carried.
3. Requests for upgrade.
 - a. Stacie Bush Williams – Smokey View Campground- was addressed in previous action.
4. Standard Renewal Fee Variance Request. None
5. Other requests
 - a. Mr. Eric Watts – addressed in previous action.

Item E: **Board Discussion**

1. 2015 Examination Dates

Staff suggested May 7, May 8 and November 5 and November 6, as the 2015 for the examination dates. Mr.Braker moved to approve these dates. Motion carried.

2. Rules

Ms. Dodd updated the Board on progress of re-numbering of the rules.

3. Examination Discussion

- a. DS1 – no issues
 - b. DS2 – replace question 47
 - c. WT1 – replace 26 and 42
 - d. WT2 – replace questions 3, 53, 69 and 104
 - e. WT3 – replace 55, 129 and 140. Correct questions 66
 - f. WT4 – replace 24, 25, 46, 63, and 144. Correct 131
 - g. CS1 exam replace questions 10 and 48.
 - h. CS2 - exam: replace questions 73 and 76
 - i. WW1 - no issues
 - j. BNS exam - correct typographical error in questions 100.
 - k. WW1 exam; no issues
 - l. WW2 exam - replace questions 3, 21, 41, 77
 - m. WW3 – replace 3, 21 and 77. Correct 41
 - n. WW4 replace 43, 60 , 87 149, correct typographical error on
- Dr. Moore moved to request replacement questions. Motion carried.

The Board requested to review the replacement questions.

4. The Board requested staff to email the board policies for their review and to add policy review as a topic for at the July meeting.
5. The Board discussed offering web based certification examinations. Staff will work ABC and TDEC's Division of Information Systems to determine the cost of the testing.

Item F. Staff Reports

1. Environmental Protection Fund Processing Update.
Staff informed the Board that applications are processed generally within two weeks or 10 (ten) days of receipt and that of the renewal cards are being delayed due to the new requirement to provide proof of citizenship.
2. Continuing Education Activities Update. Training activities approved since the January 9, 2014 Board meeting were provided to the Board (Attachment E).

The meeting adjourned at 12 noon.

Approved July 17, 2014

Alan Cranford, Chairman

MINUTES
Water and Wastewater Operator Certification Board
April 22, 2014

Board Members Present:

Mr. Alan Cranford, Chairman
Mr. Randal Braker
Mr. Darryl Green
Ms. Jennifer Dodd

Others Present:

Mr. Brandon Hulette, Director, Fleming Training Center, Murfreesboro, TN
Ms. Sherry Messick, Certification Program Coordinator, Murfreesboro, TN
Ms. Gloria Lillard, Certification Secretary, Murfreesboro, TN
Ms. Stacie Bush Williams, Smokey View Campground, Dandridge, TN
Ms. Anna Rollins, Division of Water Resources, Nashville, TN

The meeting convened at 9:30 a.m.

Item A Rulemaking Hearing Rules

The Board reviewed the Rulemaking Hearing Rules and the comments and responses from the public hearing and the comment period. A public hearing was held April 8, 2014.

Mr. Braker moved to adopt the Rules. Motion carried.

The roll call vote of Board members was as follows:

Mr. Braker	Yes
Mr. Cranford	Yes
Mr. Green	Yes
Ms. Dodd	Yes

Mr. Braker moved to rescind the April 3, 2014 motion upgrading all Small Water Systems impacted by the incorrect classification of the facility to Grade I Water Treatment Plant Operator certificates and allowing one year to obtain the Grade I Distribution System certificate by examination. Motion carried.

Ms. Dodd moved to adjourn. Motion carried.

Meeting adjourned 10:10am.

Approved July 17, 2014

Alan Cranford, Chairman

MINUTES
Water and Wastewater Operator Certification Board
October 2, 2014

Board Members Present:

Mr. Alan Cranford, Chairman
Mr. Darryl Green, Vice Chairman
Mr. Randal Braker
Ms. Jennifer Dodd

Others Present:

Mr. Michael Patrick, City of Chattanooga, Chattanooga, TN
Mr. Brad Trout, Certified Operator, Chapel Hill, TN
Ms. Kim Jameson, Tennessee Hills Campground, Murfreesboro, TN
Mr. Mark Wells, Cleveland Utilities, Cleveland, TN
Mr. Brandon Hulette, Director, Fleming Training Center, Murfreesboro, TN
Ms. Gloria Lillard, Administrative Secretary Certification Program, Murfreesboro, TN
Ms. Sherry Messick, Certification Program Coordinator, Murfreesboro, TN

The meeting convened at 9:30 a.m.

Mr. Cranford suspended the agenda and turned the meeting over to Vice Chairman, Green to allow for review of the Board's Bylaws. Mr. Braker moved to strike the language "No member may serve in an officer position for more than two consecutive terms." from Article V of the Bylaws. Mr. Braker's motion was provided in writing. In accordance with the Board Bylaws, the Board will vote on the motion at the January 22, 2015 meeting.

Mr. Braker moved to suspend the rules and allow Mr. Cranford to serve as chairman. Motion carried. Mr. Cranford serves as chairman the remainder of the meeting.

Item A: Approval of the Minutes

1. Approval of the July 17, 2014 Minutes
Mr. Green moved to approve the minutes of the July Board meeting. Motion carried.

Mr. Cranford suspended the agenda to allow persons in attendance, which wished to address the Board to do so.

Mr. Michael Patrick, City of Chattanooga addressed the Board in regard to his application for Grade IV Wastewater Treatment Operator examination. Mr. Patrick requested the Board consider providing certification for managers. No action was taken

Mr. Brad Trout addressed the Board requesting an extension of time to meet the continuing education requirements for his Grade III Water Treatment and Grade II Distribution System Operator certifications. Mr. Braker moved to grant an extension of time until November 30, 2014 to meet the continuing education requirement. Motion carried.

Ms. Kim Jameson addressed the Board requesting an upgrade in her SWS certification to WT and DS1 due to incorrect classification of the facility. Mr. Green moved to table the request until the January 2015 Board meeting and to request verification of the number of connections from the Columbia Environmental Field Office. Motion carried.

Mr. Mark Wells addressed the Board regarding his application for DS2 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.

Ms. Melanie Thomas with Applied Measurement Professionals Inc. provided a presentation on the computer based testing services.

Ms. Christie Ball with Columbia Southern University presented information on the University's online degree programs and potential for a learning partnership with FTC.

Item B: Board Bylaws- Addressed in previous action.

Item C. Applications for Certification by Examination

1. Staff Recommendations

- a. Staff presented a listing of applications recommended to be approved for the exam. Mr. Green moved to accept staff's recommendation on the approval listings. Motion carried.
- b. Staff presented listing of application recommended to be disapproved. Mr. Braker moved to accept staff recommendations on disapprove listing with the exclusion of Jesse Ellis, who will be added to the approve list. Motion carried. (Attachment A)

2. The results of the "No Recommendation" list review are as follows:

- a. **Mr. Dennis Allison** submitted an application for DS2 examination. Mr. Green moved to disapprove the applicant to sit for examination. Motion carried.
- b. **Mr. Jimmy Breeden** submitted an application for WT2 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.
- c. **Mr. William J. Brownfield** submitted an application for WT1 examination. Mr. Braker moved to disapprove the applicant to sit for the examination. Motion carried.
- d. **Mr. Donald L. Crotts** submitted an application for CS2 examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.
- f. **Mr. Anthony Devers** submitted an application to sit for CS2 examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.
- g. **Mr. Gerald R. Erwin** submitted an application for WW4. Mr. Braker moved to approve the applicant to sit for the examination. Motion carried.
- h. **Mr. Joseph P. Miller** submitted an application to sit for CS2 examination. Mr. Braker moved to approve the applicant to sit for the examination. Motion carried.
- i. **Mr. Michael Patrick** submitted an application for WW4 examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.

- j. Matthew Rye submitted an application to sit for DS2 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.
- k. Mr. Spencer Smalley submitted an application to sit for WW4 examination. Mr. Braker moved to approve the applicant to sit for the examination. Mr. Green abstained from voting. Motion carried.
- l. Mr. Tommy Thacker submitted an application to sit for WW3 examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.
- m. Mr. Chris Thomas submitted an application to sit for WT4 examination. Mr. Green moved to disapprove the applicant to sit for the examination. Motion carried.
- n. Mr. Dustin Tucker submitted an application to sit for WW4 examination. Mr. Braker moved to approve the applicant to sit for the examination. Motion carried.
- o. Mr. Charles Vineyard submitted an application to sit for Cs2 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.
- p. Mr. Mark Wells submitted an application to sit for DS2 examination. Handled in previous action.

The following applicants submitted training activities, completed after the application deadline and before the Board meeting date:

- a. Mr. Billy Cowles applicant for the WT4 examination
- b. Mr. Mike Mitchell applicant WT4 examination
- c. Mr. Ridge Nunley applicant for the WT4 examination
- d. Mr. Todd Sillivant applicant for the WT4 examination
- e. Mr. Robert Summers applicant for the WT4 examination

Mr. Green moved to approve the following applicants pending completion of the required training activities prior to the examination. Motion carried.

The following applicant submitted operating experience gained at non classified treatment plants

- a. Mr. Donnell Bunch, applicant for WW1 examination. Mr. Braker moved to approve the applicant for examination. Motion carried.
- b. Mr. Jamie Dutch, applicant for WW3 examination. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.
- c. Mr. John Motes, applicant for WW4. Mr. Green moved to approve the applicant to sit for the examination. Motion carried.
- d. Mr. Edward Wilson, applicant for WW1. Mr. Braker moved to approve the applicant to sit for the examination. Motion carried.

Requests for Late Acceptance of Applications

The following applicants requested the Board to accept and approve their applications after the application deadline:

- a. Mr. James Miller submitted an application for WW4 examination after the deadline. Mr. Green moved to approve the applicant to sit for the November 2014 examination. Motion carried.

- b. Mr. Joseph Howell submitted an application for WT2 examination after the deadline. Mr. Green moved to approve the applicant to sit for the November 2014 examination. Motion carried.

Item D: Recommendations for Certification by Reciprocity

Staff presented a listing of 5 operators requesting to be approved for certification by reciprocity. (Attachment C)

Mr. Braker moved to approve the applications for certification by reciprocity. Motion carried.

Item E: Requests for Board Consideration

1. Requests for Time Extension to Acquire a Certified Operator. None
2. Extension of time to acquire continuing education.
 - a. Mr. Roger Cooper submitted a request for an extension of time to meet the continuing education requirements for his SWS certificate. Mr. Green moved to grant an extension of time until November 30, 2014. Motion carried.
 - b. Mr. Joe McMahan requested an extension of time to meet the continuing education requirements for his WW4 certificate. Ms. Dodd moved to approve the request and grant an extension of time until November 30, 2014. Motion carried.
 - c. Mr. Brad Trout handled in previous action.
3. Renewal Fee Variance Request – Payment after the deadline None
4. 2014 Rule Change –Upgrade Requests
The following operators filed requests for upgrades of their SWS certification as a result of the 2014 rule change:
 - a. Suzanne Holbrook, Greenlee Campground
 - b. Jana Touton, Natchez Trace Wilderness PR
 - c. Allison Hutson, Fancher’s Willow Branch Campground
 - d. Michael Bunch, Douglas Lake Campground
 - e. Randal Sikes, Terry Point Campground

Mr. Braker moved to upgrade the five operators to WT1 and DS2 certificates. Motion carried.

- f. Kim Jameson, Tennessee Hills Campground - Handled in previous action.

Item F: Board Discussion

1. Prison Program
Mr. Hulette updated the Board on developing a formalized program for testing and certification of inmates with the Department of Corrections.
2. Exams
Mr. Hulette updated the Board on progress with the implementation of online exams.
3. Rules
Mr. Hulette informed the Board that any modifications of the rules that might be required for online testing would be available by the January 2015 meeting.

Item G: Staff Reports

1. Environmental Protection Fund Processing Update. The response time for applications is about 5 days and 409 applications were processed.
2. Continuing Education Activities Update. Training activities approved since the July 17, 2014 Board meeting were provided to the Board (**Attachment 3**).
3. Administrative Update
Mr. Hulette updated the Board on the status of vacant positions at Fleming Training Center.

Mr. Green moved to adjourn. Motion carried.

The meeting adjourned at 12:25 P.M.

Approved on January 22, 2015

Darryl Green, Vice Chairman

ATTACHMENT 2-CONTINUING EDUCATION

APPROVED TRAINING FOR THE JANUARY 9, 2014 BOARD MEETING							
Course #	Activity	Provider	Contact	Cert	Hours	Date Approved	Location and Date Conducted
14003	Disaster Management for Water and Wastewater Utilities	TEEX	Jim Sipe	Any	12	September 13, 2013	Johnson City, TN, October 21-22, 2013
14004	Voluntary PreTreatment Certification – Level 2	Tetra Tech	Chuck Durham	Any WW or CS	18	October 9, 2013	Bowling Green, KY, November 18-22, 2013
14005	TWWA Technical Tours and Water Loss and Ice Piggging	TWWA	Joe Russell	Any	4	October 9, 2013	Clarksville, TN, November 14, 2013
14006	Globally Harmonized System of Chemical Labeling and Safety Data Sheet Training	FTC	Amanda Carter	Any	3	October 9, 2013	Murfreesboro, TN, November 18, 2013
14007	24 Hour Hazmat	TAUD	Brent Ogles	Any	24	October 10, 2014	Murfreesboro, TN, September 23-25, 2014
14008	AMR/AMI Technology	TAUD	Brent Ogles	Any DS	6	October 10, 2013	Murfreesboro TN and Knoxville TN, May 6, 2014 and August 21, 2014
14009	Blackflow Preventer Repair Class	TAUD	Brent Ogles	Any	6	October 10, 2013	Jackson, Chattanooga, Knoxville and Murfreesboro TN, February 14, April 1, May 13, and June 29, 2014
14010	Bacteriological Sampling and Monitoring	TAUD	Brent Ogles	Any WT or DS	12	October 10, 2013	Johnson City, Murfreesboro, Jackson, Clarksville, Knoxville and Chattanooga TN, April 8-9, April 23-24, May 7-8, July 1-2, July 15-16, and October 21-22, 2014
14011	Cross Connection Control Basic Workshop	TAUD	Brent Ogles	Any	12	October 10, 2013	Murfreesboro, Clarksville, Jackson, Chattanooga, Kingsport, Knoxville, Murfreesboro, Memphis, Murfreesboro, Chattanooga, Knoxville, and Murfreesboro, Jan 8-10, Jan 20-31, Feb 11-13,

							March 5-7, March 19-21, April 9-11, April 16-18, June 11-13, July 9-11, July 16-18, Sept 3-5, and Sept 17-19, Oct 1-4 and Nov 12-14, 2014
14012	Cross Connection Renewal Workshop	TAUD	Brent Ogles	Any	6	October 11, 2013	Murfreesboro, Memphis, Clarksville, Jackson, Chattanooga, Kingsport, Knoxville, Murfreesboro, Memphis, Murfreesboro, Chattanooga, Knoxville, Murfreesboro, Jackson, Memphis and Murfreesboro, Jan. 7, Jan. 22, Jan 28, Feb 10, March 4, March 18, April 8, April 15, June 10, July 8, July 15, Sept 2, Sept 16, Sept 30, Oct 20, Nov 10, 2014
14013 A-C	Chemical Handling and Safety	TAUD	Brent Ogles	Any CS or DS, Any WT or WW, Any	6	October 11, 2013	Murfreesboro, TN, January 21, 2014, January 22, 2014,
14014	Liquid Chemical Handling and Safety	TAUD	John Shadwick	Any	6	October 11, 2013	Murfreesboro, TN, January 22, 2014
14015	Chemical Handling and Safety	TAUD	John Shadwick	Any WT or WW	6 or 12	October 11, 2013	Murfreesboro, TN, January 22-23, 2014
14016	Chemical Oxidation	TAUD	John Shadwick	Any	18	October 11, 2013	Murfreesboro, TN, June 10-12, 2014
14017	Chemical Oxidation for Distribution and Collection Systems	TAUD	John Shadwick	Any CS or DS	6	October 11, 2013	Johnson City, TN, June 12, 2014
14018	Chemical Oxidation for Water and Wastewater Operations	TAUD	John Shadwick	Any WT or	12	October 11, 2013	Murfreesboro, TN, June 10-11, 2014

				WW			
14019	Collection Systems Issues and Update	TAUD	Brent Ogles	Any CS	6	October 11, 2013	Jackson, Knoxville, and Murfreesboro, TN, Feb 20, March 20, and Sept 11, 2014
14020	Chlorine Safety Training	TAUD	Brent Ogles	Any	6	October 11, 2013	Murfreesboro, TN, June 3, 1024
14021	Confined Space Advanced (MOST) Training	TAUD	Brent Ogles	Any	12	October 14, 2014	Murfreesboro, TN, April 2-3, 2014
14022	Confined Space Training	TAUD	Brent Ogles	Any	6	October 14, 2014	Chattanooga, Jackson, Knoxville, Johnson City and Murfreesboro, TN, Jan 23, June 5, August 19, September 3, and September 23, 2014
14023	Wastewater Cram Session	TAUD	Brent Ogles	Any WW	12	October 14, 2013	Knoxville and Murfreesboro, TN, April 28-May1, 2014 and November 3-6, 2014
14024	Water Cram Session	TAUD	Brent Ogles	Any WT	12	October 14, 2013	Knoxville and Murfreesboro TN, April 28-April 31, and November 3-5, 2014
14025	Collection Cram Session	TAUD	Brent Ogles	Any CS	6	October 14, 2014	Knoxville and Murfreesboro, TN, April 28 - 31, 2014 and November 3-5, 2014
14026	Distribution Cram Session	TAUD	Brent Ogles	Any	6	October 14, 2013	Knoxville and Murfreesboro, TN, April 28-31 and November 3-5, 2014
14027	Crane Safety/Qualified Rigger & Signal Person	TAUD	Brent Ogles	Any	12	October 14, 2013	Murfreesboro and Aloc, TN, March 31-April 1 and August 26-27, 2014
14028	Emergency Operations Training	TAUD	Brent Ogles	Any	6	October 14, 2013	Murfreesboro, Clarksville, Jackson, Chattanooga, Knoxville and Gray, TN, June 4, July 9, July 10, August 26, August 27, August 28, 2014
14029	Leak Detection: New Technologies and Approaches	AWWA	Terry Taylor	Any DS	1.5		Webinar, Oct. 9, 2013
14030	Fundamentals of Water Distribution	TAUD	Brent Ogles	Any DS	30	October 22, 2013	Murfreesboro, Gray, Jackson, Jackson, Murfreesboro and

							Knoxville, January 6-10, March 3-7, March 24-, September 8-12, September 8-12 and Sept 15-19, 2014
14031	Fundamentals of Wastewater	TAUD	Brent Ogles	Any WW	30	October 22, 2013	Murfreesboro, TN, March 3-7 and August 11-15, 2014
14032	Fundamentals of Water Treatment	TAUD	Brent Ogles	Any WT	30	October 22, 2013	Morristown, Murfreesboro, Jackson, Knoxville, Murfreesboro and Jackson TN, Feb 10-14, Feb 25-28, March 24-28, August 11-15, August 18-22 and Sept 8-12, 2014
14033	Hazard Communication/TN Right to Know	TAUD	Brent Ogles	Any	4	October 22, 2013	Murfreesboro, TN, June 25 and August 25, 2014
14034	Knowledge Based Exam Competition	TAUD	Brent Ogles	Any	1	October 22, 2013	Lebanon, TN, May 22, 2014
14035	Flagger Safety Training and Certification	TAUD	Brent Ogles	Any CS or DS	4	October 22, 2013	Jackson and Murfreesboro, TN, June 6, and June 26, 2014
14036	Fundamentals of Collection Systems	TAUD	Brent Ogles	Any CS	30	October 22, 2013	Murfreesboro, TN, February 24-28 and July 28-August 1, 2014
14037	Introduction Hydrant Setting, Maintenance and Troubleshooting	TAUD	Brent Ogles	Any DS	6	October 22, 2013	Jackson, Knoxville and Murfreesboro, TN,
14038	Introduction to Cyber Security in the Water and Wastewater Industry	TAUD	Brent Ogles	Any	6	October 22, 2013	Murfreesboro, TN, July 22, 2014
14039	Lockout/Tagout	TAUD	Brent Ogles	Any	4	October 22, 2013	Murfreesboro, TN, June 25, 2014
14040	Mapping Technologies	TAUD	Brent Ogles	Any CS or DS	6	October 22, 2013	Murfreesboro and Knoxville, TN, may 27, and July 31, 2014
14041	10 Hour OSHA Safety Training	TAUD	Brent Ogles	Any	10	October 22, 2013	Murfreesboro, TN, May 29-30, 2014
14042	OSHA Record Keeping	TAUD	Brent Ogles	Any	4	October 22, 2013	Murfreesboro, May 30, 2014

14043	Practical Math for Distribution Operators	TAUD	Brent Ogles	Any DS	18	October 22, 2013	Murfreesboro, Knoxville, Jackson and Murfreesboro, TN, March 25-27, April 1-4, August 19-21, and Sept 30-Oct 2, 2014
14044	Practical Math for Wastewater	TAUD	Brent Ogles	Any WW	18	October 22, 2013	Murfreesboro, TN, Feb 11-13 and July 15-17, 2014
14045	Practical Math for Water Operators	TAUD	Brent Ogles	Any WT	18	October 23, 2013	Murfreesboro, TN, January 14-15, and September 2-4, 2014
14046	Pumps and Motors - Advanced	TAUD	Tony Wyatt	Any	18	October 23, 2013	Murfreesboro, TN, August 26-28, 2014
14047	Pumps and Motors - Introduction	TAUD	Tony Wyatt	Any	6	October 23, 2013	Murfreesboro, August 26, 2014
14048	Pumps and Motors Intermediate	TAUD	Tony Wyatt	Any	12	October 23, 2013	Murfreesboro, TN, August 26-27, 2014
14049	SDWA Update for All Water Treatment Operators	TAUD	John Shadwick	Any WT	6	October 23, 2013	Cookeville, Lawrenceburg, Murfreesboro, Knoxville, Johnson City, Jackson and Chattanooga, TN, March 19, April 9, October 1, November 19, December 3, December 3, and December 10, 2014
14050	SDWA Update for Distribution System Operators	TAUD	John Shadwick	Any DS	6	October 23, 2013	Cookeville, Lawrenceburg, Murfreesboro, Knoxville, Johnson City, Jackson and Chattanooga, TN, March 20, April 10, October 2, November 20, December 4, December 4 and December 11, 2014
14051	SDWA for Grade 3 and 4 Water Treatment Plant Operators	TAUD	John Shadwick	WT3 or WT4	6	October 23, 2013	Cookeville, Lawrenceburg, Murfreesboro, Knoxville, Johnson City, Jackson and Chattanooga, TN, March 18, April 8, September 30, November 18, December 2, December 2, and December 9, 2014
14052	TOSHA Basic Safety Training	TAUD	Brent	Any	6	October	Knoxville and Murfreesboro,

			Ogles			23, 2013	TN, July 30, and September 29, 2014
14053	Trench Excavation Training	TAUD	Brent Ogles	Any CS or DS	6	October 23, 2013	Chattanooga, Jackson, Knoxville, Gray and Murfreesboro, TN, January 22, June 4, August 20, September 4 and September 22, 2014
14054	Wastewater and Water NPDES Lab Quality Control	TAUD	Brent Ogles	Any WT or WW	6	October 23, 2013	Jackson, Knoxville, and Murfreesboro TN, February 19, March 19, and September 10, 2014
14055	Water Loss: Assessment and Solutions	TAUD	Brent Ogles	Any DS or WT	6	October 23, 2013	Murfreesboro, Jackson and Knoxville TN, March 24, April 24, and May 14, 2014
14056	Water Loss Control Workshop	TAUD	Brent Ogles	Any DS or WT	6	October 23, 2013	Murfreesboro, Jackson, Johnson City and Knoxville, TN, September 30- October 1, October 2-3, October 6-7, October 8-9, 2014
14057	Water Quality After the Meter & Customer Complaints	TAUD	Brent Ogles	Any WT or DS	6	October 23, 2013	Murfreesboro, TN, February 20, 2014
R14058	Activated Sludge I	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14059	Activated Sludge II	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14060	Aerobic and Anerobic Sludge Digestion	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14061	Ammonia, PH and Chlorine	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14062	Air Stripping and Carbon Adsorption	Approved Environment	Ann Bersbach	Any WT or WW	1.0	October 25, 2013	Online, Repeated

R14063	Biological Nitrogen Removal	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14064	Biochemical Oxygen Demand Concept and Treatment	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14065	BOD, DO and COD	Approved Environment	Ann Bersbach	Any WW	1.0	October 25, 2013	Online, Repeated
R14066	Chemistry I/Water Chemistry	Approved Environment	Ann Bersbach	Any WW or WT	1.0	October 28, 2013	Online, Repeated
R14067	Chemistry II/The Periodic Table	Approved Environment	Ann Bersbach	Any WW or WT	1.0	October 28, 2013	Online, Repeated
R14068	Clarifiers Optimization	Approved Environment	Ann Bersbach	Any WW	1.0	October 28, 2013	Online, Repeated
R14069	Disinfection by Chlorine	Approved Environment	Ann Bersbach	Any WW or WT	1.0	October 28, 2013	Online, Repeated
R14070	Drinking Water Production	Approved Environment	Ann Bersbach	Any WT	1.0	October 28, 2013	Online, Repeated
R14071	Filtration	Approved Environment	Ann Bersbach	Any WW or WT	2.0	October 28, 2013	Online, Repeated
R14072	Final Effluent I	Approved Environment	Ann Bersbach	Any WW	1.0	October 28, 2013	Online, Repeated
R14073	Final Effluent II	Approved Environment	Ann Bersbach	Any WW	1.0	October 28, 2013	Online, Repeated
R14074	Membrane Technology	Approved Environment	Ann Bersbach	Any WW or WT	1.0	October 29, 2013	Online, Repeated
R14075	Lab Procedures for Plant	Approved	Ann	Any	1.0	October	Online, Repeated

	Control	Environment	Bersbach	WW		29, 2013	
R14076	Laboratory Terms, Equipment and Sampling	Approved Environment	Ann Bersbach	Any WW or WT	1.0	October 29, 2013	Online, Repeated
R14077	Odor Control	Approved Environment	Ann Bersbach	Any WW	1.0	October 29, 2013	Online, Repeated
R14078	Maintenance II/Pumps	Approved Environment	Ann Bersbach	Any WW	1.0	October 29, 2013	Online, Repeated
14079	Operation and Control of a Wastewater Treatment Plant	Approved Environment	Ann Bersbach	Any WW	1	October 29, 2013	Online, Repeated
14080	Energy Management Workshop for Small Water Systems	Dawn Nall	Dawn Nall	Any	6	October 29, 2013	Knoxville, TN, December 4, 2013
R14081	Ozone Disinfection	Approved Environment	Ann Bersbach	Any	1	October 30, 2013	Online, Repeated
R14082	Parasites and Pathogens	Approved Environment	Ann Bersbach	Any	1	October 30, 2013	Online, Repeated
R14083	Primary Treatment	Approved Environment	Ann Bersbach	Any WW	1	October 30, 2013	Online, Repeated
R14084	Industrial Waste Treatment I	Approved Environment	Ann Bersbach	Any WW	1	October 30, 2013	Online, Repeated
R14085	Industrial Waste Treatment II	Approved Environment	Ann Bersbach	Any WW	1	October 30, 2013	Online, Repeated
R14086	Removing Metals from Wastewater	Approved Environment	Ann Bersbach	Any WW	1	October 30, 2013	Online, Repeated
R14087	Safety	Approved Environment	Ann Bersbach	Any WT or WW	1	October 31, 2013	Online, Repeated

R14088	Settleability & Loss of Solids	Approved Environment	Ann Bersbach	Any WW	1	October 31, 2013	Online, Repeated
R14089	Sludge Stabilization Versus Sludge Conditioning	Approved Environment	Ann Bersbach	Any WW	1	October 31, 2013	Online, Repeated
R14090	Solids Dewatering	Approved Environment	Ann Bersbach	Any WW	1	October 31, 2013	Online, Repeated
R14091	Solids Handling	Approved Environment	Ann Bersbach	Any WW	1	October 31, 2013	Online, Repeated
R14092	The Microlife	Approved Environment	Ann Bersbach	Any WW or WT	1	October 31, 2013	Online, Repeated
R14093	Trickling filters and RBCS	Approved Environment	Ann Bersbach	Any WW	1	October 31, 2013	Online, Repeated
R14094	Understanding Wastewater Mathematics	Approved Environment	Ann Bersbach	Any WW	1	November 1, 2013	Online, Repeated
R14095	UV Disinfection	Approved Environment	Ann Bersbach	Any WW or WT	1	November 1, 2013	Online, Repeated
R14096	Wastewater Preliminary Treatment	Approved Environment	Ann Bersbach	Any WW	1	November 1, 2013	Online, Repeated
R14097	Wastewater Mathematics Practice Problems	Approved Environment	Ann Bersbach	Any WW	1	November 1, 2013	Online, Repeated
	Maintenance I/Boiler Feed Water	Approved Environment	Ann Bersbach		1	NOVEMBER 1, 2013	Not Approved, Repeated
14098	Middle Tennessee Forum on Geographic Information Systems	TNGIC	Jason Duke	Any CS or DS	12	November 1, 2013	Murfreesboro, TN, November 6-7, 2013
R14099	Multiple Choice Questions	Approved	Ann	Any	1	November	Online, Repeated

		Environment	Bersbach	WW		1, 2013	
14100	Process Instrument Verification	Hach Company	Marvel Schulze	Any	6	November 5, 2013	Murfreesboro, TN, January 28, 2014
14101	Simplified Methods for Nutrient Testing	Hach Company	Marvel Schulze	Any WW	6	November 5, 2013	Murfreesboro, TN, January 30, 2014
14102	Analysis for Corrosion Control Parameters	Hach Company	Marvel Schulze	Any	6	November 5, 2013	Murfreesboro, TN, January 29, 2014
14103	Pumper & Cleaner Expo	Cole Inc.	Julie Gensler	Any CS	6	November 6, 2013	Indianapolis, Indiana, February 24-27, 2014
14104	Activated Sludge Process	TX Water Utilities Association	Malcom Cowdin	WW3	20	November 12, 2013	Arlington, TX, May 13-17, 2013
14105	TAWWA/WEAT Texas Water 2013 Conference	TAWWA/WEAT	Malcolm Cowdin	WT3	5.5	November 12, 2013	Galveston, TX, April 9-12, 2013
14106	Competent Person Confined Space Entry	Alliance Water	Mike Dougherty	WT4	6	November 6, 2013	Columbia, MO, August 12, 2013
14107	NASSCO Pipeline Assessment and Certification Program	NASSCO	Sukhendu Majumdar	CS2	6	November 8, 2013	Memphis, TN, August 21, 2013
14108	Collection Systems: Optimize System Operations	WEF	Terry Taylor	Any CS	2	November 12, 2013	Online, November 6, 2014
14109	A Practical Guide to Variable Speed Pumping	NCRWA	Greg Hall	WT2	1.0	November 12, 2013	Greensboro, NC, May 16, 2012
14110	Disaster Preparedness-All Hazards Webcast	AWWA/TXWARN	Malcolm Cowdin	WT3	2.0	November 12, 2013	Online, June 28, 2013
14111	Wastewater Treatment	TEEX	Robert Taylor	WW3	20	November 12, 2013	Kerrville, TX, April 11, 2013
14112	HAWOPER Field Emergency Response Refresher	KUB UT	Walter Idol	Any	8	December 6, 2013	Knoxville, TN, July 10, 11 and 29, 2013
14113	2013 Water Quality Technology Conference & Expo	AWWA	Leah Bang	Any WT or DS	29	November 14, 2013	Long Beach, CA, November 3-7, 2013
R14114	Instrumentation	AWWA	Leah Bang	Any WT or DS	6	November 14, 2013	Online, Repeated
R14115	Revised Total Coliform Rule	AWWA	Leah	Any		November	Online, Repeated

			Bang	WT or DS		13, 2013	
R14116	Underground Utility Systems Level 1	AWWA	Leah Bang	Any DS		November 14, 2013	Online, Repeated
R14117	Underground Utility Systems Level 2	AWWA	Leah Bang	Any DS		November 14, 2013	Online, Repeated
R14118	Underground Utility Systems Level 3	AWWA	Leah Bang	Any DS	60	November 14, 2013	Online, Repeated
14119	Globally Harmonized System Training	TAUD	Brent Ogles	Any	3	November 13, 2013	Monteagle, Jackson and Knoxville, TN, November 13, 20, and 21, 2013
R14120	Chlorination 101	TLC	Melissa Durbin	Any	8	November 14, 2013	Online, Repeated
R14121	Chlorination 202	TLC	Melissa Durbin	Any	16	November 13, 2013	Online, Repeated
R14122	Chlorination 404	TLC	Melissa Durbin	Any	30	November 14, 2013	Online, Repeated
14123	TWWA Lower East Fall Meeting	TWWA	Glenn Fraley	Any	3	November 19, 2013	Chattanooga, TN, November 21, 2013
14124	Heartsaver, CPR AED, First Aid	American Heart Association	Laurie Fowler	WW1	6	November 21, 2013	Luray, VA, January 24, 2012
14125	Understanding Activated Sludge	Virginia Rural Water	Laurie Fowler	WW1	7	November 21, 2013	Mount Jackson, Virginia, November 14, 2013
14126	Trenching & Excavation - NUCA Competent Person		Joy Shular	Any CS or DS		November 22, 2013	Knoxville, TN, October 16, and 17, 2013
14127	Confined Space Training	City of Murfreesboro & Northern Safety	Terry Taylor	Any	5	November 25, 2013	Murfreesboro, TN, November 7, 2013
14128	Drinking Water membrane Technology Workshop	GE	Ken Reynolds	WT4	15	December 2, 2013	San Diego, CA, September 23-25, 2013
14129	Inspection, Operation & Maintenance of Water Storage	State of Missouri	Mike Douthert	DS2	6.5	December 2, 2013	O'Fallon, MO, May 14, 2013

	Tanks		y				
14130	Hazard Communications/Chemical Safety/GHS Update	Bronson Gibbs	Bronson Gibbs	CS or DS	1	December 10, 2013	Clarksville, TN, November 16, 2013
14131	Water Treatment CE Seminar	FTC	Shannon Pratt	Any WT	6	December 17, 2013	Murfreesboro, TN, February 18, 2014
14132	Wastewater CE Seminar - Day 1	FTC	Shannon Pratt	Any WW	6	December 17, 2013	Murfreesboro, Jackson, Chattanooga, Memphis, Knoxville, Elizabethton and Murfreesboro TN, February 20, February 25, April 1, May 13, June 10, August 26, and September 16, 2014
14133	Wastewater CE Seminar - Day 2	FTC	Shannon Pratt	Any WW	6	December 17, 2013	Jackson, Chattanooga, Memphis, Knoxville, Elizabethton and Murfreesboro TN, February 26, April 2, May 14, June 11, August 27, and September 17, 2014
14134	Collection System CE Seminar	FTC	Shannon Pratt	Any CS	6	December 17, 2013	Murfreesboro, Jackson, and Chattanooga TN, February 21, February 27, and April 3, 2014
Not approved	Disasters! Hurricanes and Business Continuity Planning	CH2M Hill	Dea Larson	Not approved			
Not Approved	Facility Security: Guns, Gates and Guards	CH2M Hill	Dea Larson				

APPROVED TRAINING FOR THE APRIL 3, 2014 BOARD MEETING

Course #	Activity	Provider	Contact	Cert	Hours	Date Approved	Location and Date Conducted
14135	Safe Handling of Chemicals	TAUD	Brent Ogles	Any	3	January 6, 2014	Knoxville, Nashville, Jackson, Lewisburg and Crossville TN, June 11, June 23, July 9, July 23 and August 20, 2014

14136	Pumper and Cleaner Expo	Cole International	Julie Gensler	Any CS	16	January 6, 2014	Indianapolis, IN February 26-27, 2014
14137	Anaerobic Sludge Digestion	Dr. Larry Moore-City of Memphis	Larry Moore	Any WW	4	January 17, 2014	Memphis, TN, January 21, 2014
14138	Preliminary Treatment, Primary Treatment, & Calculations	Dr. Larry Moore - City of Memphis	Larry Moore	Any WW	4	January 17, 2014	Memphis, TN, January 23, 2014
14139	Community-Based Water Resiliency	US EPA	Thomas Nushat	Any	5	January 17, 2014	Murfreesboro, TN, January 22, 2014
14140	Backflow Prevention Assembly Repair Class	FTC	Dennis Conger	Any	6	January 17, 2014	Murfreesboro, TN, March 7, 2014 and September 19, 2014
14141	FEMA- Intro to Incident Command, Introduction NIMS, Introduction National Response	FEMA	William O. Hall	WW4	9	January 17, 2014	Online, January 14, 16, 17, 2014
14142	EPA Safe Drinking Water Act Training	TEEX	James Fischer	Any WT or DS		January 23, 2014	Jackson, Columbia and Chattanooga TN, April 15, 16, and 17, 2014
14143	Distribution System Seminar	FTC	Shannon Pratt	Any DS	6	January 24, 2014	Murfreesboro, TN, February 19, 2014
14144	NCWOA Advanced Day	NCWOA	Ward Milenski	WT4	6	January 28, 2014	Raleigh, NC, September 25, 2013
14145	ARWA 34rd Annual Technical Training Conference	AL Rural Water	Gary Coates	WW2	5	January 28, 2014	Montgomery, AL, March 11-14, 2012
14146	ARWA - BOAZ Technical Training on Pumps, Panels & VFD	AL Rural Water	Troy Chambers	WT3	7.0	January 28, 2014	Boaz, AL, May 30, 2012
14147	2013 Back to the Basics	TTL, Inc.	Troy Chambers	WT3	5.5	January 28, 2014	Haleyville, AL, March 27, 2013
14148	Water Jam 2012	VA AWWA	Stephen Matoska	WT3	6	January 28, 2014	Virginia Beach Virginia, September 10-13, 2012
14149	Water Jam 2013	VA AWWA, WEF	Stephen Matoska	WT3, WW4	1 WT, 5 WW	January 28, 2014	Richmond, VA, September 9-12, 2013

14150	8-Hour Hazardous Waste Operations	CH2MHill	Stephen Matoska	WT3	1.5	January 29, 2014	Richmond, VA, March 8, 2012
14151	Industrial Waste & Pretreatment Conference	VA WEF	Stephen Matoska	CS2	6	January 29, 2014	Charlottesville, VA, March 4-5, 2013
15152	Data Quality and Validation - Part 2	WEF	Stephen Matoska	WW4	2.0	January 29, 2014	Online, January 9, 2013
14153	Flushable or Not? Dispersing the Non-Dispersible	WEF	Stephen Matoska	WW4		January 29, 2014	Online, June 19, 2013
14154	Process Control for Biological Nutrient Removal	WEF	Stephen Matoska	WW4	2	January 29, 2014	online, May 29, 2013
14155	Using TOC to Replace BOD Requirements	WEF	Stephen Matoska	WW4	2	January 29, 2014	online, August 7, 2013
14156	MWEA & MO AWWA Joint Annual Meeting	MWEA MO AWWA	Shawn Middendorf	WW4	10	January 29, 2014	Osage Beach, MO, March 25-26, 2013
14157	Electronic Discharge Monitoring Report (eDMR)	MO Dept Natural Resources	Shawn Middendorf	WW4	5	January 29, 2014	Jefferson City, MO, October 8, 2013
14158	Hazwoper Refresher	ATA	Jerry Goodman	CS2	6	January 29, 2014	Tullahoma, TN, October 28, 2013
14159	Fall Operations Symposium	MO Rural Water Association	Gary C. Johnson	WW4	10	January 29, 2014	Lake Ozark, MO, Oct 31- Nov 1, 2013
14160	Wastewater and Collection CE Seminar	City of Gatlinburg	Dale Phelps	Any CS or WW	6	January 29, 2014	Gatlinburg, TN, February 27, 2014
14161	Water Treatment Day 1 CE Seminar	FTC	Shannon Pratt	Any WT	6	February 4, 2014	Chattanooga, TN, March 4, 2014
14162	Water Treatment Day 2 - CE Seminar	FTC	Shannon Pratt	Any WT	6	February 4, 2014	Chattanooga, Memphis, Elizabethton, March 5, April 2, and June 26, 2014
14163	Distribution CE Seminar	FTC	Shannon Pratt	Any DS	6	February 4, 2014	Chattanooga, TN, March 6, 2014
14164	Disaster Management for Water and Wastewater Utilities	TEEX	Charles Boddie	Any	12	February 6, 2014	Nashville, TN, November 7-8, 2013

14165	Force Main Condition Assessment Part 1: Choosing the Right Technology	WEF	William Davidson	CS2	2	February 6, 2014	Online, February 5, 2014
14166	Pretreatment CE Seminar	FTC	Shannon Pratt	Any WW or CS	6	February 6, 2014	Jackson, Knoxville and Murfreesboro, TN, June 18, July 16, and July 30, 2014
14167	Wastewater Characteristics, Laboratory Testing and Analysis	Dr. Larry Moore - City of Memphis	Dr. Larry Moore	Any WW	4	February 10, 2014	Memphis, TN, February 11 and 13, 2014
14168	2014 TAUD Technology Conference	TAUD	Brent Ogles	Any	1-12	February 10, 2014	Gatlinburg, TN, March 12-14, 2014
14169	E/One Grinder Pump Repair School	WASCON, INC	Jonathan Cummings	Any CS	6	February 11, 2014	Livingston, TN, December 16, 17, 2013
14170	Work Zone Traffic Control	TTAP	Kenny Wiggins	Any CS or DS	6	February 13, 2014	Aloca, TN, March 12 & 13, 2014
14171	Work Zone Traffic Control/Flagging	TTAP	Frank Brewer	Any CS or DS	6	February 13, 2014	Knoxville, Jackson, Nashville, Memphis, Chattanooga, January 7, February 20, 28, April 3, 29, 2014
14172	TWWA Technical Session	TWWA	Glenn Fraley	Any	2	February 20, 2014	Aloca, TN, February 20, 2014
R14173	Wastewater Microbiology & Process Control Part 2	CEUPLAN	William Edgar	Any WW	2	February 21, 2014	online, Repeated
14174	Activated Sludge Process Control Workshop	Tyson Foods,	Tommy Thorsen	WW4	12	February 21, 2014	, April 16-18, 2014
14175	Drinking Water Rules Seminar	TDEC	Erich Webber	Any DS or WT	3	February 24, 2014	Knoxville, TN, April 4, 2014
R14176	Water Loss Control	CEUPlan	William Edgar	Any DS or WT	2.0	February 24, 2014	online, repeated
R14177	Introduction to Cross Connection	CEUPlan	William Edgar	Any	2.0	February 24, 2014	Online, Repeated
R14178	Basic Chemistry & Laboratory	CEUPlan	William	Any	1.0	February	Online, Repeated

	Techniques		Edgar	WT or Ww		24, 2014	
R14179	Math for Water Plant and Distribution	CEUPlan	William Edgar	Any WT or DS	1.0	February 24, 2014	Online, Repeated
14180	CPR/AED	City of Clarksville	Bronson Gibbs	Any	4	February 25, 2014	Clarksville, TN, February 12, 2014
14181	SCADA-Managing Your Most Critical Cyber Asset	AWWA	Jeff Corder	Any WT or DS	2	February 26, 2014	online, December 13, 2014
14182	SC AWWA Southeastern Technology Transfer Conference	SC AWWA	Linten Atkins	WT4	7.5	February 26, 2014	Greenville, SC, January 30-31, 2014
14183	KY/TN Work Zone Traffic Control/Flagging	KY/TN AWWA	Jack Lyle	Any CS or DS	6	February 26, 2014	Murfreesboro, TN, April 16, 2014
14184	Excavation and Trenching Safety	City of Clarksville	Bronson Gibbs	Any CS or DS	3	February 26, 2014	Clarksville, TN, February 11, 2014
14185	Water Distribution/Treatment Course	Al Rural Water	Phillip Palmer	WT4, DS2	15 for Water and 15 for Distribution	February 26, 2014	Rogersville, AL, June 3, August 27, 2013
14186	Nitrogen Removal Process	Boxer Environmental	James Carter	WW4	6	February 28, 2014	Atlanta, GA, November 6, 2013
14187	Phosphorus Removal	Boxer Environmental, Inc	James Carter	WW4	6	February 28, 2014	Atlanta, GA, December 11, 2013
14188	Level 1 Voluntary Pretreatment Certification Course	KY/TN WEA	Chuck Durham	Any WW or CS	16.5	March 4, 2014	Bowling Green, KY, March 10-13, 2014
14189	Introduction to Chlorine Analysis	Hach	Marvel Shultz	Any WT	4	March 11, 2014	Chattanooga, and Memphis TN, April 17, and August 28,

							2014
R14189	Corrosion Management	CEU Plan	William Edgar	Any DS or WT	4	March 5, 2014	Online , Repeated
R14190	Thermal Controls	CEU Plan	William Edgar	Any WT or WW	2	March 5, 2014	Online, Repeated
R14191	Introduction to Mechanical Seals	CEU Plan	William Edgar	Any	1	March 5, 2014	Online, Repeated
R14192	Mechanical Seal Failures	CEU Plan	William Edgar	Any	1	March 5, 2014	Online, Repeated
R14193	Nuts, Bolts and Gaskets - Part One	CEU Plan	William Edgar	Any	1	March 5, 2014	Online, Repeated
R14194	Introduction to GIS	CEU Plan	William Edgar	Any DS or CS	1	March 5, 2014	Online, Repeated
R14195	Wastewater Treatment - Basics Course	Train 2 Retain Resources, LLC	Melissa Brothers	Any WW	18	March 5, 2014	Online, Repeated
14196	WT Day 1 CE Seminar	FTC	Shannon Pratt	Any WT	6	March 13, 2014	Memphis, TN, April 1, 2014
14197	WT Day 2 CE Seminar	FTC	Shannon Pratt	Any WT	6	March 13, 2014	Memphis, TN, April 2, 2014
14198	DS CE Seminar	FTC	Shannon Pratt	Any DS	6	March 13, 2014	Memphis, TN, April 3, 2014
14200	Non-Dispersibles, National and Local Perspectives	KY/TN WEA	Valerie Lucas	Any CS	1	March 13, 2014	Webinar, March 26, 2014
14201	Chemical Spill Response Training	Sigma Consulting	Chris Pappas	Any	8	March 13, 2014	Dandridge, Knoxville, Jackson, and Murfreesboro TN, April 14, 2014, April 15, 2014, April 16, 2014 and April 17, 2014
14202	Wastewater Treatment Update and Review	UT-MTAS	Brett Ward	Any WW	6	March 13, 2014	Cookeville, TN, March 25, 2014
14199	NUCA Confined Space Entry Training	Athens Utilities	Craig Brymer	Any	6	March 13, 2014	Athens, TN, March 13, and March 20, 2014

		Board					
14203	Operator Expo	TAUD	Tony Wyatt	Any	6	March 19, 2014	Lebanon, TN, May 22, 2014
Not Approved	New Orleans – History of Stormwater Pumping	CEUPlan					
APPROVED TRAINING FOR THE JULY 17, 2014 BOARD MEETING							
Course #	Activity	Provider	Contact	Cert	Hours	Date Approved	Location and Date Conducted
14204	Pre-Treatment Training	Tyson Foods	David Warren	WW4	12	March 28, 2014	Cummings, GA, February 25-26, 2014
14205	Composite Correction Plan - Phase 1 4th Creek WWTP	KUB	Bernard Maloy	Any WW	4	March 28, 2014	Knoxville, TN, December 6, 2013
14206	HDPE - Pipe Training	Consolidated Pipe	David Jenkins	Any CS or DS	6	April 1, 2014	Cleveland, TN, April 22, 2014
14207	Barger Precast Conference 2014	C.R. Barger and Sons	Kelly Barger	Any CS or WW	4.5	April 1, 2014	Lenoir City, TN, May 15, 2014
14208	Small Water Systems CE Seminar	FTC	Amanda Carter	Any SWS, WT1, WT2	6	April 15, 2014	Elizabethton, TN, June 24, 2014
14209	Water Treatment CE Seminar - Day 1	FTC	Amanda Carter	Any WT	6	April 15, 2014	Elizabethton, TN, June 25, 2014
14210	Distribution System Seminar - Elizabethton	FTC	Amanda Carter	Any DS	6	April 15, 2014	Elizabethton, TN, June 27, 2014
14211	Manhole Rehabilitation: Tech & Specs	WEF	Terry Taylor	Any CS	2	April 15, 2014	Murfreesboro, TN, April 4, 2014
14212	TAUD Region 10 Meeting	TAUD	Joe Bafford	WT4	2	April 21, 2014	Chattanooga, TN, February 26, 2014
14213	Activated Sludge Introduction	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, March 18, 2014
14214	Activated Sludge Introduction - 2	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, March 25, 2014

14215	Activated Sludge Microbiology	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, April 15, 2014
14216	Activated Sludge Process Goals & Data	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, April 17, 2014
14217	Activated Sludge Process Control & Process Calculations	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, May 13, 2014
14218	Activated Sludge Troubleshooting	City of Memphis	Dr. Larry Moore	Any WW	4	April 24, 2014	Memphis, TN, May 15, 2014
14219	Fundamentals of Erosion Prevention and Sediment Control Workshop	TDEC	Marvin Russell Blevins	DS2	7	April 24, 2014	Chattanooga, TN,
14220	Going Green Continuing Education Training	State of KY - DCA	Jeff Kinder	WW4	12	April 24, 2014	Pineville, KY, March 20-21, 2014
14221	2014 Neptune Water Meter and Fire Hydrant Road Show	Southern Pipe	Chris Wiseman	Any DS	6	April 25, 2014	Nashville, TN, April 29, 2014
14222	Wastewater Engineering' Regulations, Changes and Construction Permit Process	MO Dept. of Natural Resources	Mike Dougherty	WW4	5	April 29, 2014	Jefferson City, MO, March 25, 2014
14223	Technical Tours: Lewisburg Water and Wastewater	TWWA	Joe Russell	Any	2 or 4	May 5, 2014	Lewisburg, TN, May 13, 2014
14224	Free Preparedness Tolls & Resources for Drinkign Water and Wastewater Utilities	US EPA	Courtney Sullivan	Any	1.0	May 6, 2014	Online, May 6, 2014
14226	Confined Spaces	City of Clarksville	Bronson Gibss	Any CS or DS	5	May 6, 2014	Clarksville, TN, Aopril 8 - 10, 2014
14225	Automatic Control Valve Application and Operation Training Program	Singer Valve	Carl Plaughter	Any	6 and 6	May 7, 2014	Charlotte, NC, April 30-May1 and April2-3, 2014
14227	2014 ACE - Annual Conference & Expo	AWWA	Leah Bang	Any WT or DS	29	Mqy 6, 2014	Boston, MA, June 8-14, 2014
R14228	Fairbanks Morse Intermediate Pumps Course 1	360 Water - KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
R14229	Fairbanks Morse Intermediate Pumps Course 2	360 Water Inc, KUB	Gordon Baugh	Any DS or	1.0	May 7, 2014	Online, Repeated

				WT			
R14230	Description of Operation High Service Pump Station and Intermediate Pumps, Course 1	360 Water -KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
R14231	Description of Operation High Service Pump Station and Intermediate Pumps, Course 2	360 Water - KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
R14232	Flowserve Horizontal Split-Case Pumps, Course 1	360 Water - KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
R14233	Flowserve Horizontal Split-Case Pumps, Course 2	360 Water-KUB	Gordon Baugh	Any DS or WT	1.0	May 8, 2014	Online, Repeated
R14234	Robicon VFD, Course 1	360 Water - KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
R14235	Robison VFD, Course 2	360 Water - KUB	Gordon Baugh	Any DS or WT	1.0	May 7, 2014	Online, Repeated
14236	Odor Control 101: Successful Strattgies, Innovations, and Technologies	WEF	William Davidson	CS2	2.0	May 9, 2014	Online, May 6, 2014
14237	OSHA Standards for General Industry	Texas A & M	Randy Jones	WW4	30	May9, 2014	Texas City, TX, April 7-10, 2014
R14238	Empro Dry Polymer System Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14239	Duperon Washer Compactor Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14240	Wes Tech Side Channel Screen Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14241	Duperon Flex Rake Bar Screen Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14242	Catepillar Generators Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14243	Anerobic Digesters, Course # 1	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14244	Anerobic Digesters, Course #2	360 Water	Gordon	Any	1.0	May 13,	Online, Repeated

		- KUB	Baugh	WW		2014	
R14245	Anerobic Digester, Course # 3	360 Water	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14246	Anerobic digesters, Course # 4	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 13, 2014	Online, Repeated
R14247	Watson Marlow Chemical Pumps Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14248	SPX Lightin Mixer Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14249	Velodyne Wet Polymer System Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14250	Spirac Shaftless Screw Coveyor Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14251	Patterson Final Effluent Pumps Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14252	Neuros Blowers Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14253	McLanahan Microsand Pumps Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14254	Kruger sludge Scraper collection Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14255	Kruger Actiflo Process Overview Course 1	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14256	Kruger Actiflo Process Overview Course 2	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14257	JDV Turbomixer, Course 1	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14258	JDV Turbomixer, Course 2	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14259	Flygt Submersible Wet Weather Pumps	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14260	Ferric System course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated
R14261	Flygt Drain Pumps Course	360 Water - KUB	Gordon Baugh	Any WW	1.0	May 15, 2014	Online, Repeated

14262	Pretreatment CE Seminar	FTC	Gordon Baugh	Any CS or WW	6.0	May 15, 2014	Murfreesboro, TN, July 30, 2014
14263	Operator Training for the City of Chattanooga	Dr. Larry Moore	Dr. Larry Moore	Any WW or CS	6 or 12	May 19, 2014	Chattanooga, TN, June 18-20, 2014
14264	GE Water & Process Ultrafiltration Membrane Operator and Maintenance Training Program	GE	Jason Headrick	Any WT	37	May 27, 2014	Knoxville, TN, April 7-11, 2014
14265	Treatemnt, Water & Distribution	TWWA	Joe Waldrup	Any DS or WT	12	May 27, 2014	Jackson, TN, June 2-3, 2014
14266	Smart Water for Smart Cities Workshop	Schneider Electric	Chris Gross	WT4	6	May 30, 2014	Atlanta, GA, May 13, 2014
14267	Lateral Assessment & Certification	NASSCO	Rick Irwin	CS2	6	May 30, 2014	Maryville, TN, February 5-6, 2014
14268	GRWA Training and Technical Conference	GA Rural Water	Charles Thomas	WT4	12	June 3, 2014	Jekyll Island GA, May 13-15, 2014
14269	Critical Transmission Main Monitoring-Improvement in Leak Detection	UMI-Mueller	Terry Taylor	Any DS	1	June 6, 2014	Webinar, May 21, 2014
14270	Anaerobic Digester Training	CHA	Scott Lord	Any WW	6 or 12	June 6, 2014	Murfreesboro TN, June 16 and August 7, 2014
14271	TX A&M OSHA 511	TX A&M	Randy Jones	DS2 and WT4	6- DS2 12- WT4	June 6, 2014	Texas City, TX, April 7-10, 2014
14272	Power and Water Emergencies	National Center for Emergency Preparedness	William Oakley Hall	WW4	6	June 11, 2014	Nashville, TN, May 29, 2014
14273	National Developments in the Regulation and Control of Urban Wet Weather Discharges	Wet Weather Partnership - Richmond,	Clure Winfrey	CS2	3	June 12, 2014	Memphis, TN, May 20-22,2014

		VA					
14274	Algae Bioreactors as a Cost Effective Approach for Nutrient Removal	WEF	Terry Taylor	Any CS	2	June 12, 2014	Webinar, April 29, 2014
14275	The Impacts of Nutrient Pollution on Drinking Water Quality - AWWA	AWWA	Terry Taylor	Any DS	1.5	June 13, 2014	Webinar, May 14, 2014
14276	NC Rural Water - System Operations Topics	NC Rural Water	Gary Tipton	DS1	6	June 16, 2014	Newland, NC, June 4, 2014
14277	Introduction to the Incident Command System	CH2MHill	Dea Larsen	Any	1.5	June 17, 2014	Clarksville, TN, July 2014
14278	MWEA/MO-AWWA Joint Annual Meeting	MO AWWA and WEF	Gary Johnson	WT4 and WW4	4 hours WW and 6 hours WT	June 17, 2014	Osage Beach, MO,
14279	KY/TN Water Professionals Conference	KY/TN AWWA WEF	Dorothy Rader	Any	1-14	July 3, 2014	Chattanooga, TN, July 20-23, 2013
14280	Wastewater Treatment and Collection Training	Severn Trent Services	Phil Gioia	WW4	8	June 29, 2014	Bell Chase LA,
14281	Level 3 and 4 Wastewater Training	Severn Trent Services	Phil Gioia	WW4	8	June 19, 2014	Belle Chase LA, February 29, 2012
14282	ACE 14 Water Conference	AWWA	Craig Mullinax	DS2	7.0	July 1, 2014	Boston, MA, June 8-11, 2014
14283	Small Water Systems CE Seminar	FTC	Amanda Carter	Any WT or SWS	6	July 2, 2014	Jackson, TN, July 15, 2014
14284	Water Treatment CE Seminar - Day 1	FTC	Amanda Carter	Any WT	6	July 2, 2014	Jackson, TN, July 16, 2014
14285	Water Treatment CE Seminar - Day 2	FTC		Any WT	6	July 2, 2014	Jackson, TN, July 17, 2014
14286	Distribution Systems CE Seminar	FTC	Amanda Carter	Any DS	6.0	July 2, 2014	Jackson, TN, July 18, 2014

14287	Emergency Manager: An Orientation to the Position	FEMA/EM I	Joel Long	WT4	6	July 2, 2014	Webinar, September 18, 2013
14288	Introduction to Incident Command for Public Works	FEMA/EM I	Joel Long	WT4	3	July 3, 2014	Webinar, September 11, 2014
14289	ICS for Single Resources and Initial Action Incident	FEMA/EM I	Joel Long	WT4		July 2, 2014	Webinar, September 17, 2013
14290	Hazwoper 8 HR Annual Refresher	360training	Joel Long	DS2	8	July 3, 2014	Online, January 3, 2014
14291	Free Preparedness Tolls and Resources for Drinking Water and Wastewater Utilities	EPA	Alan Cranford	Any	1.0	July 8, 2014	Webinar - Murfreesboro, TN, May 6, 2014
Not Approved	Integrated Planing: Affordability & Available Resources	WEF					

APPROVED TRAINING FOR THE OCTOBER 2, 2014 BOARD MEETING

Course #	Activity	Provider	Contact	Cert	Hours	Date Approved	Location and Date Conducted
14291	Free Preparedness Tolls and Resources for Drinking Water and Wastewater Utilities	EPA	Alan Cranford	Any	1.0	July 8, 2014	Webinar - Murfreesboro, TN, May 6, 2014
14292	Small Water Systems CE	FTC	Amanda Carter	SWS, WT1, WT2	6	July 14, 2014	Knoxville, TN, August 5, 2014
14293	Water Treatment Day 1	FTC	Amanda Carter	Any WT	6	July 14, 2014	Knoxville, TN, August 6, 2014
14294	Water Treatment Day2	FTC	Amanda Carter	Any WT	6	July 14, 2014	Knoxville, TN, August 7, 2014
14295	Distribution Systems	FTC	Amanda Carter	Any DS	6	July 14, 2014	Knoxville, TN, August 8, 2014
14296	Bacteriological Lab QA/QC	TAUD	John Shadwick	Any WT or	6	July 14, 2014	Atoka, TN, July 8, 2014

				DS			
14297	Schreiber's 2014 Operator's Seminar	Schreiber LLC	Brian Morrison	WW4	8	July 21, 2014	Trussville, AL, May 22-23, 2014
14298	2014 TNWARN Seminar and Tabletop Exercise	US EPA	Will Keefer	Any	6	July 21, 2014	Nashville, TN, September 17, 2014
14299	Chlorine Safety Handling	DPC Enterprises	Jason Bush	Any	2	July 29, 2014	Nashville, TN, August 6, 2014
14300	WEFTEC 2014 - 87th Annual Technical Exhibition and Conference	WEF	Matt Jones	Any WW or CS	6, 12, 18	July 30, 2014	New Orleans, LA, August 27-October1, 2014
14301	Optimizing Coagulation Using Streaming Current	Chemtrac	Mark Vandiver	Any WT	4	July 31, 2014	Nashville, TN, August 7 and 8, 2014
14302	Introduction to Activated Sludge	Larry Moore	Larry Moore	Any WW	4	August 1, 2014	Memphis, TN, August 19, 2014
14303	Activated Sludge Microbiology	Larry Moore	Larry Moore	Any WW	4	August 2, 2014	Memphis, TN, August 21, 2014
14304	Diaphragm Valve Trouble Shooting and Repair	WASCON	Josh Cravins	Any DS	3	Augus 5, 2014	Gatlinburg, TN, August 15, 2014
14305	TAUD Business of Running a Utility Conference	TAUD	Brent Ogles	Any	3 or 6	August 6, 2014	Gatlinburg, TN, August 13, 14, 2014
14306	August 18, 2014 West Section Training- Day 1	TWWA	Joe Waldrup	Any CS or WW	6	August 11, 2014	Jackson, TN, August 18, 2014
14307	August 19, 2014 - West Section Training - Day 2	TWWA	Joe Waldrup	Any WW	6	August 11, 2014	Jackson, TN, August 19, 2014
14308	TWWA Training September 4, 2014	TWWA	Joe Waldrup	Any	6	August 11, 2014	Murfreesboro, TN, September 4, 2014
14309	Electrical Safety and Lockout Tagout	City of Clarksville	Bronson Gibbs	Any CS or DS	2	August 12, 2014	Clarksville, TN, July 29, July 31, 2014
14310	Bloodborne Pathogens	City of Clarksville	Bronson Gibbs	Any CS or DS	1.0	August 12, 2014	Clarksville, TN, July 29, July 31, 2014
14311	Work Zone Traffic Control	City of Clarksville	Bronson Gibbs	Any CS or DS	2.0	August 12, 2014	Clarksville, TN, August 5-7, 2014

14312	Water Disaster and Emergency Management	City of Clarksville	Bronson Gibbs	Any CS or DS	1.0	August 12, 2014	Clarksville, TN, August 5-7, 2014
14313	Workshop 2 - Energy Management Initiative	TDEC	Kathy Glapa	Any	6	August 14, 2014	Murfreesboro, TN, August 20, 2014
14314	2014 Tools for Water Loss Control Webinar	AWWA	Leah Bang	Any DS or WT	1.5	August 18, 2014	webinar, August 13, 2014
14315	Taming the Energy Hog at Your WWTP	Eco-Tech	David Tucker	WW4	4	August 19, 2014	Nashville, TN, August 26, 2014
14316	10-Hours OSHA Occupational Safety and Health Training	TN Safety & Health Congress	Bridget Powers	WT3	10	August 29, 2014	Nashville, TN, July 22, 2014
14317	Water Industry Backflow Prevention Overview	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, November 13, 2011
14318	Water Industry Backflow Prevention Methods	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, November 12, 2011
14319	Water Industry Combustible & Flammable Liquids	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, January 28, 2012
14320	Water Industry Coagulation, Flocculation and Sedimentation	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, January 28k, 2012
14321	Water Industry compressed Gas Safety	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, February 24, 2012
14322	Water Industry Disaster Preparedness	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, February 24, 2012
14323	Water Industry Confined Space Entry	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, February 25, 2012
14324	Water Industry Working in Extreme Temperatures	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, December 4, 2013
14325	Water Industry Risk Assessment Analysis	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, December 10, 2013
14326	Water Industry Disinfection Basics	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, June 7, 2014
14327	Water Industry Fall Protection	Target Solutions	Ted Cudal	WT3	1.0	August 20, 2014	Online, July 15, 2014
14328	Water Industry Lead Awareness	Target	Ted Cudal	WT3	1.0	August	Online, August 14, 2014

		Solutions				20, 2014	
14329	Blackflow Prevention Assembly Repair Class	FTC	Amanda Carter	Any	6	August 21, 2014	Murfreesboro, TN, September 19, 2014
14330	Small Water Systems CE Seminar	FTC	Amanda Carter	SWS, WT1, WT2	6	August 21, 2014	Murfreesboro, TN, September 9, 2014
14331	Water Treatment Day 1 CE Seminar	FTC	Amanda Carter	Any WT	6	August 21, 2014	Murfreesboro, TN, September 10, 2014
14332	Water Treatment Day 2 CE Seminar	FTC	Amanda Carter	Any WT or DS	6	August 21, 2014	Murfreesboro, TN, September 11, 2014
14333	Distribution Systems CE Seminar	FTC	Amanda Carter	Any DS	6	August 21, 2014	Murfreesboro, TN, September 12, 2014
14334	AWWA- Linking Effective Communication with Technical Solutions	AWWA	Terry Taylor	Any DS or WT	1.5	August 25, 2014	Webinar, August 20, 2014
14335	Link 2013	Schneider Electric	Eddie O'Neill	DS2		September 2, 2014	Loveland, CO March 12-14, 2013
14336	ICS-100 Introduction of Incident Command System	FEMA	Tony Russell	WW3	3	September 2, 2014	Webinar, August 26, 2014
14337	Wastewater Treatment Seminar for Aerated Stabilization Basins	Environmental Business Specialists	Maria Transchina	Any WW	21	September 3, 2014	Mandeville, LA, September 9-11, 2014
14338	AWWA Smart Metering Options	AWWA	Terry Taylor	Any DS	1.0	September 3, 2014	Webinar, August 27, 2014
14339	24-Hour Operations Level Emergency Response Course	UT/CIS	Charles Gluck	Any	12	September 9, 2014	Knoxville, TN, October 25, 2013
14340	GAC 101 with Case Studies and Introduction to Advanced Oxidation	Calgon	Kristi Schneli	September 10, 2014	1.5	September 10, 2014	Nashville, TN, September 10, 2014
14341	GE Users - Ultrafiltration Membrane Technology Workshop	GE	Jim Imrie	WT4	12	September 11, 2014	Nashville, TN, September 7-9, 2014
14342	Wastewater Fundamentals	TAUD	Brent	Any	12	September	Oak Ridge, TN, September 16-

			Ogles	WW		17, 2014	18 and 23-25,2014
14343	Tools for Water Loss	AWWA	Terry Taylor	Any DS	1.5	September 17, 2014	Webinar, September 11, 2014
14344	TNWARN Seminar and Tabletop Exercise	EPA and Horsley Witten Group	Rod Huckabee	Any	6	September 30, 2014	Nashville, TN, September 17, 2014
14345	Hazmat Training	Occupational Solutions	Alan Cranford	Any WT or DS	8	September 16, 2014	Murfreesboro, TN September 16, 2014
14346	Therman Drum Dryer Operator Training	Brown & Caldwell	Charles Boddie	WW4	12	September 25, 2014	Nashville, TN, June 1-17, 2014
14347	Basic Civil Engineering-Sewers and Sewerage	RedVector	Matthew Casey	BNS	1.0	September 29, 2014	Online, August 22, 2014
14348	Sewage Lift Station Design	RedVector	Matthew Casey	BNS	2.0	September 29, 2014	Online, January 28, 2014
14349	Basics of Industrial Wastewater Treatment	RedVector	Matthew Casey	BNS	1.0	September 29, 2014	Online, February 12, 2014
14350	Wastewater: Land Treatment Systems	RedVector	Matthew Casey	BNS	1.0	September 29, 2014	Online, March 13, 2014
14351	Basic Civil Engineering-Sewage Treatment	RedVector	Matthew Casey	BNS	1.0	September 29, 2014	Online, January 30, 2014
B0030	Industrial Waste Treatment Volume 1	California State University, Sacramento Water Programs Office	Chris Heath	Any ww	12	July 28, 2014	Correspondence, Repeated
B0031	Industrial Waste Treatment Volume 2	California State University,	Chris Heath	Any WW	12	July 28, 2014	correspondence, repeated

		Sacramento Water Programs Office					
15001	2014 Water Infrastructure Conference	AWWA	Leah Bang	Any DS or WT	18, 12 or 6	August 6, 2014	Atlanta, GA, October 26-29, 2014
15002	Drinking Water Rules & Surveys	TDEC	Erich Webber	Any DS or WT	3	August 26, 2014	Knoxville, TN, October 24, 2014
15003	2014 Tennessee Backflow Prevention Conference	TBPA	David Risner	Any	8	September 3, 2014	Sevierville, TN, October 16, 17, 2014
15004	E-One Pump Inspection and Repair	Wascon	Justin Roach	Any CS or WW	6	September 4, 2014	Jackson, TN, October 21, 2014
15005	Energy management Initiative - Wave 2 Series 3	TDEC	Kathy Glapa	Any	6	September 11, 2014	Murfreesboro, TN, October 8, 2014
15006	Tractive Force Design for Self-Cleaning Sanitary Sewers	KY-TN WEA	Valerie Lucas	Any CS	1.0	September 17, 2014	Webinar, October 14, 2014

ATTACHMENT 3- CERTIFICATION EXAM RESULTS

May 1 and 2, 2014

EXAM	# EXAMINEES	# PASSING	% PASSING	HIGH SCORE	LOW SCORE	AVERAGE SCORE
SWS	7	6	85.7%	96.0	64.0	84.6
WT1	1	0	0%	62.0	62.0	62.0
WT2	13	4	30.7%	79.13	38.26	60.67
WT3	44	13	29.5%	80.77	36.15	64.63
WT4	33	10	30.3%	83.33	31.33	63.86
DS1	7	3	42.8%	89.00	50.00	71.14
DS2	91	42	46.1%	87.50	37.50	68.17
TOTAL	196	78	39.7%			
BNS	11	8	72.7%	94.00	56.00	73.27
WW1	5	1	20%	80.00	60.00	68.20
WW2	5	1	20%	87.83	53.04	65.39
WW3	43	18	41.8%	95.38	27.69	65.58
WW4	28	7	25.0%	86.00	44.00	65.43
CS1	8	4	50%	91.00	52.00	71.50
CS2	48	33	68.7%	94.17	42.50	74.17
TOTAL	148	72	48.6%			
ALL EXAMS	344	150	43.6%			

November 6 and 7, 2014 Examinations

EXAM	# EXAMINEES	# PASSING	% PASSING	HIGH SCORE	LOW SCORE	AVERAGE SCORE
SWS	8	6	75.0%	92.00	68.00	79.00
WT1	5	1	20.0%	81.00	43.00	64.60
WT2	11	0	0%	66.09	39.13	52.17
WT3	51	22	43.13%	83.08	33.08	66.23
WT4	41	9	21.95%	84.67	41.33	63.07
DS1	6	3	50%	83.00	57.00	70.00
DS2	89	57	45.97%	92.50	39.17	70.21
TOTAL	211	98	62.92%			
(W/O SWS)	203	92	45.32			
BNS	9	6	66.66%	93.00	64.00	75.11
WW1	7	1	14.28%	73.00	52.00	63.00
WW2	6	3	50.0%	84.35	50.42	70.43
WW3	45	16	35.56%	83.85	31.54	62.55
WW4	35	11	31.42%	82.67	36.00	60.53
CS1	7	4	57.14%	89.00	57.00	73.71
CS2	48	33	68.75%	88.33	49.17	73.16
TOTAL	157	74	47.13%			
ALL EXAMS	368	172	46.73%			
(W/O SWS)	360		46.11%			

ATTACHMENT 4

Survey for Water Treatment and Distribution System Operators

1

Title: Survey for WT and DS operators

Published: Oct 28, 2014 10:21 am

Expires: Never expires

Response as of Nov 13, 2014 4:11 pm

Who Responded

visited	324
finished	165

Where they came from

mailings	
Direct Visits	41
Survey for WT Operators	280
Survey for WT Operators	1
Untitled Mailing	2
	324
direct visits	41

What they had to say

What additional operational topics would you like further training in as part of a continued education seminar (1-2 days)? Please select all that apply.

Coagulation and flocculation	50
Corrosion control	44
Disinfection	80
Filtration	47
Fluoridation	28
Laboratory procedures	68
Leak detection	72
Membrane filtration	43
Reservoir management	28
Sedimentation	31
Softening	13
Specialized treatment processes	67
Water quality	70
Water sources and treatment	48

Please list any additional operations: 15

What additional equipment maintenance topics would you like further training in as part of a continued education seminar (1-2 days)? Please select all that apply.

Chemical feed equipment	90
Compressors	25

survey-for-wt-and-ds-operators_(response_summary) (7)

Chlorinators	66
Electrical equipment	52
Filters	52
Meters	69
Pumps	89
Valves	57
Water mains	50

Please list any additional equip: 15

Would you or your fellow operators be interested in attending a 2-3 day class on laboratory practices and QA/QC procedures? The class would show operators how to run standard

Yes	113
No	42

Would you or your fellow operators be interested in attending a class (1-3 days) covering safety in the workplace?

Yes	87
No	69

If you would be interested in additional safety training, please select the topics you would like to see covered. Please select all that apply.

Bloodborne pathogens	46
Compressed gas cylinders	34
Control of hazardous energy/lo	33
Electrical	44
Excavation and trenching	52
Exit routes, emergency action	29
Fall protection	30
Fire protection	16
Hazard communication and Te	40
How to comply with TOSHA tre	56
Machine guarding	10
Material handling	29
Medical, first-aid, including blo	44
Permit required confined space	46
Personal protective equipment	47
Safety and health program mai	29
Stairs and ladders	19
Tools/hand and power tools	38

Please list any additional safet: 7

Would you or your fellow operators be interested in attending a continued education seminar (1 day) that covered the rules, regulations, inspections, and enforcement actions of the

survey-for-wt-and-ds-operators_(response_summary) (7)

Yes	151
No	8

Would you or your fellow operators be interested in attending a continued education seminar (1-2 days) regarding plant and system security?

Yes	108
No	45

If you would be interested in additional plant and system security training, please select all topics that you would like to see discussed.

CyberSecurity	62
Emergency Planning	81
Homeland Security	63
TNWARN	54
Vulnerability Assessment	68

Please list any additional secur	6
----------------------------------	---

Would you or your fellow operators be interested in attending a facility best practices panel discussion as a 1 day continued education seminar?

Yes	103
No	51

survey-for-wt-and-ds-operators_(response_summary) (7)

Attachment 5 Small Water Seminars

\$125

Approved for 6
hours for SWS

State of Tennessee
Fleming Training Center

Fleming Training Center



Your Partner in Clean Water

Small Water Systems Seminar

Course #4200

Tuesday, June 24, 2014

8:30 A.M.—4:30 P.M.

Johnson City Environmental Field Office
2305 Silverdale Rd., Johnson City, TN

8:30 – 8:45	Welcome and Paperwork	
8:45 – 9:15	Maintaining Your Well And Septic Tank	Will Parks TDEC - DWR William.F.Parks@tn.gov
9:15 – 9:45	Source Water Protection	Video
9:45 – 10:00	Break	
10:00 – 11:30	Liquid Assets: The Story of Our Water Infrastructure	Video
11:30 – 12:30	Lunch	
12:30 – 2:00	The Revised Total Coliform Rule	Dawn Taylor TDEC - DWR Dawn1.Taylor@tn.gov
2:00 – 2:15	Break	
2:15 – 3:00	Hypochlorination	Video
3:00 – 4:00	Questions & Discussion	Dawn Taylor

Fleming Training Center
2202 Blanton Drive
Murfreesboro, TN 37129

Phone: 615-898-6507
Fax: 615-898-8064

Topics are subject to change. This seminar has been approved for 6 hours
of continued education toward a Small Water Systems certificate.

If you have any questions call Amanda Carter at (615) 898-6507.

Attachment 6

\$125

Approved for 6
hours for WT

State of Tennessee
Fleming Training Center

Fleming Training Center



Your Partner in Clean Water

Water Treatment Seminar

Course #4201

Tuesday, March 4, 2014

8:30 A.M.—4:30 P.M.

Chattanooga Environmental Field Office

540 McCallie Ave., 1st Floor, Chattanooga, TN

8:30 – 9:30	Globally Harmonized Systems (GHS) - Classification & Labeling of Chemicals	Amanda Carter Fleming Training Center Amanda.Carter@tn.gov
9:30 – 9:45	Break	
9:45 - 11:45	Method Update Rule Hands-on Calibration Curve & MDL for Total Chlorine	Amanda
11:45 – 1:00	Lunch	
1:00 – 2:00	Community-Water Based Resiliency Training	Amanda
2:00 – 2:15	Break	
2:15 – 3:45	Community-Water Based Resiliency Training - continued	Amanda
4:15 –4:30	Questions	

Fleming Training Center
2202 Blanton Drive
Murfreesboro, TN 37129
shannon.pratt@tn.gov
Phone: 615-898-6506

Topics are subject to change. This seminar has been approved for 6 hours of continued education toward a Water Treatment certificate. If you have any questions call Shannon Pratt at (615) 898-6506.

**Attachment 7 Fleming Training Schedule
2014**



Fleming Training Center

2014 Schedule of Courses



2022 Blanton Drive

Murfreesboro, TN 37129

Phone: (615) 898-8090 - Fax: (615) 898-8064

www.tn.gov/environment/water/fleming.shtml



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Cross Connection Control Classes

For full-time employees of public water systems, your fee will only be \$60 for Cross Connection Classes.

2103 Cross Connection Control Basic Workshop

Duration: 3 days
 Class Fee: \$335.00 for class and test

Alcoa	Jackson	Kingsport
April 23-25, 2014 September 10-12, 2014	April 9-11, 2014 October 15-17, 2014	July 30-August 1, 2014

Murfreesboro

January 15-17, 2014 February 5-7, 2014 March 12-14, 2014	May 7-9, 2014 June 18-20, 2014 July 16-18, 2014	August 13-15, 2014 September 24-26, 2014 November 19-21, 2014
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3102 Cross Connection Control Renewal Workshop

Duration: 1 day
 Class Fee: \$170.00 for class and test

Alcoa	Jackson	Kingsport
April 22, 2014 September 9, 2014	April 8, 2014 October 14, 2014	July 29, 2014

Murfreesboro

January 14, 2014 February 4, 2014 March 11, 2014	May 6, 2014 June 17, 2014 July 15, 2014	August 12, 2014 September 23, 2014 November 18, 2014
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3300 Backflow Prevention Assembly Repair Class

Duration: 1 day
 Class Fee: \$125
 Location: Murfreesboro, Fleming Training Center

March 7, 2014 September 19, 2014

Distribution Systems Classes

1113 Distribution Systems Grades 1 & 2

Duration: 4 days
 Fee: \$275.00
Murfreesboro: February 24-27, 2014
 August 25-28, 2014

Collection Systems Classes

1213 Collection Systems Grades 1 & 2

Duration: 4 days
 Fee: \$275.00
Murfreesboro: March 3-6, 2014
 September 2-5, 2014

Laboratory Classes

#2112 Water Treatment Laboratory Week 1

Duration: 5 days
 Fee: \$275
Murfreesboro: June 2-6, 2014

#2212 Wastewater Treatment Laboratory Week 1

Duration: 5 days
 Fee: \$275
Murfreesboro: June 23-27, 2014

#2122 Water Treatment Laboratory Week 2

Duration: 5 days
 Fee: \$275
Murfreesboro: June 16-20, 2014

#2222 Wastewater Treatment Laboratory Week 2

Duration: 5 days
 Fee: \$275
Murfreesboro: July 7-11, 2014

No prerequisite is required. Course #1004, Basic Math, is recommended if the student has difficulty with math.



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Math Classes

1004 Basic Math for Water and Wastewater

Duration: 4 days
Fee: \$275.00
Murfreesboro: March 17-20, 2014
September 22-25, 2014

1212 Applied Math for Collection Systems

Duration: 3 days
Fee: \$225.00
Murfreesboro: April 14-16, 2014
October 20-22, 2014

1112 Applied Math for Distribution Systems

Duration: 4 days
Fee: \$275.00
Murfreesboro: April 14-17, 2014
October 20-23, 2014

1201 Applied Math for Wastewater Treatment

Duration: 5 days
Fee: \$275.00
Murfreesboro: April 21-25, 2014
October 27-31, 2014

1104 Applied Math for Water Treatment Grades 1 & 2

Duration: 3 days
Fee: \$225.00
Murfreesboro: April 21-23, 2014
October 27-29, 2014

1101 Applied Math for Water Treatment Grades 3 & 4

Duration: 5 days
Fee: \$275.00
Murfreesboro: April 21-25, 2014
October 27-31, 2014

Distribution Systems Seminars - Course # 4203		
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Chattanooga March 6, 2014	Elizabethton June 27, 2014	Jackson July 18, 2014
Knoxville August 8, 2014	Memphis April 3, 2014	Murfreesboro February 19, 2014 September 12, 2014

Water Treatment Day 1 Course # 4201	Water Treatment Day 2 Course # 4202	Small Water Systems Course # 4200
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Chattanooga March 4, 2014	Chattanooga March 5, 2014	Chattanooga not offered
Elizabethton June 25, 2014	Elizabethton June 26, 2014	Elizabethton June 24, 2014
Jackson July 16, 2014	Jackson July 17, 2014	Jackson July 15, 2014
Knoxville August 6, 2014	Knoxville August 7, 2014	Knoxville August 5, 2014
Memphis April 1, 2014	Memphis April 2, 2014	Memphis not offered
Murfreesboro February 18, 2014 September 10, 2014	Murfreesboro not offered September 11, 2014	Murfreesboro not offered September 9, 2014

Collection Systems Seminars - Course # 4103		
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Chattanooga April 3, 2014	Elizabethton August 28, 2014	Jackson February 27, 2014
Knoxville June 12, 2014	Memphis May 15, 2014	Murfreesboro February 21, 2014 September 18, 2014

Wastewater Treatment Day 1 Course # 4101	Wastewater Treatment Day 2 Course # 4102
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Chattanooga April 1, 2014	Knoxville June 10, 2014	Chattanooga April 2, 2014	Knoxville June 11, 2014
Elizabethton August 26, 2014	Memphis May 13, 2014	Elizabethton August 27, 2014	Memphis May 14, 2014
Jackson February 25, 2014	Murfreesboro February 20, 2014 September 16, 2014	Jackson February 26, 2014	Murfreesboro not offered September 17, 2014

Wastewater Treatment Classes

1204 Biological / Natural Systems

Duration: 4 1/2 days
Fee: \$275.00
Murfreesboro: March 24-28, 2014
September 29-October 3, 2014

1205 Wastewater Treatment Grades 1 & 2

Duration: 5 days
Fee: \$275.00
Murfreesboro: January 27-31, 2014
August 4-8, 2014

2201 Wastewater Treatment Grades 3 & 4

Duration: 10 days
Fee: \$550.00
Murfreesboro: January 27-31 & February 10-14, 2014
August 4-8 & August 18-22, 2014

3201 Advanced Wastewater Treatment

Duration: 5 days
Fee: \$275.00
Murfreesboro: March 17-21, 2014
September 22-26, 2014

3202 Activated Sludge Workshop

Duration: 3 days
Fee: \$225.00
Murfreesboro: May 28-30, 2014

The Tennessee Department of Environment and Conservation is committed to principles of equal opportunity, equal access and affirmative action. Contact the EEO/AA Coordinator at 1-888-867-7455 or the ADA Coordinator at 1-866-253-5827 for further information. Hearing impaired callers may use the Tennessee Relay Service (1-800-848-0298)

