

Virginia Department of Planning and Budget **Economic Impact Analysis**

18 VAC 160-30 Waterworks and Wastewater Works Operators Licensing Regulations Department of Professional and Occupational Regulation

Town Hall Action/Stage: 6285 / 10540

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The Department of Planning and Budget (DPB) has analyzed the economic impact of this proposed regulation in accordance with § 2.2-4007.04 of the Code of Virginia (Code) and Executive Order 19. The analysis presented below represents DPB's best estimate of the potential economic impacts as of the date of this analysis.¹

Summary of the Proposed Amendments to Regulation

The Board for Waterworks and Wastewater Works Operators and Onsite Sewage System Professionals (Board) proposes to: a) increase the time that an applicant has to pass the Board-approved examination once an application has been approved from 12 to 24 months,² b) state that an examination score received by an applicant is valid for a period of ten years from the date of the examination, c) no longer require that felony convictions that occurred more than 20 years from the date of application be disclosed, d) no longer require that misdemeanor convictions that do not involve lying, cheating, or stealing be disclosed, e) reduce the experience requirements for all Class 5 and Class 6 waterworks licensure applicants, f) newly allow Class 4 applicants without a high diploma or equivalent and Class 3 applicants with a bachelor's, or master's degree to substitute experience in the other profession (waterworks experience for wastewater works licensure and vice versa) or education for part of the experience requirement, g) reduce the

¹ Code § 2.2-4007.04 requires that such economic impact analyses determine the public benefits and costs of the proposed amendments. Further the analysis should include but not be limited to: (1) the projected number of businesses or other entities to whom the proposed regulatory action would apply, (2) the identity of any localities and types of businesses or other entities particularly affected, (3) the projected number of persons and employment positions to be affected, (4) the projected costs to affected businesses or entities to implement or comply with the regulation, and (5) the impact on the use and value of private property.

² In this document, if neither waterworks nor wastewater works are specified, then the statement applies to both professions.

experience requirements for Class 2 and Class 3 applicants who have an associate's degree and for those without a high diploma or equivalent, h) reduce the experience requirements for all Class 1 applicants, i) reduce the minimum required number of credit hours in science and/or math when using an associate's, bachelor's, or master's degree for licensure qualification, j) state that the Board will send, instead of mail, the renewal notice to the licensee, k) increase the reinstatement period for licenses from one year to 24 months, l) reduce the minimum number of continuing professional education (CPE) contact hours required for Class 1, Class 2, and Class 3 licensure renewal, m) reduce the minimum number of CPE contact hours required for Class 5 waterworks licensure renewal, n) increase the CPE credit for teaching a relevant course, o) reduce the amount of CPE hours that can be in safety subjects, p) reduce the minimum number of required contact hours for CPE pertaining to utility management, q) allow training courses to be approved retroactively, r) require that training course providers provide each participant with a certificate of completion or similar documentation, s) reduce required training course provider record retention from seven years to five years, t) increase from 30 days to 90 days the time within which training providers must report changes in information that is required to be sent to the Board, u), increase from 30 days to 60 days the time within which licensees must report changes of name or address, v) no longer require that licensees inform the Board of all licenses, certificates, or registrations affected by an address change, w) newly allow soliciting or accepting financial or other valuable consideration from material or equipment suppliers for specifying their products or service if the circumstances are fully disclosed to, and agreed to by, all interested parties in writing, x) newly allow soliciting or accepting gratuities, directly or indirectly, from contractors, their agents, or other parties dealing with a client or employer in connection with work for which the licensee is responsible if the circumstances are fully disclosed to, and agreed to by, all interested parties in writing, y) no longer require that a licensee who has direct knowledge that another individual may be violating any of the provisions of this chapter or the provisions of Chapter 23 (§ 54.1-2300 et seq.) of Title 54.1 of the Code immediately inform the Board in writing, and z) remove descriptions of waterworks and wastewater works facility classifications, and instead include references to the VDH and DEQ regulations, respectively where the descriptions are also contained.

Background

In order to operate a waterworks or wastewater works, individuals must possess the appropriate category of license in a classification equal to or higher than the classification of the applicable waterworks or wastewater works. For example, an individual with a Class 6 waterworks license can operate a Class 6 waterworks facility, but not a Class 5, 4, 3, 2, or 1 facility. An individual with a Class 5 waterworks license can operate a Class 5 or 6 waterworks facility, but not a Class 4, 3, 2, or 1 facility. And so on.

Waterworks Facilities

A Class 1 facility is a) a waterworks or a water treatment plant serving 50,000 or more persons, or having a water treatment plant capacity of 5.0 million gallons per day (MGD) or more and employing conventional filtration or chemical coagulation in combination with membrane filtration; or b) a waterworks designated by the Virginia Department of Health (VDH) to be a Class 1 waterworks.

A Class 2 facility is a) a waterworks or a water treatment plant serving 5,000 or more persons but fewer than 50,000 persons or having a water treatment plant capacity of 0.5 MGD or more but less than 5.0 MGD, whichever range applies, and employing rapid rate conventional filtration (see 12VAC5-590-874) or chemical coagulation in combination with membrane filtration; b) a waterworks or a water treatment plant serving fewer than 50,000 persons or having a water treatment plant capacity of less than 5.0 MGD and employing high rate conventional filtration; or c) a waterworks designated by VDH to be a Class 2 waterworks.

A Class 3 facility is a) a waterworks or a water treatment plant serving fewer than 5,000 persons or having a water treatment plant capacity less than 0.5 MGD, whichever is greater, and employing conventional filtration or chemical coagulation in combination with membrane filtration; b) a waterworks or a water treatment plant serving 5,000 or more persons or having a water treatment plant capacity of 0.5 MGD or more, whichever is greater, and employing one or more of the following: disinfection other than with hypochlorination, caustic soda feed, iron and manganese removal, ion exchange, slow sand filtration, aeration, rechlorination other than with hypochlorination, activated carbon contactors, membrane or other filtration technologies without chemical coagulation, and fluoridation with a saturator or acid feed; c) a waterworks or a water treatment plant employing fluoridation with other than a saturator not considered a Class 1 or

Class 2 waterworks; or d) a waterworks designated by the department to be a Class 3 waterworks.

A Class 4 facility is a) a waterworks or a water treatment plant serving fewer than 5,000 persons or having a water treatment plant capacity of less than 0.5 MGD and employing one or more of the following: disinfection other than with hypochlorination, caustic soda feed, iron and manganese removal, ion exchange, slow sand filtration, aeration, rechlorination other than with hypochlorination, activated carbon contactors, membrane or other filtration technologies without chemical coagulation, and fluoridation with a saturator; or b) a waterworks designated by the department to be a Class 4 waterworks.

A Class 5 facility is a) a waterworks serving 400 or more persons that: (i) provides no treatment; or (ii) employs one or more of the following treatment processes: hypochlorination for disinfection, corrosion control with calcite or magnesium oxide contactors or solution feed except with caustic soda, or sequestration by solution feed; or b) a waterworks designated by the department to be a Class 5 waterworks.

A Class 6 facility is a) a waterworks serving fewer than 400 persons that: (i) provides no treatment; or (ii) employs one or more of the following treatment processes: hypochlorination for disinfection, corrosion control with calcite or magnesium oxide contactors or solution feed except with caustic soda, or sequestration by solution feed; or b) a waterworks designated by the department to be a Class 6 waterworks.

Wastewater Works Facilities

A Class 1 facility is a) a wastewater works using biological treatment methods consisting of but not limited to (i) suspended growth reactors, (ii) aerated lagoons or constructed wetlands, (iii) filters or other attached growth contactors, (iv) processes utilizing biological nutrient control, (v) processes utilizing land treatment and having a hydraulic capacity greater than 5.0 MGD; b) a wastewater works using advanced waste treatment methods consisting of but not limited to (i) ammonia stripping, (ii) breaking chlorination, (iii) carbon adsorption, (iv) chemical coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, (viii) demineralization (i.e., ion exchange, reverse osmosis, or electrodialysis) and having a design capacity greater than 2.5 MGD; or c) a wastewater works classified by the Department of Environmental Quality (DEQ) or VDH as a Class 1 wastewater works.

A Class 2 facility is a) a wastewater works using biological treatment methods consisting of but not limited to (i) suspended growth reactors, (ii) aerated lagoons or constructed wetlands, (iii) filters or other attached growth contactors, (iv) processes utilizing biological nutrient control, (v) processes utilizing land treatment and having a hydraulic capacity greater than 0.5 MGD but equal to or less than 5.0 MGD; b) a wastewater works using advanced waste treatment methods consisting of but not limited to (i) ammonia stripping, (ii) breaking chlorination, (iii) carbon adsorption, (iv) chemical coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, (viii) demineralization (i.e., ion exchange, reverse osmosis, or electrodialysis) and having a design capacity greater than 0.1 MGD but equal to or less than 2.5 MGD; or c) a wastewater works classified by DEQ or VDH as a Class 2 wastewater works.

A Class 3 facility is a) a wastewater works using biological treatment methods consisting of but not limited to (i) suspended growth reactors, (ii) aerated lagoons, (iii) constructed wetlands, (iv) filters or other attached growth contactors, (v) processes utilizing biological nutrient control, or (vi) processes utilizing land treatment having a design hydraulic capacity greater than 0.04 MGD, but equal to or less than 0.5 MGD; b) a wastewater works using natural treatment methods (land treatment utilizing a secondary process for pretreatment followed by irrigation, overland flow infiltration-percolation, or combination thereof or aquatic ponds or constructed wetlands) with a design hydraulic capacity greater than 1.0 MGD; c) a wastewater works using advanced waste treatment methods consisting of but not limited to (i) ammonia stripping, (ii) breakpoint chlorination, (iii) carbon adsorption, (iv) chemical coagulation, (v) flocculation, (vi) precipitation, (vii) filtration, or (viii) demineralization (i.e., ion exchange, reverse osmosis, or electrodialysis) having a design hydraulic capacity greater than 1,000 gallons per day but equal to or less than 0.1 MGD; or d) a wastewater works classified by DEQ or VDH as a Class 3 wastewater works.

A Class 4 facility is a) a wastewater works employing biological mechanical methods (i.e., mechanical treatment process defined as those containing aerated and mixed flows using electrical or outside energy sources) with a design hydraulic capacity greater than 1,000 gallons per day but equal to or less than 0.04 MGD; b) a wastewater works using natural treatment methods (land treatment utilizing a secondary process for pretreatment followed by irrigation, overland flow infiltration-percolation, or combination thereof or aquatic ponds or constructed

wetlands) with a design hydraulic capacity greater than 1.0 MGD; or c) a wastewater works classified by DEQ or VDH as a Class 4 wastewater works.

Estimated Benefits and Costs

Examinations and Reinstatement

Under the current regulation, an applicant has 12 months from approval of the application to pass the board-approved examination. Failure to pass the board-approved examination within 12 months of approval results in the applicant being required to submit a new application to be considered for licensure. The proposed increase in the time that an applicant has to pass the Board-approved examination once an application has been approved from 12 to 24 months would save applicants who need the extra time from paying another \$100 application fee as well as the time associated with assembling and sending another application.

Currently, individuals who were previously licensed, but who allowed their license to expire and lapse, must re-take the licensure examination. The proposal to state that an examination score received by an applicant is valid for a period of ten years from the date of the examination would be beneficial in that it would newly allow some such individuals to regain licensure without having to retake the examination.

Under the current regulation, a license may be reinstated for up to one year following the expiration date of the license. An individual who fails to reinstate their license within 12 months after the expiration date must apply for a new license and meet entry requirements in effect at the time of the submittal of the new application. The proposal to increase the reinstatement period for licenses from one year to 24 months would likely enable individuals to resume practicing legally more quickly as they would not need to wait for a new license to be approved. It would not result in fee savings though, as the reinstatement fee is \$105 and the new license fee is \$100.

Disclosures

Under the current regulation, licensure applicants must disclose all felony convictions regardless of when they occurred and all misdemeanor convictions (except for marijuana) that occurred within three years of the date of application. By no longer requiring disclosure of felony convictions that occurred more than 20 years from the date of application, or misdemeanor convictions that do not involve lying, cheating, or stealing, applicants' time tracking down

specific information about the convictions and Department of Professional and Occupational Regulation (DPOR) staff time reviewing the applications could be saved.

Experience Requirements

Under the current regulation, Class 6 waterworks licensure requires at least six months of experience at a Class 6 or higher waterworks facility for those with a high school diploma or equivalent, or one year of experience at a Class 6 or higher waterworks for those without a high school diploma or equivalent. Class 5 waterworks licensure requires at least six months of experience at a Class 5 or higher waterworks facility for those with a high school diploma or equivalent, or one year of experience at a Class 5 or higher waterworks for those without a high school diploma or equivalent. Experience can be gained as an "operator-in-training" at a facility for which the operator is not yet licensed, under the direct supervision of an operator holding a valid license. For both Class 6 and Class 5, the Board proposes to reduce the required minimum experience to three months for those with a high school diploma or equivalent and six months for those without a high school diploma or equivalent.

Under the current regulation, Class 3 licensure for both professions (waterworks and wastewater works) requires at least nine months of experience in the same profession at a Class 4 or higher facility for those with an associate's degree, or three years of experience in the same profession at a Class 3 or higher facility for those without a high school diploma or equivalent. The Board proposes to reduce the required minimum experience to six months for those with an associate's degree and 18 months for those without a high school diploma or equivalent. Additionally, the Board proposes to allow experience at a Class 4 facility to count toward the experience requirement for those without a high school diploma or equivalent.

Under the current regulation, Class 2 licensure for both professions requires at least 18 months of experience in the same profession at a Class 3 or higher facility for those with an associate's degree, or five years of experience at a Class 2 or higher facility for those without a high school diploma or equivalent. The Board proposes to reduce the required minimum experience to one year for those with an associate's degree and three years for those without a high school diploma or equivalent. Additionally, the Board proposes to allow experience at a Class 3 facility to count toward the experience requirement for those without a high school diploma or equivalent.

Under the current regulation, Class 1 licensure for both professions requires at least two years of experience in the same profession at a Class 2 or higher facility for those with a bachelor's or master's degree, or three years of experience at a at a Class 2 or higher facility for those with an associate's degree, or four years of experience at a at a Class 2 or higher facility for those with a high school diploma or equivalent, or nine years of experience at a at a Class 2 or higher facility for those without a high school diploma or equivalent. The Board proposes to reduce the required minimum experience to 18 months for those with a bachelor's, master's, or associate's degree, three years for those with a high school diploma or equivalent, and four years for those without a high school diploma or equivalent.

Under the current regulation, for some licensure classes and educational backgrounds, up to half of the minimum experience requirements can be satisfied by substituting experience in the other profession so long as the experience was gained in an equivalent or higher class of facility. Also, education may substitute for part of the required experience in the category of license applied for at a rate of one month of experience credit for each semester hour of college credit. Coursework must be relevant to the category and classification of the license being sought. The college credit must be from an accredited college or university that is approved or accredited by a regional or national accreditation association, or by an accreditation agency that is recognized by the U.S. Secretary of Education. Board-approved waterworks or wastewater works operator training courses may be utilized for experience at a rate of one month experience for each training credit approved by the board. In total, substitutions may not exceed 50 percent of the total experience required for licensure. The Board proposes to newly allow Class 4 applicants without a high diploma or equivalent and Class 3 applicants with a bachelor's, master's, or associate's degree to utilize substitutions for minimum experience.

The proposal to reduce the minimum experience requirements, add facilities at which experience can count toward the minimum experience requirements, and allow additional applicants to utilize substitutions for minimum experience all make it easier for professionals to qualify for higher classes and the initial classes for Class 6 waterworks and Class 4 wastewater works. This would likely increase the supply of individuals qualified for licensure.

Science and Math

Applicants seeking to qualify for licensure based on completion of an associate's, bachelor's, or master's degree must have specific elements as part of the degree: 1) bachelor's or master's degree in engineering or engineering technology in a related physical, biological, environmental, or chemical science; 2) bachelor's degree in a related physical, biological, environmental, or chemical science that includes a minimum 40 semester credit hours in any combination of science and math; 3) master's degree in a related physical, biological, environmental, or chemical science, and a bachelor's degree in any major such that the combined degrees include a minimum 40 semester credit hours in any combination of science and math; or 4) associate's degree in waterworks, in wastewater works, or in a related physical, biological, environmental, or chemical science that includes a minimum of 20 credit hours in any combination of science and math. For the second and third pathways, the Board proposes to reduce the minimum number of semester credit hours in any combination of science and math from 40 to 32. For the fourth pathway, the Board proposes to reduce the minimum number of semester credit hours in any combination of science and math from 20 to 16. These proposed changes make it easier for some professionals to qualify for Classes 1, 2, and 3 for both professions. This would likely increase the supply of individuals qualified for Classes 1, 2, and 3 licensure.

Renewal Notice

According to DPOR, the Board does not currently distribute renewal notifications through email. The current regulation states that "Prior to the expiration date shown on the license, the board shall mail a renewal notice to the licensee's address of record." The Board proposes to replace "shall mail" with "will send." This would facilitate faster notifications through electronic means and reduce postal costs.

CPE contact hours

Under the current regulation, Class 1, Class 2, and Class 3 operators must obtain a minimum of 20 CPE contact hours; Class 4 operators must obtain a minimum of 16 CPE contact hours; Class 5 waterworks operators must obtain a minimum of eight CPE contact hours; and Class 6 waterworks operators must obtain a minimum of four CPE contact hours within the two-year licensure period in order to renew their license. The Board proposes to reduce the required

minimum CPE contact hours to 18 for Class 1, Class 2, and Class 3, and six for Class 5 waterworks operators. The required minimum CPE contact hours would not change for Class 4 operators and Class 6 waterworks operators.

The current regulation states that "Of the total 20 hours required, a minimum of five contact hours pertaining to utility management is required of Class 1 and Class 2 waterworks operators." In addition to reducing the required total minimum contact hours from 20 to 18, the Board also proposes to commensurately reduce the required minimum contact hours pertaining to utility management from five to four.

The current regulation also states that "Safety subjects shall not count for more than one-half of the total required CPE hours." The Board wishes to place greater emphasis on other approved topics and proposes to reduce the cap on safety subjects to one-quarter of the total required CPE hours.

The regulation allows licensees to receive two hours of CPE no more than once during a single licensing renewal cycle for the initial development or substantial updating of a CPE course. The Board proposes to increase the credit to four hours of CPE.

Reducing the required number CPE hours for license renewal reduces costs for licensees. Examples of costs for CPE courses from providers included by DPOR include At Your Pace Online:³ \$19 for one-hour course, \$20 for two-hour course, \$50 for five-hour and six-hour courses, etc., and American Water College:⁴ \$59.95 for four-hour course, \$109.95 for eight-hour course, etc. Thus, by reducing required CPE by two hours, licensees could save approximately \$20 in fees plus the value of two hours of their time. The most recent edition of the U.S. Bureau of Labor Statistics State Occupational Employment and Wage Estimates⁵ indicates that the mean hourly wage for water and wastewater treatment plant and system operators in Virginia is \$27.91. Valuing their time by the average wage, \$55.82 in time would be saved by reducing required CPE by two hours. While Class 1, Class 2, and Class 3, and Class 5 operators would have savings, providers of CPE would commensurately lose some business.

³ See https://www.avpotech.com/virginia-water-operator-continuing-education.

⁴ See https://www.americanwatercollege.org/virginia/.

⁵ See https://www.bls.gov/oes/current/oes518031.htm.

Training Courses

The current regulation requires that training courses be approved by the Board prior to commencing. This is replaced in the proposed regulation by a statement that credit for a course will not be awarded until a course is approved by the Board. This is less restrictive as training courses could be approved retroactively. If a licensee does choose to take a training course that is not yet approved, he or she would assume the risk of potentially wasting their time and money if the Board does not subsequently approve it.

The Board proposes to reduce required training course provider record retention from seven years to five years. This would modestly reduce costs for training providers.

Reporting

The Board proposes to increase from 30 days to 90 days the time within which training providers must report changes in information that is required to be sent to the Board, and increase from 30 days to 60 days the time within which licensees must report changes of name or address. This is moderately beneficial for training providers and operators.

The Board also proposes to no longer require that licensees inform the Board of all licenses, certificates, or registrations affected by an address change. This would save operators time.

The current regulation requires that "A licensee who has direct knowledge that another individual may be violating any of the provisions of this chapter or the provisions of Chapter 23 (§ 54.1-2300 et seq.) of Title 54.1 of the Code of Virginia shall immediately inform the board in writing" The Board proposes to strike this requirement, which would reduce some burden on licensees but may also reduce the likelihood wrongdoing is found and remedied.

Financial Considerations and Gratuities

The current regulation prohibits both 1) soliciting or accepting financial or other valuable consideration from material or equipment suppliers in exchange for specifying their products or services and 2) soliciting or accepting gratuities, directly or indirectly, from contractors or their agents or other parties dealing with a client or employer in connection with work for which the licensee is responsible. The Board proposals to append to both "unless the circumstances are fully disclosed to, and agreed to by all interested parties in writing." This could be financially

beneficial for licensees who choose to accept considerations or gratuities. Otherwise, the impact of these proposed changes is unclear.

Facility Classifications

The current regulation includes descriptions of waterworks and wastewater works facility classifications. The Board proposes to remove the descriptions and instead include references to the VDH⁶ and DEQ⁷ regulations, respectively, where the descriptions are also contained. This would add time for interested readers to find the information, but if VDH or DEQ amend the descriptions, having the references rather than text in the DPOR regulation would avoid having inconsistent information and the need for DPOR to start a time-consuming regulatory action to regain consistency.

Businesses and Other Entities Affected

The proposed amendments affect the 2,044 licensed wastewater works operators, 2,215 licensed waterworks operators, licensure applicants, as well as wastewater works and waterworks facilities.⁸ There are 71 Class 1, 119 Class 2, 198 Class 3, and 120 Class 4 wastewater works facilities;⁹ and 36 Class 1, 77 Class 2, 42 Class 3, 286 Class 4, 277 Class 5, and 893 Class 6 waterworks facilities.¹⁰

The Code of Virginia requires DPB to assess whether an adverse impact may result from the proposed regulation.¹¹ An adverse impact is indicated if there is any increase in net cost or reduction in net benefit for any entity, even if the benefits exceed the costs for all entities combined.¹² While the proposed reductions in required CPE hours are beneficial for licensees,

⁶ Waterworks Regulations (12VAC5-590).

⁷ Sewage Collection and Treatment Regulations (9VAC25-790). Note, the DEQ regulation uses Roman numerals instead of Arabic numerals when referring to licensure classes.

⁸ Data source: Department of Professional and Occupational Regulation.

⁹ Data source: DEQ.

¹⁰ Data source: VDH.

¹¹ Pursuant to Code § 2.2-4007.04(D): In the event this economic impact analysis reveals that the proposed regulation would have an adverse economic impact on businesses or would impose a significant adverse economic impact on a locality, business, or entity particularly affected, the Department of Planning and Budget shall advise the Joint Commission on Administrative Rules, the House Committee on Appropriations, and the Senate Committee on Finance

¹² Statute does not define "adverse impact," state whether only Virginia entities should be considered, nor indicate whether an adverse impact results from regulatory requirements mandated by legislation. As a result, DPB has adopted a definition of adverse impact that assesses changes in net costs and benefits for each affected Virginia entity that directly results from discretionary changes to the regulation.

they would likely reduce business for some training providers. Thus, an adverse impact is indicated for training providers.

Small Businesses¹³ Affected:¹⁴

Types and Estimated Number of Small Businesses Affected

According to DPOR, there are currently 23 Board approved specialized training programs and courses, most of which are likely small businesses.

Costs and Other Effects

Proposed amendments would likely reduce hiring costs for small waterworks and wastewater works, and reduce business for some small training providers.

Operator licenses are issued to individuals, not business entities. However, according to DPOR, many licensed waterworks and wastewater works professionals are likely owners or employees of business entities that meet the definition of small business.

Alternative Method that Minimizes Adverse Impact

There are no clear alternative methods that both reduce adverse impact and meet the intended policy goals.

Localities¹⁵ Affected¹⁶

The proposed amendments neither disproportionately affect particular localities nor increase costs for local governments.

Projected Impact on Employment

The proposed amendments that make it easier for professionals to qualify for higher operator classes and the initial classes for Class 6 waterworks and Class 4 wastewater works may

¹³ Pursuant to § 2.2-4007.04 of the Code of Virginia, small business is defined as "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."

¹⁴ If the proposed regulatory action may have an adverse effect on small businesses, Code § 2.2-4007.04 requires that such economic impact analyses include: (1) an identification and estimate of the number of small businesses subject to the proposed regulation, (2) the projected reporting, recordkeeping, and other administrative costs required for small businesses to comply with the proposed regulation, including the type of professional skills necessary for preparing required reports and other documents, (3) a statement of the probable effect of the proposed regulation on affected small businesses, and (4) a description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation. Additionally, pursuant to Code § 2.2-4007.1, if there is a finding that a proposed regulation may have an adverse impact on small business, the Joint Commission on Administrative Rules shall be notified.

¹⁵ "Locality" can refer to either local governments or the locations in the Commonwealth where the activities relevant to the regulatory change are most likely to occur.

¹⁶ § 2.2-4007.04 defines "particularly affected" as bearing disproportionate material impact.

make it easier to fill vacancies by expanding the supply of qualified operators. This may moderately increase the number of individuals who are employed.

Effects on the Use and Value of Private Property

The proposed amendments that are likely to increase the supply of qualified operators may moderately reduce hiring costs for waterworks and wastewater works, moderately increasing their value. The proposed reduction in required CPE hours would likely moderately reduce business for some training providers, which may moderately reduce their value. The proposed amendments do not affect real estate development costs.