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# Proposed Regulation Agency Background Document

Agency name	Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (WWWOOSSP)
Virginia Administrative Code (VAC) citation	18VAC160-20
Regulation title	Board for Waterworks and Wastewater Works Operators Regulations
Action title	General Regulation Review
Date this document prepared	September 18, 2008

This information is required for executive branch review and the Virginia Registrar of Regulations, pursuant to the Virginia Administrative Process Act (APA), Executive Orders 36 (2006) and 58 (1999), and the *Virginia Register Form, Style, and Procedure Manual.* 

#### Brief summary

In a short paragraph, please summarize all substantive changes that are being proposed in this regulatory action.

The proposed amendments change the language in specific sections of the regulations, reduce redundancy, and replace ambiguous language with more specific terms to eliminate confusion in determining various license entry and renewal requirements. The proposed changes will assist applicants and licensees to better understand the licensing requirements specific to each classification of licensure in waterworks and wastewater works. The language detailing experience exemption requirements is changed to be consistent throughout the regulations, the scope of the Board's disciplinary authority is clarified, continued professional education (CPE) becomes a renewal requirement for wastewater works operator licenses, and restricted Class VI waterworks licenses have been repealed.

#### Legal basis

Please identify the state and/or federal legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly chapter number(s), if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

Form: TH-02

Section 54.1-2301 B of the Code of Virginia (<a href="http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+54.1-2301">http://leg1.state.va.us/cgi-bin/legp504.exe?000+cod+54.1-2301</a>) states that the Board shall examine operators and issue licenses. The licenses may be issued in specific operator classifications to attest to the competency of an operator to supervise and operate waterworks and wastewater works while protecting the public health, welfare and property and conserving and protecting the water resources of the Commonwealth.

The imperative form of the verb "shall" is used, making the Board's authority to regulate mandatory rather than discretionary.

### Purpose

Please explain the need for the new or amended regulation by (1) detailing the specific reasons why this regulatory action is essential to protect the health, safety, or welfare of citizens, and (2) discussing the goals of the proposal, the environmental benefits, and the problems the proposal is intended to solve.

The technology used to treat water and wastewater continues to evolve over time. For this reason, the Board decided that a thorough review of its existing regulations in light of current industry practice is necessary. That need is best illustrated by the college degrees and degree programs designed to prepare students to work in the environmental protection field. Many, if not most, of these degree fields did not exist or were very new when the Board last conducted a general review of its regulations. The same is true of the facility classification standards in the current regulations. A review will identify any necessary modifications to reflect current practice and assure operation by competent individuals.

#### Substance

Please briefly identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. (More detail about these changes is requested in the "Detail of changes" section.)

Section 18VAC160-20-10 is amended to clarify definitions which differentiate between waterworks and wastewater works licensees as well as expand on the definition of "structured training activity".

Section 18VAC160-20-85 is repealed because the time period affecting restricted Class VI waterworks licenses has expired.

Section 18VAC160-20-90 is amended to include all specific qualifications for licensure of both waterworks and wastewater works operators. The amendments replace Roman numerals with Arabic numerals, specify the requirements for experience verification, expand education to included master's degrees as well as related science degrees, and modify the experience and experience substitution requirements.

Section 18VAC160-20-95 is amended to emphasize that only non-classified facility operation experience is applicable to provisional licensure.

#### **Town Hall Agency Background Document**

Section 18VAC160-20-106 is amended to specify that the regulant's act of submitting to renew a license is the equivalent of an implied declaration that he/she has already fulfilled the Board's continued professional education (CPE) requirement.

Form: TH-02

Section 18VAC160-20-109 is amended to include CPE for all regular and provisional licensed facility operators. The amendments also specify that CPE must appropriate to the license held and safety subjects may not count for more than one half of the CPE requirement. The amendments extend the amount of time a regulant is required to maintain CPE completion records, eliminate the possibility of using the same CPE course for credit more than once during a license cycle, and provide CPE credit for course instructors.

Section 18VAC160-20-120 is amended to replace Roman numerals with Arabic numerals, and it also specifies the particular type of waterworks facilities which may be operated by a Class 1 waterworks licensee.

Section 18VAC160-20-130 is amended to replace Roman numerals with Arabic numerals, and it also specifies the particular type of wastewater works facilities which may be operated by a Class 1 wastewater works licensee.

Section 18VAC160-20-140 is amended to clarify the scope of the Board's disciplinary authority over fraudulent attempts to obtain or renew a license.

Section 18VAC160-20-150 is amended to replace Roman numerals with Arabic numerals, remove self-assessment as a course completion requirement, and specify that other assessment techniques must be similar to the aforementioned assessment techniques within the section.

#### **Issues**

Please identify the issues associated with the proposed regulatory action, including:

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;
- 2) the primary advantages and disadvantages to the agency or the Commonwealth; and
- 3) other pertinent matters of interest to the regulated community, government officials, and the public.

If the regulatory action poses no disadvantages to the public or the Commonwealth, please so indicate.

- 1) The primary advantage to the public is the assurance that, as the relevant technology continues to advance, waterworks and wastewater works facilities in Virginia will continue to be operated by individuals whose education and experience includes the relevant changes in technology. These changes are best illustrated by the need for some \$1.4 billion in upgrades to approximately 120 wastewater facilities located in the Chesapeake Bay Watershed to meet EPA water quality improvement standards. Therefore, minimally competent individuals will continue to operate those facilities assuring the continued protection of the health and welfare of the citizens of the Commonwealth.
- 2) The primary advantage to the Commonwealth will be the continued successful regulation of competent and licensed individuals operating waterworks and wastewater works facilities throughout Virginia. No disadvantage has been identified.
- 3) The proposed amendments allow applicants to meet the licensing educational requirements with degrees in specific as well as related science fields pertinent to the waterworks and wastewater works industry. This may expand the scope of potential applicants while simultaneously ensuring competent applicants and licensees.

## Requirements more restrictive than federal

Form: TH-02

Please identify and describe any requirement of the proposal which are more restrictive than applicable federal requirements. Include a rationale for the need for the more restrictive requirements. If there are no applicable federal requirements or no requirements that exceed applicable federal requirements, include a statement to that effect.

No applicable federal requirements have been identified.

## Localities particularly affected

Please identify any locality particularly affected by the proposed regulation. Locality particularly affected means any locality which bears any identified disproportionate material impact which would not be experienced by other localities.

No locality has been identified as particularly affected.

# Public participation

Please include a statement that in addition to any other comments on the proposal, the agency is seeking comments on the costs and benefits of the proposal and the impacts of the regulated community.

In addition to any other comments, the Board/agency is seeking comments on the costs and benefits of the proposal and the potential impacts of this regulatory proposal. Also, the Board/agency is seeking information on impacts to small businesses as defined in § 2.2-4007.1 of the Code of Virginia. Information may include 1) projected reporting, recordkeeping, and other administrative costs, 2) probable effect of the regulation on affected small businesses, and 3) description of less intrusive or less costly alternative methods of achieving the purpose of the regulation.

Anyone wishing to submit written comments may do so by mail, email, or fax to **David E. Dick, Executive Director**, **9960 Mayland Drive**, **Richmond**, **VA 23233-1485**, **(804) 367-2648**, fax **(804) 527-4297**, email <u>waterwasteoper@dpor.virginia.gov</u>. Written comments must include the name and address of the commenter. In order to be considered, comments must be received by the last date of the public comment period.

A public hearing will be held and notice of the public hearing may appear on the Virginia Regulatory Town Hall website (www.townhall.virginia.gov) and can be found in the Calendar of Events section of the Virginia Register of Regulations. Both oral and written comments may be submitted at that time.

# **Economic impact**

Please identify the anticipated economic impact of the proposed regulation.

Projected cost to the state to implement and	a. NFG (0900)
enforce the proposed regulation, including	b. One-time costs in FY09 include printing and

(a) fund source / fund detail, and (b) a	mailing costs to send notifications to the affected
delineation of one-time versus on-going	regulants. No ongoing costs are expected as a
expenditures	result of this regulatory change.
Projected cost of the regulation on localities	No change anticipated.
Description of the individuals, businesses or	This regulation change will affect all Wastewater
other entities likely to be affected by the	Works Operators who wish to renew or reinstate
regulation	their licenses.
Agency's best estimate of the number of such	This regulatory change will impact 2,583
entities that will be affected. Please include an	Wastewater Works Operators.
estimate of the number of small businesses	·
affected. Small business means a business entity,	
including its affiliates, that (i) is independently	
owned and operated and (ii) employs fewer than	
500 full-time employees or has gross annual sales	
of less than \$6 million.	
All projected costs of the regulation for affected	No change in licensing fees is anticipated as a
individuals, businesses, or other entities.	result of this regulatory change. Wastewater
Please be specific. Be sure to include the	Works Operator regulants will have to incur the
projected reporting, recordkeeping, and other	costs of 16 to 20 hours of continuing professional
	<b>5</b> .
administrative costs required for compliance by	education every two years. The typical cost of
small businesses.	continuing education is from \$30 to \$90 per contact
	hour or approximately \$480 to \$1,800 every two
	years.

## **Alternatives**

Please describe any viable alternatives to the proposal considered and the rationale used by the agency to select the least burdensome or intrusive alternative that meets the essential purpose of the action. Also, include discussion of less intrusive or less costly alternatives for small businesses, as defined in §2.2-4007.1 of the Code of Virginia, of achieving the purpose of the regulation.

No viable alternative has been identified. The industry's technology is advancing and is reflected in the applicable degree programs which are available but not recognized by the current regulations. A complete review was necessary to obtain input from the industry, from training and educational institutions, and from the public to determine what amendments to the entry standards are appropriate.

Additionally, as a result of the changes in the technology of the industry, the Board considered the need to have those changes conveyed to individuals who are currently licensed in the wastewater works industry. Evidence that these changes are occurring is best illustrated by the need for some \$1.4 billion in upgrades to approximately 120 wastewater facilities located in the Chesapeake Bay Watershed to meet EPA water quality improvement standards. While the changes in technology can be conveyed through CPE requirements currently in place for waterworks operators, no such requirement exists for wastewater works operators. The Board recognized the need for continued minimal competence for currently licensed wastewater works facility operators and proposed that CPE become mandatory for them as well.

Current regulations mandate CPE for the renewal of waterworks operator licenses. The cost of training can be minimized through relevant operator training in-house at waterworks facilities which applies toward fulfilling the CPE requirement. The proposed amendments would require that wastewater works operators meet the same type of CPE requirements as those that are currently required for waterworks operators. However, this requirement can also be fulfilled in the same manner as the waterworks facilities operators.

The above lead the Board to conclude that amendments may be necessary to assure the recognition of all degree programs that properly prepare individuals for licensure. The Board also considered the need for the continued successful operation of both categories of facilities by minimally competent individuals. In all of its consideration, the Board feels that the proposed amendments will affectively meet these goals.

Form: TH-02

# Regulatory flexibility analysis

Please describe the agency's analysis of alternative regulatory methods, consistent with health, safety, environmental, and economic welfare, that will accomplish the objectives of applicable law while minimizing the adverse impact on small business. Alternative regulatory methods include, at a minimum: 1) the establishment of less stringent compliance or reporting requirements; 2) the establishment of less stringent schedules or deadlines for compliance or reporting requirements; 3) the consolidation or simplification of compliance or reporting requirements; 4) the establishment of performance standards for small businesses to replace design or operational standards required in the proposed regulation; and 5) the exemption of small businesses from all or any part of the requirements contained in the proposed regulation.

- 1) The establishment of the least stringent requirements for the currently regulated professions is evidenced by the inclusion of master's degrees and *related* physical, biological, and chemical sciences as well as the inclusion of related environmental science degrees for initial licensure. The Board's definition of "structured training activity" is also amended to include distance learning which greatly expands licensees' options to complete CPE requirements for continued licensure. Additionally, CPE, which would become mandatory for wastewater works operators, can be completed in the same manner as waterworks operators who must complete CPE in accordance with the current regulation requirements.
- 2) The only compliance or reporting requirement is the continuing professional education (CPE) requirement for license renewal. A requirement for licensees to report compliance through documentation submitted at the time of renewal was replaced with a provision making the act of applying for renewal an affirmative statement of CPE compliance, thus making the renewal process less burdensome for the regulants and staff. The Board will periodically select, at random, a number of regulants and require submittal of CPE documentation to determine compliance. Those unable to provide documentation will be subject to the disciplinary provisions of the Board's regulations.
- 3) Same as #2 above.
- 4) All of the performance standards are focused on the protection of the public and the environment through the regulation of individuals rather than the regulation of their employers or their businesses.
- 5) The Board has no statutory authority to regulate businesses but has not lost sight of the fact that regulations affecting individuals do impact on businesses. The focus of the Board has remained on identifying the least intrusive provisions that will protect the public and the environment and also minimize adverse impact on businesses.

#### Public comment

Please summarize all comments received during public comment period following the publication of the NOIRA, and provide the agency response.

Commenter	Comment	Agency response
Donnie Addison	Include Microbiology,	No rationale or justification for the

Chief Operator Chesterfield County Water Treatment addisond@chesterfield.gov	Environmental Science and Ecology as degrees allowing reduced experience for licensure for the Class III	suggestions is provided.
	Allow a minor degree in the sciences to carry the same weight as a bachelor's degree allowing reduced experience for licensure.	The Board has proposed amendments to 18VAC160-20-90 to recognize as qualifying for a Class 3, Class 2 and Class 1 license a master's as well as bachelor's degrees in specific fields. Currently, the degrees must reflect a major in engineering, engineering technology, physical, biological or chemical science. The amendment will allow degrees in environmental science or a related science.
	Allow an associate degree in the same science fields one year education for experience credit toward licensure for the Class III license.	A minor degree or an associate degree currently counts for substitutions to the extent that the courses taken will qualify for substitutions as a post-secondary course.
	Allow Category experience substitution for Class III and below for non-operating duties such as Operation/Maintenance of a distribution system, Water lab work or water plant maintenance. One quarter credit of the actual experience gained.	The Board feels that category substitution for Class 3 and below is not reflective of adequate skill levels those classes of license.
	Reduce the experience requirement for persons holding a High School Diploma for the Class I to five years and the Class II to three years.	Further proposed amendments will change the required experience for a Class 2 license applicant possessing an appropriate college degree from six to nine months without substitutions in order to conform with the provision that limits the substitutions allowed to half of the experience requirement.
		Those applying for a Class 2 license that possess a high school diploma must have three rather than four years of experience and those without a high school diploma must have six rather than seven years experience.
		Proposed amendments will change the required experience for a Class 1 license

		applicant possessing an appropriate college degree from one year to 15 months without substitutions in order to conform with the provision that limits the substitutions allowed to half of the experience requirement.  Those applying for a Class 1 license that possess a high school diploma must have five rather than six years of experience.  The Board feels these amendments to the entry requirements take into consideration the developing technology, reflect a balance between education and experience, and will assure minimally competent applicants applying for the examination.
VA AWWA Plant Operations Committee Via Susan Watson, Lake Kilby Water Treatment Plant, 105 Maury Place, Suffolk, VA 23434 757.539.2201 ext 224	Comments resulting from a survey of operators attending the annual Operations Conference in May 2007 to determine issues important to operators.	No rationale or justification for the suggestion is provided. While the results of such a survey may be interesting, it is not clear from the comment how the view of those attending a single event will relate to the Board's charge to protect the public.
757.539.7608 Fax	The bachelor degrees required should be expanded to include degrees from other fields such as Environmental Science, Microbiology, and Ecology.	The Board has proposed amendments to 18VAC160-20-90 to recognize as qualifying for a Class 3, Class 2 and Class 1 license a master's as well as bachelor's degrees in specific fields. Currently the degrees must reflect a major in engineering, engineering technology, physical, biological or chemical science. The amendment will allow degrees in environmental science or a related science.
	Consideration given for associate degrees in related fields such as Biology, Microbiology, Engineering, Physical Science, Chemical Science.	An associate degree currently counts for substitutions to the extent that the courses taken will qualify for substitutions as a post-secondary course.
	Consideration given to applying the Virginia Tech Short School program to training and/or education substitution requirement.	Virginia Tech Short School programs are given Training Credit recognition.

	Establish more detailed reciprocity guidelines.	The current reciprocity guidelines have been reviewed and there is no information to suggest a hazard exists from the current standards.
	What criteria does DPOR presently use to establish "the Virginia category and classification comparable to the license or certificate held in the other jurisdiction?"	The criteria used to establish the comparable classification for out-of-state applicants appears in the current sections 18VAC160-20-120 and 18 VAC160-20-130.
	Consideration given for experience in non-operating duties such as operation/maintenance of distribution system, lab work or plant maintenance as an operator or operator-intraining for Class III, IV, V, VI.	The Board feels that non-operation substitution for Class 3 and below is not reflective of adequate skill levels for those classes of license. Please note that the current regulations do allow water distribution system operation and maintenance to be considered when applying for Class 5 or Class 6 waterworks operator license.
	Consideration given to reducing the number of years of experience required for each licensure class if applicant does not possess a bachelor degree.	Proposed amendments will change the required experience for Class 2 applicants that possess a high school diploma to three rather than four years of experience and those without a high school diploma to six rather than seven years experience.
		Those applying for a Class 1 license that possess a high school diploma must have five rather than six years of experience.
		The Board feels these amendments to the entry requirements take into consideration the developing technology, reflect a balance between education and experience, and will assure minimally competent applicants applying for the examination.
	Consider changing the CPE contact hours to be inversely proportional to the level of license, i.e. Class I, 8 hours; Class II, 12 hours; Class III, 16 hours.	The current CPE hours do not appear to create a hazard and will be retained.
Anonymous	Regulations appear to be rather outdated and	No rationale or justification for the suggestions is provided.

somewhat flawed as far as the fast-track education requirements are concerned. Feels that engineering and engineering technology has absolutely nothing to do with water treatment plant operation. Physical science is a very broad term that, from my experience, neither the Board nor the PSI Exam Vendor can seem to interpret. Can someone with an astronomy degree, which is a physical science, fast track their licensing process? What about Physics; how are they relevant to water treatment?

Suggests that new types of sciences, such as environmental science and environmental engineering bachelor's degree (major), be allowed. Both require chemical, biological, and physical (hydrology, geology, soil studies, etc.) courses, as well as an internship and hands-on/in the field laboratory time. Isn't that what the board looks for in the optimal candidate for a waterworks license? One who has been exposed to all fields of sciences relevant to water treatment. Or do they look for a highway or skyscraper engineer, an astronomer, or a physicist, just to name a few.

Believes the educational requirements should state that an individual must "have a bachelor's degree in environmental engineering, or in chemical, biological, or environmental science."

Many states (NC, MD, PA, NJ, and NY) already have these requirements in place, and I think it's a superior balance of education and relevance for fast –tracking a

The Board has proposed amendments to 18VAC160-20-90 to recognize as qualifying for a Class 3, Class 2 and Class 1 license a master's as well as bachelor's degrees in specific fields. Currently the degrees must reflect a major in engineering, engineering technology, physical, biological or chemical science. The amendment will allow degrees in environmental science or a related science.

Form: TH-02

Applicants who take exception with DPOR's or PSI's evaluation of their application may ask for an Informal Fact Finding Conference under the provisions of the Virginia Administrative Process Act. This will start the process that ends with the Board determining the applicant's eligibility.

	college graduate's waterworks/wastewater works license.	
	Times and technology change and it is important for the regulations to be updated regularly to reflect those changes. More importantly, to fast-track only the most qualified operators to protect the health, safety, and welfare of the public.	
Dennis R. Wanless D. R. Wanless and Associates, Inc. P. O. Box 655 Elon, NC 27244-0655	Require that on-site classes conducted by an organization to meet the CPE requirement must to some extent address the broad variety and full range of content areas covered by the licensing examinations and not solely, for example, safety issues such as confined space, lockout tagout, or personal protective equipment. While safety is an important subject area and should be emphasized in the utility workplace, still it must be remembered that it is only one among many license content areas. Moreover, many new and upcoming drinking water regulations address distribution, treatment, and water quality issues. The board might address this weakness in the existing regulation by simply limiting the CPE hours obtained through safety topics to no more than half an operator's biennial CPE requirement.	The Board thanks Mr. Wanless for his comment and is proposing an amendment to limit CPE safety subjects to no more than one-half of the required number of CPE hours.
	Clarify that the same or similar course title or general subject area may be repeated for CPE credit so long as any such "repeated" course is taken in a different license cycle.	Nothing in the current regulation prohibits a licensee from repeating the same course in a subsequent license cycle. Repeating the same course in the same license cycle is currently prohibited.
	State that instructors who develop and/or present CPE contact hour classes may themselves receive CPE	Nothing in the current regulation prevents an instructor from receiving the same credit for CPE course participation as the students taking the class. Often

hours for one-time presentation of a topic.

instructors may not qualify for credit for a CPE course because they instruct only a portion of the course and then depart. An instructor that is present for the entire CPE course, in the role of student or instructor, may receive full credit.

Form: TH-02

Clarify that classes whose content areas address an operator's own or higher level of license are acceptable CPE classes toward renewal of his or her license.

The Board is aware of no instance where a licensee has completed a CPE course that is not pertinent to his current class of license or to the next higher class of license. The purpose of CPE is to allow an individual and his employer to plan the subject matter that best meets their needs.

State that only partial or no CPE hour credit can be awarded to attendees who do not attend an entire CPE seminar, presentation, roundtable, or workshop, as the case may be.

The current regulation requires the certificate of CPE completion to contain a statement from the sponsor verifying the number of hours completed. Those having to leave early or who arrive late will receive credit for only the actual time that they participated in the CPE training class.

Re-affirm and re-emphasize the importance of obtaining from the CPE class provider documentation of subject areas covered and the number of CPE hours obtained under the licensee's name as it appears on her or her license. In addition, the Board should require that licensees send either photocopies of a sufficient number of their CPE class certificates or else a summary listing of classes completed on a Board-approved form with their license renewal applications. While this change would increase the paperwork burden on DPOR staff, such a requirement would better ensure full compliance with the CPE requirement than the current

system of random audits, and would also allow DPOR to

Those selected for the CPE audit must provide both a copy of their completion certificate and a completed form provided by DPOR itemizing the training completed.

CPE training need not be in the form of a formal training but may be given on-site by facility staff or by vendors providing training on the equipment they sell or manufacture.

determine 1) that all operators were in fact obtaining their hours and 2) the content areas of those hours. We make this recommendation based on our own four years of experience in providing CPE classes, during which numerous towns, cities, and many utility organization have been conspicuous by their absence. We have also had individuals tell us that in the past they have signed their CPE certification at renewal without meeting the requirement.

Finally, extend at least a minimal CPE requirement to wastewater operators and phase in CPE wastewater hour requirements comparable to those on water operators over a period of 4-5 years.

I have attempted here to be both brief and helpful and hope that I have succeeded on both counts. Please contact me if I can provide any additional information or perspective. I am honored and privileged to offer my classes in the Commonwealth, and I thank you for your attention to the letter.

The Board is proposing an amendment to require Wastewater Works Operators to complete the same CPE hours as Waterworks Operators.

Form: TH-02

# Family impact

Please assess the impact of the proposed regulatory action on the institution of the family and family stability including to what extent the regulatory action will: 1) strengthen or erode the authority and rights of parents in the education, nurturing, and supervision of their children; 2) encourage or discourage economic self-sufficiency, self-pride, and the assumption of responsibility for oneself, one's spouse, and one's children and/or elderly parents; 3) strengthen or erode the marital commitment; and 4) increase or decrease disposable family income.

No family impact has been identified.

# Detail of changes

Form: TH-02

Please detail all changes that are being proposed and the consequences of the proposed changes. Detail all new provisions and/or all changes to existing sections.

If the proposed regulation is intended to replace an emergency regulation, please list separately (1) all changes between the pre-emergency regulation and the proposed regulation, and (2) only changes made since the publication of the emergency regulation.

For changes to existing regulations, use this chart:

Current section number	Proposed new section number, if applicable	Current requirement	Proposed change and rationale
18VAC160-		Definitions used in the	"Board" is amended to include Onsite
20-10		regulation language	Sewage System Professionals.  "Classification" is amended to clarify divisions within the two categories of waterworks and wastewater works. Class I Roman numeral is replaced with the Arabic equivalent.  "Continuing Professional Education (CPE)" is amended to be applicable to all licensees.  "Operate" is amended to remove an unnecessary comma.  "Structured training activity" is amended to include distance learning.
18VAC160- 20-85		Establishes requirements for restricted Class VI waterworks	This section is repealed because the Feb. 15 <sup>th</sup> , 2003 application deadline is past.
18VAC160- 20-90		Establishes the qualifications for licensure for waterworks and wastewater works operators	Subsection A is amended to remove the language which mandates that the individual's immediate supervisor must certify the applicant's experience. The certification of an individual's experience is addressed in subsection A.2.  Subsection A.2 is amended to mandate that an applicant's experience be gained under the direct supervision of a licensed supervisor. By only allowing experience under a licensed supervisor, the Board's disciplinary authority extends to both the applicant and the certifying supervisor. The language amendment also offers the applicant an alternative should the direct

supervisor be unavailable; a representative of the facility owner may then verify the applicant's experience.

Form: TH-02

Subsection A.5 is amended to replace Roman numerals with Arabic numerals.

Subsections B.1-3 are amended to replace Roman numerals with Arabic numerals, and the examination requirement is clarified to be specific to the license applied for: Class 6 license requires completion of Class 6 exam, Class 5 license requires completion of a Class 5 exam, and Class 4 license requires completion of a Class 4 exam.

Subsection B.4 is amended to replace Roman numerals with Arabic numerals. The exam requirement is clarified to indicate a "Class 3" exam specifically is required, master's degrees are included to meet initial licensing requirements, the language specifies that degrees must be majors in the listed sciences, and the language is changed to allow related sciences. The criteria for licensure in subdivisions a and b are similar; the only difference is that subdivision b considers applicants who currently hold a Class 4 license. The situation is the same for subdivisions c and d; subdivision d also considers applicants who currently hold a Class 4 license. Both subdivisions, b and d, are removed to eliminate redundancy because the requirements are the same as a and c, respectively. The licensure requirements of subsection B.4 are the same for all individuals regardless of any other licenses

Subsection B.5 is amended to replace Roman numerals with Arabic numerals and the experience requirement value is expressed in months instead of years. The exam requirement is clarified to indicate a "Class 2" exam specifically, master's degrees are included in the eligible requirements, the language specifies that degrees must be majors in the listed sciences, and the language is changed to allow related sciences. The experience requirements without substitutions are changed so as to be consistent with the language contained in subsection C of the current regulations. The criteria for licensure in subdivisions a, b, and c are similar; the

		only difference is that subdivisions b and c
		only difference is that subdivisions b and c consider applicants who currently hold a Class 4 license or a Class 3 license, respectively. Subdivisions b and c are removed to eliminate redundancy because the requirements are the same as subdivision a. Under the proposed amendments, the licensure requirements of subsection B.5 are the same for all individuals regardless of any other licenses held. The experience requirements under this subsection are changed so as to be consistent with all classifications of licenses. The change ultimately reduces the required
		experience for those applying with a high school diploma as well as those applicants with no high school diploma.
		Subsection B.6 is amended to replace Roman numerals with Arabic numerals, and the experience requirement is expressed in a superscript/subscript fraction format to reduce confusion. The exam requirement is clarified to indicate a "Class 1" exam specifically, master's degrees are included in the eligible requirements, the language specifies that degrees must be majors in the listed sciences, and the language is changed to allow related sciences. The experience requirements without substitutions are changed so as to be consistent with the language contained in subsection C of the current regulations.  Subsection C is amended to replace Roman numerals with Arabic numerals.  Subsection C.2.b is amended to include related sciences as well as environmental science.
		Subsection C.3 is amended to specify its mandate as pertinent to subsection B, and Roman numerals are replaced with Arabic numerals.
18VAC160- 20-95	Provisional licensure requirements	Subsection A.2 is amended to emphasize its application to nonclassified facilities only. The language is also changed so as to read more fluently and eliminate confusion. No substance requirements are changed.
18VAC160- 20-106	Renewal requirements	Subsection C is amended to emphasize that a licensee's act of renewal is his/her affirmation of compliance with the CPE requirement of this chapter. Language

		requiring the licensee to send in an actual statement of compliance is eliminated.
18VAC160- 20-109	Continued professional education requirements (CPE)	Subsection A is amended to replace Roman numerals with Arabic numerals. The language is changed so as to require CPE for wastewater works operators which will assure that they have a means of becoming current on the emerging technology. The changes in technology are best illustrated by the need for some \$1.4 billion in upgrades to approximately 120 wastewater facilities located in the Chesapeake Bay Watershed to meet EPA water quality improvement standards. CPE will ensure the continued successful operation of these facilities by minimally competent licensed individuals. The amended language also emphasizes that the section's requirements apply during each renewal cycle.
		Subsection B is amended to clarify that CPE subject matter must be appropriate to the license held, and safety subjects are declared to be valid toward no more than half of the CPE requirement per renewal cycle.
		Subsection E is amended to require that proof of CPE completion be maintained for 2 years.
		Subsection F is amended to disallow the use of a CPE course more than once during a renewal cycle toward fulfilling the CPE requirement.
		Subsection H is added to allow CPE instructors to receive CPE credit toward license renewal.
		Subsection I is added to allocate CPE credit to CPE instructors who initially develop or substantially update CPE activities currently held.
18VAC160- 20-120	Waterworks license classification requirements	Subsection A is amended to replace Roman numerals with Arabic numerals.
		Subsection B is amended to replace Roman numerals with Arabic numerals.
		Subsection C is amended to replace Roman numerals with Arabic numerals.
		Subsection D is amended to replace Roman

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		numerals with Arabic numerals.
		Subsection E is amended to replace Roman numerals with Arabic numerals.
		Subsection F is amended to delineate specifically the types of waterworks facilities which may be operated by a Class I license holder.
		Subsection G is amended to correctly list terms specific to membrane technologies; the substance of the content remains unchanged.
18VAC160- 20-130	Wastewater works license classification requirements	Subsection A is amended to replace Roman numerals with Arabic numerals. The amendments also include the correction of an error in the amount of the design hydraulic capacity from .4 MGD to .04 MGD.
		Subsection B is amended to replace Roman numerals with Arabic numerals.
		Subsection C is amended to replace Roman numerals with Arabic numerals.
		Subsection D is amended to replace Roman numerals with Arabic numerals. This subsection is also amended to delineate specifically the types of wastewater works facilities which may be operated by a Class I license holder.
18VAC160- 20-140	Board disciplinary criteria	This section is amended to clarify the Board's scope of authority by including language specific to individuals fraudulently attempting to obtain or renew licenses.
18VAC160- 20-150	Training approval requirements	This section is amended to replace Roman numerals with Arabic numerals.
		Subsection B.5 is amended to eliminate self-assessment as a course completion requirement, and it specifies that other assessment techniques must be similar to those currently listed in this section.

Enter any other statement here