



**pennsylvania**

DEPARTMENT OF ENVIRONMENTAL  
PROTECTION

Commonwealth of Pennsylvania  
Department of Environmental Protection  
Bureau of Safe Drinking Water

**Three-Year Internal Review Report  
Drinking Water Operator Certification Program  
Calendar Years 2011 – 2013**

Submitted to EPA on July 24, 2014

## **INTRODUCTION**

The purpose of the Drinking Water and Wastewater Systems Operator Certification Program is to protect public health, safety, and the environment and promote the long-term sustainability of the Commonwealth's drinking water and wastewater treatment systems. The 1996 amendments to the Federal Safe Drinking Water Act require States to develop and implement a drinking water Operator Certification Program through rules and funding pursuant to §1419 of the Act. The U.S. Environmental Protection Agency (EPA) provides guidance to the States for periodically conducting reviews of their certification program through both internal and external reviews. EPA recommends that part of the review process consist of internal program reviews every three years and external/peer reviews every five years. States are not required to report on all program elements but rather focus on significant changes to the program.

The contents of this report represent the Pennsylvania Department of Environmental Protection's (DEP) internal program review for calendar years 2011, 2012, and 2013. The DEP review team consisted of supervisors and technical staff in the Certification, Operations, Training, and Technical Assistance Sections as well as the program division chief, who also serves as DEP's representative on the State Board for Certification of Water and Wastewater Systems Operators (Board).

## **STAFFING**

The review team completed the following analysis and activities associated with program staffing resources:

- DEP completed a three-year analysis of Operator Certification Program resources as required under 25 Pa. Code Chapter 302 (Administration of the Water and Wastewater Systems Operators' Certification Program). DEP's Deputy Secretary for the Office of Water Management presented the report to the Environmental Quality Board on November 19, 2013. Staff also shared the report with program stakeholders and posted it on DEP's Website.
- Although the above analysis confirmed the availability of adequate funds, staffing levels have been insufficient over the past three years to meet the statewide demand for operator certification examinations. In late 2013, DEP initiated steps to create complement on the Operator Certification sub-fund, which was established through new fees under Chapter 302. Insufficient complement levels remain a weakness of the Operator Certification Program.
- In late 2011, DEP initiated a major reorganization that affected the duties, responsibilities, and management of the Operator Certification Program. The

reorganization improved program efficiencies through staff training, administrative enhancements, and online computer-based exams. Minor staffing adjustments have continued after the reorganization.

## **BUDGET**

Using the three-year analysis presented to the Environmental Quality Board, the review team completed the following analysis of the program budget:

- The actual Chapter 302 revenues collected during FY '10-11, FY '11-12, and FY '12-13 were \$354,413, \$678,121, and \$918,316, respectively. FY '12-13 revenue includes delinquent annual service fee payments plus 12% interest per annum from FY '11-12. The revenues for FY '13-14 through FY '15-16 are annually projected at \$822,000.
- The actual Chapter 302 expenses during FY '10-11, FY '11-12, and FY '12-13 were \$34,232, \$264,327, and \$631,448, respectively. The projected expenses for FY '13-14, FY '14-15, and '15-16 are \$829,755, \$928,360, and \$964,958, respectively.
- By state fiscal years '14-15 and '15-16, expenses will exceed revenue within the Operator Certification Program. However, surplus revenues from FY '10-11 through FY '12-13 will provide temporary relief for these deficits. DEP recommends retaining the fee schedule currently established in 25 Pa. Code Chapter 302. At this time, DEP recommends no regulatory amendments to modify program fees.

## **TRAINING AND TESTING**

The review team completed the following analysis and activities associated with operator certification training and testing:

- In late 2009, a statewide furlough of Commonwealth employees resulted in a reduction of available exams slots for operators from a three-year average of 1,400 examinees per year to less than 400 examinees. Due to staff training and administrative enhancements, 802, 1,119, and 1,483 examinee slots were provided in calendar years 2011, 2012, and 2013, respectively, thus increasing numbers above the pre-furlough levels. At their August 22, 2012 meeting, the Board unanimously approved a motion that expressed satisfaction with the current number of exams offered.
- Starting in October 2013, DEP pilot tested online exams to supplement the traditional classroom exams. 25 Pa. Code Chapter 302 states that Approved

Examination Providers “will not at any time be in possession of any Department–developed examination materials or examination content.” DEP will maintain possession with the proposed online exam system. In lieu of building a new electronic system, DEP’s current learning management system is used to host exams, and cost savings will ultimately be realized through the elimination of manual exam scoring. The online exam program will expand in 2014.

- DEP developed standard operating procedures on the quality assurance assignments and procedures for operator certification exams delivered in accordance with the Water and Wastewater Systems Operators’ Certification Act and Chapter 302. Exams are reviewed annually after a complete calendar year of testing. Training Section staff members within the Bureau of Safe Drinking Water perform initial reviews and coordinate exam modifications with subject matter experts and the Certification Section.
- DEP created a new Commonwealth Civil Service classification, Water Professional Exam Proctor, and hired 10 wage payroll employees in this classification to assist with exam proctoring across the state. Staff developed standard operator procedures on assignments, procedures, and work flows for DEP staff and wage payroll employees who proctor exams in accordance with the Water and Wastewater Systems Operators’ Certification Act.
- In November 2012, DEP conducted a statewide meeting with Approved Examination Providers to plan certification exams and review exam policies and procedures. DEP frequently communicates with all providers to ensure they remain current with exam offerings and program changes.
- Per § 302.1006 (relating to laboratory supervisor certification), DEP developed a Subclass 15 Laboratory Supervisor exam for individuals responsible for the supervision of testing or analysis of environmental samples and reporting of analytical data for water systems in a Pennsylvania-accredited environmental laboratory. At the December 2013 meeting, the Board approved the exam for its inaugural offering on July 1, 2014.
- DEP revised several key Operator Training Modules to assist operators in preparing for the operator certification exams. To correlate with the Subclass 15 exam, DEP created a laboratory supervisor study guide and classroom training module. The modules were also made available to training providers to deliver in conjunction with DEP. Each module is available from DEP’s Operator Information Center Website at [www.depweb.state.pa.us](http://www.depweb.state.pa.us) (choose “Operator” under DEP Programs A – Z).

- DEP developed and delivered a series of training modules to small system operators in remote areas of the state to help them obtain the knowledge to become certified or obtain the proper certification level. During 2013, 165 community water systems were in violation for not having a certified operator. These systems were targeted for technical assistance in an effort to return them to compliance. Out of the targeted group of systems, 41 operators accepted the assistance and participated in 5 weeks of rigorous operator certification training. On the sixth week, a certification exam was administered. These operators took 155 subclass exams and passed 115. Forty-three systems were returned to compliance, largely as a result of this technical assistance.
- PayPal credit card payment was initiated in mid 2011 for DEP Web-based courses under the Operator Certification Program. Operators can now use credit cards to pay for fourteen Web-based courses covering drinking water and wastewater regulatory topics, including the DEP-required system security course
- The DEP Operator Certification website was overhauled to create a more user-friendly environment.

## **COMPLIANCE AND ENFORCEMENT**

The review team completed the following analysis and activities associated with operator certification compliance and enforcement:

- As part of our primacy requirements, DEP revised the Sanitary Survey inspection checklist used by field staff to ensure all 8 elements of a Sanitary Survey are adequately and consistently evaluated. The Operator Compliance module has been updated to include the Chapter 302 provisions and requirements to ensure water systems employ appropriately certified operators.
- In each of the past three years, DEP mailed an Available Operator Report (AOR)—a snapshot of the information DEP has on record for a system and their available operators—to each water system owner. The annual AOR verification is one of DEP's mechanisms for determining system and operator compliance. Data from the completed AORs was compiled and provided to DEP regional and central office staff for review and use for inspections and investigations, permit/waiver requests, outreach assistance, and other program areas.
- Annually, along with the AOR, DEP mailed a Chapter 302 Annual Service Fee invoice to each water system owner. The latest statistics on fee enforcement

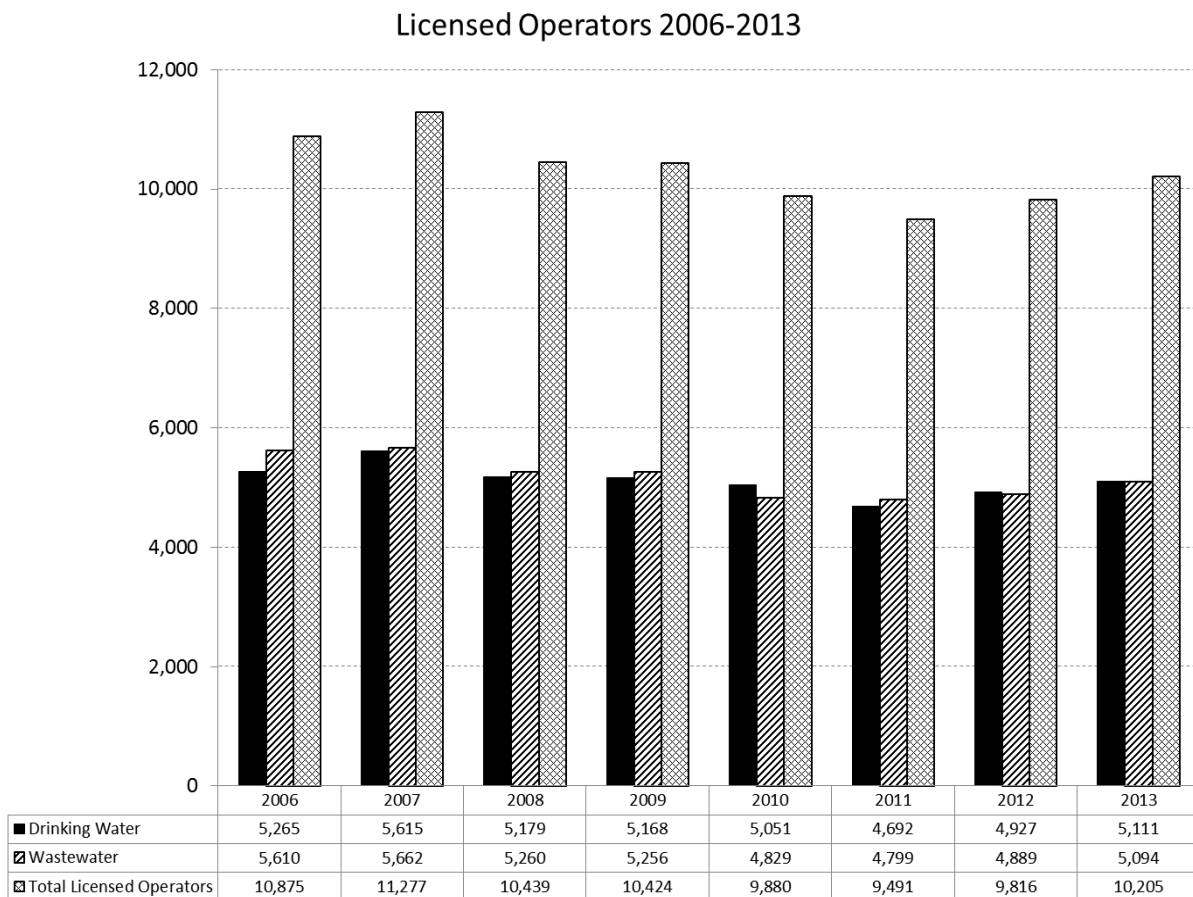
activities are included in DEP's *Annual Report for the Drinking Water Operator Certification Program* for calendar year 2013.

- In 2013, DEP continued with the development of a compliance and enforcement strategy and worked with regional DEP staff to identify systems without a designated available operator. Additionally, DEP contacted the system owners regarding non-compliance and emphasized the potential liability for continued non-compliance. The lack of a final strategy remains a weakness of the Operator Certification Program

**CERTIFIED OPERATOR TRENDS**

Figure 1 provides a chart showing the total number of licensed water and wastewater operators during calendar years 2006 through 2013. During the past three years, it appears that an upward trend has taken root after the decline of the previous four years.

**Figure 1. Number of License Operators in Pennsylvania—2006 through 2013**



## **eFACTS ENHANCEMENTS**

Pennsylvania's Operator Certification Program relies heavily on DEP's internal enterprise data system (eFACTS) to administer examination and certification application processes. eFACTS enhancement and maintenance presents a major workload for DEP staff. Notably, these duties cannot be completed by third-party resources due to the propriety nature and security requirements associated with eFACTS. During 2011 through 2013, numerous enhancements occurred to ensure eFACTS kept pace changing business processes. Additionally, in 2013, eFACTS was enhanced to automate the existing annual fee collection system for Chapter 302. Productivity was improved by partially automating the generation of invoices, tracking of annual fees, and managing Available Operator Reports in lieu of full manual tracking.

## **NEW PROGRAM GUIDANCE**

The review team completed the following activities associated with technical guidance documents for the Operator Certification Program:

- In January 2013, DEP published the *Drinking Water and Wastewater Systems Operator Certification Program Handbook* to assist regional and central office DEP staff, operators, and system owners in understanding program elements.
- In November 2013, DEP published *Board Guidelines* for the State Board for Certification of Water and Wastewater Systems Operators. The document provides the Board and DEP with a framework for implementing and administering the requirements of the Drinking Water and Wastewater Systems Operators' Certification Act and 25 Pa. Code Chapter 302. The guidance applies to all operators and owners of regulated water and wastewater systems, the Board, and DEP.

## **CONCLUSION**

DEP's Drinking Water and Wastewater Systems Operator Certification program expanded its services and support to operators and system owners during calendar years 2011, 2012, and 2013. Numerous improvements occurred in the areas of training, testing, compliance and enforcement, program guidance, and database enhancements. DEP completed a detailed three-year analysis of Operator Certification Program resources and demonstrated adequate funding during the three-year period. Areas of ongoing weakness include inadequate complement levels and the lack of a final compliance and enforcement strategy. DEP will continue to take steps toward addressing these weaknesses during calendar years 2014 and 2015.