OPERATOR CERTIFICATION REQUIREMENTS

* Objectives:
  * Define: “Certification”
  * Discuss the requirements of State law & regulations as they pertain to certification.
  * We will describe the structure of the MDE certification program, and
  * Identify sources of additional information about certification and examinations
Port of Entry

WaterWorks

Authority
Federal regulation of drinking water quality began in 1914, when the U.S. Public Health Service set standards for the bacteriological quality of drinking water. The standards applied only to water systems which provided drinking water to interstate carriers like ships and trains, and only applied to contaminants capable of causing contagious disease. The Public Health Service revised and expanded these standards in 1925, 1946, and 1962. The 1962 standards, regulating 28 substances, were the most comprehensive federal drinking water standards in existence before the Safe Drinking Water Act of 1974. With minor modifications, all 50 states adopted the Public Health Service standards either as regulations or as guidelines for all of the public water systems in their jurisdiction.
HISTORY OF WASTEWATER TREATMENT IN THE US

- From 1800’s US population grew from 5 million to 75 million
- PRIMARY DEVELOPMENT: COLLECTION SYSTEMS
- PRIMARY PURPOSE: DISEASE PREVENTION
- Pit privies and open ditches replaced by buried sewers: sewered population increased from 1 million in 1860 to 25 million by 1900.
- “Treatment” was mostly dilution into receiving waters
- EARLY MANAGEMENT PRACTICES
- TRENDS: awareness and control of impacts of sewage discharge on receiving waters through standards, regulation, and simple treatment (probably now called “primary”)
- 1887, first biological treatment, an intermittent sand filter, was installed in Medford, Mass.
- 1886, Standards for discharge loading and treatment developed at Lawrence, Mass experiment station and for Chicago, IL (Rudolph Hering)
- 1899, first federal regulation of sewage, Rivers and Harbors Appropriations (“Refuse Act”) prohibited discharge of solids to navigational waters without permit from US Army Corps of Engineers
OVERVIEW OF OPERATOR CERTIFICATION REQUIREMENTS

Objectives:
Define: “Certification”
Discuss the requirements of State law & regulations as they pertain to certification
Describe the structure of the certification program, and
Identify sources of additional information about certification and examinations, MCET, ABC, MRWA and EPA.
Section 12-301: An individual shall be certified by the Board in the appropriate classification before that individual may be as an operator or a superintendent. Section 12-501: A person, or municipal or private corporation may not operate a waterworks, wastewater works or industrial waterworks works unless all of the operators are certified operators.
MARYLAND’S 3-TIERED SYSTEM

- An "Operator"? An individual who participates in the operation of an industrial wastewater works, including collection, control of flow, processing, or discharge of industrial wastewater and effluent. (Not Maintenance)

- A "Superintendent"? An individual who is designated by the employer as the individual who is in responsible charge of the treatment works. "Responsible charge is defined as responsibility for the operation and supervision of all or any part of a works."
Maryland Certification is driven by the process! COMAR 26.06.01.16

- See table 1, 2 and 3 from the certification regulations
- Table 1 = Industrial Wastewater Works
- Table 2 = Wastewater Treatment Plants
- Table 3 = Water Treatment Plants
- *This is not rocket science!*
Class of Water Treatment Plants (Table #3)

Type of Water Treatment Systems

Typical Processes Included in the System

1

Disinfection
Chlorination.

2

Chemical Treatment
Chlorination, pH control, and fluoridation.

3

Simple Iron Removal
Chlorination, pH control, fluoridation, filtration, and iron removal utilizing ion exchange or contact oxidation processes.

4

Complete Treatment
Chlorination, pH control, fluoridation, aeration, coagulation, sedimentation, filtration, and complex iron removal.

5

Site Specific
Site specific - any alternative technology plant not covered under the classification system.

G

No chemical treatment
Well, storage tanks, UV disinfection
# Table 8

## Training Requirements for Operators and Superintendents

Certificate Renewal for 3-Year Renewal Period

<table>
<thead>
<tr>
<th>Class</th>
<th>Industrial Wastewater Works</th>
<th>Wastewater Treatment Plants</th>
<th>Water Collection Systems</th>
<th>Water Treatment Plants</th>
<th>Water Distribution Systems</th>
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<tbody>
<tr>
<td></td>
<td>Operators (1)</td>
<td>Superintendents (3)</td>
<td>Limited and Temporary (4)</td>
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### Notes:

1. For site-specific operator classifications, training units to (To) be determined by the Board on a case-by-case basis.
2. For operators that hold multiple certificates, (Units) units of training may be applied to multiple classifications if the training is approved as defined in Regulation 13.
3. For Superintendents, training units (Appropriate training as) approved by the Board for superintendents are required in addition to (the) their operator's training.
4. Effective January 1, 2006, for all operator categories, except WD, C1 and C2, a minimum of 50 percent of the training units submitted for issuance or renewal of a certificate must be process related.
ROLE OF THE BOARD

- Established by State law
- Sets standards for education, experience and examination
- Issues and renews certificates
- Enforce certification requirements
Wonder if the camera-man survived?
HOW IS THE CERTIFICATION PROGRAM STRUCTURED?

- Types of certificates: Superintendent, Operator, and Temporary Operator (or OIT)
- Categories of certificates: wastewater, water, industrial wastewater, wastewater collection and water distribution
- Classes of certificates 24 total
NUTS & BOLTS OF THE CERTIFICATION PROGRAM

- Obtaining a certificate from the Board – requirements to be satisfied.
- Renewing a certificate – requirements to be satisfied
- Making the process work more smoothly
FOR MORE INFORMATION ABOUT CERTIFICATION, TRAINING AND CONTINUING EDUCATION

- Please visit the MDE web-site... at www.mde.state.md.us
- Visit www.mcet.org
- Visit www.md-rwa.org
WHY IS CERTIFICATION REQUIRED? It’s the LAW! And...

- Delegation of authority for decision making
- Public health and environmental health implications
- Protecting capital investments
- Encourages professional growth & development!
AND FINALLY!
DO WE HAVE ANY QUESTIONS?