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TO: ODW Technical Staff

THROUGH: J. Wesley Kleene, Ph.D., P.E., Director  
Office of Drinking Water

FROM: Mark C. Anderson, Technology Transfer Director  
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SUBJECT: OPERATORS & WATERWORKS CLASSIFICATION - Board for Waterworks  
and Wastewater Works Operators and Department of Health Responsibilities

Key Revisions:

Revisions reflect the name change of the Board for Waterworks and Wastewater Works Operators to the **Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals**, other changes at DPOR, and the Division of Water Supply Engineering to **Office of Drinking Water**.

**Background**

Waterworks operators are licensed by the Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals ("Board"). The Board and its licensing program are created and empowered by Title 54.1, Chapter 1, §§54.1-100 through 54.1-114; Chapter 2, §§ 54.1-200 through 54.1-202; Chapter 3, § 54.1-311; and Chapter 23, §§ 54.1-2300 through 54.1-2302 of the *Code of Virginia*.

The Board consists of seven members. Five are appointed by the Governor: one Class I wastewater works operator, a representative of a waterworks owner, a representative of a wastewater works owner, and a member of the sanitary or environmental engineering faculty of a state university; two serve *ex officio*; the Director of the Office of Water Programs or his designee, and the Executive Director of the State Water Control Board or his designee.

**The Board's duties.**

The Board's primary duties are to "examine operators and issue licenses" (§54.1-2301B, *Code of Virginia*). To this end, the Board is empowered to enact regulations. The most recent revision of the licensing regulations that became effective on February 15, 2001, reflected changes dictated by federal operator certification guidelines. These required all community and NTNC waterworks to have licensed operators and reduced the fees charged for applications and examinations.

The regulations deal primarily with establishing licensing requirements, defining the various classes of waterworks and wastewater works, and setting forth the experience and examination requirements for applicants for licensure. A portion of the regulations deals with standards of practice and discipline. Although the Board's main function is to issue operator licenses to qualified individuals, it is also responsible for enforcing its standards of practice and disciplining those who violate those standards.

**The Department of Professional and Occupational Regulation.** The Board operates through the Department of Professional and Occupational Regulation (DPOR). DPOR provides staff and administrative support (data processing, fiscal management, personnel services, purchasing, central examination administration, etc.) to carry out the Board's program, as well as those of other professional and occupational regulatory boards. The DPOR also maintains a staff of investigators who respond to complaints of violations of law or regulation, and an enforcement staff who administer enforcement actions against violators. Strict procedures are established by state law for conducting disciplinary proceedings against individuals who are charged with violating laws or regulations.

Most of the Board's activities are carried out by DPOR staff. The section is headed by the Assistant Director of the DPOR for the Board for Waterworks and Wastewater Works Operators **and Onsite Sewage System Professionals** and for several other miscellaneous boards, and includes several clerical workers. Liaisons with other sections of the DPOR are coordinated through this section, and this section's staff performs most of the functions related to the review of operator applications for examinations and licensure renewals.

**Legal requirements for operators.** Under the definitions contained in the Board's regulations, a waterworks that would be required to have a licensed operator is any community water system or nontransient noncommunity water system classified by the Department of Health. This includes consecutive systems. Nonclassified systems are not required to have licensed operators.

By law, "no person shall operate a waterworks ... without a valid license." (§ 54.1-2302, *Code of Virginia*). The term *operator* is defined by law as: "... any individual employed or appointed by an owner and who is designated by such owner to be the person in responsible charge, such as a supervisor, a shift operator, or a substitute in charge, and whose duties include testing or evaluation to control waterworks ... operations. Not included in the definition are superintendents or directors of public works, city engineers, or other municipal or industrial officials whose duties do not include the actual operation or direct supervision of waterworks...."

To be an *operator*, one must be in *responsible charge*. The term *responsible charge* is defined by the Board to mean "designation by the owner of any individual to have the duty and authority to operate a waterworks ..." For a license to be valid it must be of a class equal to or higher than the class of the facility.

In summary, an *operator* is an individual empowered by the facility owner to assess and make process changes independently in the operation of waterworks. Considering these definitions, there are many individuals who have the title operator who do not fit the legal definition of operator. There may be many other individuals who are not fully licensed to operate a facility but who make independent judgements and decisions about process control—people who are operating without a license. In short, operating staff are either operators or *operators in training*. An *operator in training* is "... an individual employed by an owner to work under the direct supervision and direction of an operator holding a valid license in the proper category [water or wastewater] and classification for the purpose of gaining experience and knowledge in the duties and responsibilities of an operator of a waterworks.... An operator in training is not an operator."

**Limited authority for Board.** The Board does not specify that the operator has to be on site, nor does the Board specify the number of operators that must be employed by an owner. The Board

only concerns itself with the *individual* who *operates* (in terms of the legal definition) a waterworks— the practitioner. The Board has no legal connection with the owner of the facility. The Board only becomes directly involved with a properly licensed individual operating a waterworks when the individual violates one of the standards of practice. The Board has the power to discipline and fine any licensee and to suspend or revoke or refuse to renew or reinstate any license as well as the power to deny any application for a license under the provisions of Chapter 23 (§ 54.1-2300 et seq.) of Title 54.1 of the Code of Virginia and this chapter for any of the following:

1. Obtaining or renewing a license through fraudulent means or misrepresentation;
2. Having been convicted or found guilty by a court in any jurisdiction of any felony or of any misdemeanor involving lying, cheating or stealing, or for activities carried out while engaged in waterworks or wastewater works activities, there being no appeal pending therefrom or the time for appeal having lapsed. Any plea of nolo contendere shall be considered a conviction for purposes of this subsection. A certified copy of a final order, decree or case decision by a court or regulatory agency with the lawful authority to issue such order, decree or case decision shall be prima facie evidence of such conviction or discipline. The record of conviction certified or authenticated in such form as to be admissible in evidence under the laws of the jurisdiction where convicted shall be admissible as prima facie evidence of such guilt;
3. Not demonstrating reasonable care, judgment, or application of the required knowledge, skill and ability in the performance of the operating duties;
4. Violating or inducing another person to violate any provisions of Chapter 1, 2, 3 or 23 of Title 54.1 of the *Code of Virginia*, or of any provision of this chapter;
5. Having been found guilty by the board, an administrative body or by a court of any activity in the course of performing his operating duties that resulted in the harm or the threat of harm to human health or the environment;
6. Failing to inform the board in writing within 30 days of pleading guilty or nolo contendere or being convicted or found guilty, regardless of adjudication, of any felony which resulted in the harm or the threat of harm to human health or the environment. Failing to inform the board in writing within 30 days of pleading guilty or nolo contendere or being convicted of or found guilty, regardless of adjudication, of any felony or of any misdemeanor for activities carried out while engaged in waterworks or wastewater works activities or involving lying, cheating or stealing; or
7. Negligence, or a continued pattern of incompetence, in the practice as a waterworks or wastewater works operator.

**Classification of Waterworks.** The Board of Health has the responsibility for classifying waterworks, not the Licensure Board. Waterworks are divided into six classes, based on size and treatment technology involved, and numbered with Roman numerals, with Class VI being the lowest (or entry level) and Class I being the highest. Refer to Working Memo #841 until the *Waterworks Regulations* are revised to reflect the six classifications.

Until such time the Health Department classifies a waterworks, a nonclassified waterworks does not have to have a licensed operator. Neither does the Board nor DPOR have enforcement authority over a nonclassified waterworks.

**Duties of ODW staff.** If, in the course of your duties with ODW, you become aware that a person is operating a waterworks without a valid license (that is, make decisions at a plant with a higher classification than his/her license) or that a person has violated any of the standards of practice, you are to report such violation(s) in writing to the Technology Transfer Director of the Division of ODW.

The Technology Transfer Director shall forward all such complaints directly to the Executive Director for the Board for Waterworks and Wastewater Works Operators **and Onsite Sewage System Professionals** at DPOR and request that DPOR investigate. The ODW Office Director shall not be included in discussions involving whether or not to file a complaint. Involvement of the ODW Office Director automatically disqualifies him from participating in any subsequent Board action because of legal bias.

The Board has regulatory authority over the operator. It has no regulatory authority over the owner of a waterworks unless the owner happens to be an operator. On the other hand, the Department of Health has no authority over individual operators; our authority is over the owner of the waterworks. The *Waterworks Regulations* require the waterworks owner to comply with minimum staffing requirements for operating personnel. It is important to note that operating personnel may or may not be operators as defined in the licensing law. The determination of who is/are the operator(s) is left to the owner.

Depending on the size and complexity of treatment our regulations may specify the qualifications for operating personnel who are not operators. Violation of the requirements contained in the *Waterworks Regulations* should be addressed in accordance with existing procedures for enforcement of the regulations involved. If, however, you encounter a situation where you believe an unlicensed or inadequately licensed individual is the de facto operator you should report this situation to the Board using the procedure stated above. A test of this is the determination that operating personnel without valid licenses must check with a properly licensed individual before making decisions or process adjustments that would affect the quality or quantity of water produced by the waterworks. If the operating staff always checks with the licensed operator before making changes, or follows explicit instructions prepared by the licensed operator, then the staff is not operating the waterworks in violation of the licensing law.

This can be done by asking the operator-in-training (OIT) a few questions, like how he would handle a turbidity spike from a summer thunderstorm. If he says he does a jar test, calls the operator, relays the results, and increases alum feed as directed, it is a good indication that the OIT is not operating the waterworks. If, on the other hand, the OIT replies he does the jar test and increases alum feed to the optimum dosage indicated from jar testing, then the OIT is operating a waterworks without a license. Other checks include looking for a written operating procedure that instructs the OIT to call the operator, whether the OIT has the home phone number or beeper number of the operator, and whether the procedure for contacting the operator posted visibly, say on a bulletin board.

The VDH has the authority to classify water systems, not the Board. This includes a class other than the ones described in the Board's regulations. For example, under the Board's regulations, a high school of 411 students that is disinfecting by hypochlorination would be described as a Class V facility. By the policy described in interim guidance of the *Waterworks Regulations* found in Working Memo #841, that high school should be classified as a Class VI. Or if a Class V (as described in the licensure regulations) waterworks distribution system is more complex because of topography, system length, repumping, re-disinfection, compliance problems, and so on, we can classify the facility a Class IV.

**Class VI Systems.** With the creation of the Class VI waterworks license in 2001, many smaller waterworks owners or operators will need to obtain an operator's license. This will require the submittal of an application fee to the licensing Board and an exam fee to the online exam vendor. The application will include the applicants operating experience and training history (if any) and a description of the waterworks. Before an applicant can sit for the exam, an individual with a high school diploma or GED certificate must have at least six months' experience as an operator-in-training before he/she can obtain a Class VI license; someone without high school or a GED must have one year of experience. The Board requires all waterworks operating experience to be certified by a licensed operator.

Documentation of these experience requirements can be difficult for someone who has been running a small system for years without being or employing a licensed operator. Normally, the DPOR staff reviewing applications will reject any application that does not contain the signature of a licensed operator certifying the applicant's experience. In the past, DPOR staff has accepted that documentation from ODW when on official letterhead.

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