
Sunset Review: Evaluation of the State Board of Waterworks and Waste Systems Operators

**Presentation to the
Senate Education, Health, and
Environmental Affairs Committee
and the House Environmental Matters Committee**

**Department of Legislative Services
Office of Policy Analysis
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Presentation Overview

- Background Information on Sunset Evaluation Process and the Board
- Maryland Statutes
- Operator/Facility Tracking
- Labor Market Concerns
- Operator Examination
- Fiscal Status of the Board
- Conclusion

Sunset Evaluation – Process

- Evaluation of the Board of Waterworks and Waste Systems Operators was conducted during 2009 interim
 - The last full evaluation of the board was conducted in 1989
 - A preliminary evaluation conducted in 2008 recommended the board undergo a full review the following year
 - Therefore, this full evaluation was undertaken to assist the review committees in determining whether to reauthorize the board and for what period of time
 - Without legislative action, the board will terminate on July 1, 2011
- Research activities included:
 - interviewing board staff and members;
 - reviewing annual Maryland Department of the Environment (MDE) reports to the Environmental Protection Agency (EPA), board meeting minutes, Maryland law and regulations, literature from professional associations, and federal regulations and water quality data;
 - contacting EPA for regional water data; and
 - participating in a site inspection visit to Backwater Treatment Facility in Baltimore City

State Board of Waterworks and Waste Systems Operators

- Established in 1957
- Consists of 11 members; 3 appointed by the Secretary of MDE and 8 appointed by the Governor
- Board duties include:
 - reviewing and approving applications for operator and superintendent certification and for certification renewal;
 - preparing and giving examinations;
 - hearing appeals concerning certification requirements;
 - investigating reports of fraud or deception in obtaining or using a certificate and unsatisfactory performance in the operation or supervision of a waterworks or wastewater works facility;
 - taking disciplinary action, including the reprimand of a certificate holder or suspension or revocation of a certificate; and
 - recommending regulations for promulgation by the Secretary of the Environment

Snapshot of Board Activities

- Board oversees certified operators and superintendants at five categories of facilities
- In total, the board regulates 3,600 certificate holders with approximately 7,500 certificates
- Board is authorized to issue five types of certificates under statute, although only four are currently issued
- Board receives very few complaints and appears to handle them efficiently

The Practice of Water and Wastewater Treatment

- Water quality standards are largely set by two major federal environmental statutes: the Safe Drinking Water Act and the Clean Water Act
- Operators in both water and wastewater plants control equipment and processes that remove or destroy harmful materials, chemicals, and microorganisms
- Waterworks operators treat water so that it is safe to drink
- Wastewater operators remove harmful pollutants from domestic and industrial waste so that it is safe to return to the environment
- Despite shortage of certified operators, overall water quality appears high but could be improved
- No information is available regarding the potential impact of operator shortage on wastewater facilities

Findings from the Department of Legislative Services Review of Board-related Statutes

- While the board is responsible for certifying operators and superintendents, current statute does not specify who is responsible for enforcing the requirement that all facilities have certified operators or be under the charge of a superintendent
- Officials from MDE and the board agree that MDE is the most suitable entity to handle this responsibility
- MDE already has an enforcement unit that inspects waterworks and wastewater systems, whereas the board does not have its own enforcement unit
- **Recommendation 1 (pg. 13): Statute should be amended to clarify that MDE is the entity responsible for enforcing the superintendent/certified operator requirement.**

Limited Certificates

- Limited certificates were site-specific certificates offered to operators that lacked experience or education for certification
- However, by statute a limited certificate may only be issued to an individual who applied before July 1, 1982
- No limited certificates have been issued since 1982
- There are no active limited certificates. The last limited certificate expired before 2006
- **Recommendation 2 (pg. 13): The statutory provisions related to limited certificates are obsolete and should be repealed.**

Systems/Operator Tracking

- The statute requires all waterworks and wastewater systems to have certified operators and be under the supervision of a superintendent
- Federal regulations and funding support are directed at waterworks, not wastewater systems
- The lack of federal requirements for wastewater systems has led to an imbalance of resources between waterworks and wastewater systems
- MDE has a database capable of tracking information at waterworks, including the presence of certified operators; however, there is no similar database for wastewater systems
- A wastewater systems database would help track data which could be used to analyze whether there is any correlation between system violations and the presence/absence of certified operators

Systems/Operator Tracking (cont.)

- Maryland has made significant commitments towards improving the quality of the Chesapeake Bay, and wastewater is one area contributing to problems in the bay
- **Recommendation 3 (pg. 19): MDE should develop a database for waste systems enforcement personnel with functionality similar to that possessed by officials in the Water Supply Program.**
- Recognizing current budgetary constraints, there are a number of cost effective options available to create a wastewater database for MDE to consider
- Furthermore, federal funding may become available

Board Resources: Administrative Database

- The board's administrative database is outdated
- The age and limited functionality of the administrative database hinder the board's ability to efficiently track operators and facilities
- An upgraded database would also allow the board to more effectively communicate with operators, superintendents, applicants, system owners, and MDE Water Management officials
- **Recommendation 9 (pg. 23): MDE should upgrade the board's administrative database to a modern system that can effectively track operator, superintendent, and facility information. The upgraded database should also be compatible with the board's upgraded web site and MDE enforcement databases.**

Board Resources: Web Site Upgrade

- MDE has indicated that the board's web site is scheduled to be upgraded
- The upgraded web site is intended to serve as a “one-stop shop” resource for operator certification information
- An upgraded web site can be used as a resource for:
 - recruiting new operators to the field;
 - facility owners by providing information on facility requirements;
 - providing the public with information regarding the management of water and wastewater in the State
- **Recommendation 10 (pg. 24): The board should ensure that its web site upgrade includes resources for current operators, prospective operators, facility owners, and the public.**

Labor Market Issues

- Retirement of Baby Boomers Will Exacerbate Situation
 - American Water Works Association, *State of the Industry* report
 - one-third of all supervisors expected to retire by 2013
 - and one-quarter of all operators expected to retire
- Noncompliance High at Small and Noncommunity Systems
 - Department of Labor: median salary \$36,070 – prohibitively expensive
 - Small systems have fewer residents/customers to support full-time operator
- Cost-effective Solution: Circuit Riders
 - Circuit Riders service multiple waterworks or waste systems
 - Do not require a full-time salary from any one system

Circuit Riders

- Use of circuit riders is allowed under EPA regulations and is used in several states, including a small number in Maryland
- **Recommendation 6 (pg. 21):** The board should encourage development of circuit riders to address noncompliance and assist with difficult and worsening labor market conditions, by including links on its new web site to job opportunities.
- **Recommendation 7 (pg. 22):** The board should monitor prevalence of circuit riders to ensure their promotion of circuit riders results only in use at previously noncompliant facilities, and not switching from full-time operators to more inexpensive circuit riders.
- **Recommendation 8 (pg. 22):** The board should ensure that regulations establishing its circuit rider experience crediting policy are adopted promptly.

Enhanced Enforcement

Operator/Superintendent Compliance Not Priority

- MDE inspectors focus on water quality measures
 - Compliance is not one of the hundreds of inspection metrics
- Many facilities are unfamiliar with MDE's \$25 Penalty Authority
 - In Title 12, not Title 4 with other Clean Water Laws
- **Recommendation 11 (pg. 24): MDE should begin using the penalty authority it has long possessed under § 12-504.**

Improving Examination Performance

- Average, long-term examination pass rate in Maryland is 35%
- Board has not found this low pass rate to be an issue
 - Believes higher rates in other states result of “teaching to test”
 - Believes pass rates a private matter; not as important as ensuring operators are properly trained and certified
- Week-long short course attendees achieve higher pass rates
- **Recommendation 12 (pg. 26): The board should continue to support this and similar training opportunities.**

Computer-based Examinations

- Computer-based testing the modern trend
- Could significantly increase pass rates
- Could free board staff to work on other issues
- Will have implications for exam fee revenues
- **Recommendation 13 (pg. 26): Board should ensure that computer-based examinations are available beginning as early as January 2010 and consider additional computer-based testing locations.**

Fiscal Conditions of the Board

- General Assembly policy of self-supporting boards relaxed for certain boards in which industry primarily public employees
- Nevertheless, fee increase appropriate to cover small but persistent gap between fee revenues and board expenditures and support anticipated effect of computer-based exams
- A \$10 increase in triennial certificate renewal fee sufficient
- **Recommendation 14 (pg. 29): The board should continue effort to adjust fees by regulation and monitor whether new factors such as computer-based testing or an increase in the number of certified operators at small facilities will require further adjustments.**

Conclusion

- There is a continuing need for effective oversight of those responsible for delivering drinking water and treating wastewater in Maryland
- The Department of Legislative Services found that the board was efficient, professional, proactive, and responsive throughout the sunset evaluation process
- **Recommendation 15: Extend termination date of the board by 10 years to July 1, 2021, and require the board and MDE to report to the committees on or before October 1, 2011, on the nonstatutory recommendations contained in the report.**