

# CSI - Ohio

The Common Sense Initiative

## Business Impact Analysis

Agency Name: Ohio Environmental Protection Agency

Regulation/Package Title: 2014 Water Well Standards and Plan Approval Amendments

Rule Number(s): 3745-9-01, 3745-9-02, 3745-9-03, 3745-9-04, 3745-9-05, 3745-9-06, 3745-9-07, 3745-9-08, 3745-9-09, 3745-9-10, 3745-91-02 and 3745-91-08

Date: 03/10/14

**Rule Type:**

New

5-Year Review

Amended

Rescinded

The Common Sense Initiative was established by Executive Order 2011-01K and placed within the Office of the Lieutenant Governor. Under the CSI Initiative, agencies should balance the critical objectives of all regulations with the costs of compliance by the regulated parties. Agencies should promote transparency, consistency, predictability, and flexibility in regulatory activities. Agencies should prioritize compliance over punishment, and to that end, should utilize plain language in the development of regulations.

### **Regulatory Intent**

**1. Please briefly describe the draft regulation in plain language.**

Ohio EPA is proposing to amend all rules in Chapter 3745-9 of the OAC, which establish water well standards. These rules establish plan approval criteria for new and existing wells, well construction exemptions, well siting criteria, parameters for well construction,

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construction under specific geologic conditions, well grouting specifications, pumping rates, water sampling parameters for new systems, and well sealing requirements.

Finally, OAC rule 3745-91-02 and rule 3745-91-08 establish requirements for submittal of plans for construction or installation of public water systems or substantial changes to existing public water systems, and outline the procedure for approving plans for public water systems (PWS) and the procedure whereby changes to those plans will be requested.

Revisions to all rules in Chapter 3745-9 of the OAC include consolidating and streamlining rules; ensuring revisions are consistent with the private water system rules in Chapter 3701-28 of the Administrative Code; clarifying non-potable well requirements; adding and revising definitions; evaluating conditions under which PWS well variances may be granted; adding alternative methods requested by industry; clarifying standards for grout placement in a flowing well; and clarifying conditions requiring use of alternate cement types.

Finally, revisions to rule 3745-91-02 add plan approval exemptions for hauled water systems, and for small ground water systems installing ion exchange softeners and cartridge filters. Proposed revisions to rule 3745-91-08 reflect the current versions of Ten State Standards (Recommended Standards for Water Works) and Guidelines for Design of Small Ground Water Systems.

**2. Please list the Ohio statute authorizing the Agency to adopt this regulation.**

ORC section 6109.04 paragraph (B)(2), “Adopt, amend, and rescind such rules in accordance with Chapter 119. of the Revised Code as may be necessary or desirable to... Govern public water system to protect the public welfare, including rules governing contaminants in water that may adversely affect the suitability of the water for its intended uses or that may otherwise adversely affect the public health or welfare.” ORC section 6111.42 states, “the environmental protection agency shall... adopt rules in accordance with Chapter 119. of the Revised Code for the drilling, operation, maintenance, and abandonment of wells that are determined to be necessary by the director of environmental protection to prevent contamination of the ground waters in the state, except that the rules do not apply to wells for the provision of water for human consumption unless they are used, or are for use, by a public water system as defined in section 6109.01 of the ORC.”

- 3. Does the regulation implement a federal requirement? Is the proposed regulation being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal law or to participate in a federal program? If yes, please briefly explain the source and substance of the federal requirement.**

OAC rules in Chapter 3745-9, and rules 3745-91-02 and 3745-91-08 do not specifically implement federal requirements, but they do protect public drinking water systems from contamination due to poor well design, construction and treatment.

**4. If the regulation includes provisions not specifically required by the federal government, please explain the rationale for exceeding the federal requirement.**

There is no federal counterpart for rules in Chapter 3745-9, and rules 3745-91-02 and 3745-91-08.

**5. What is the public purpose for this regulation (i.e., why does the Agency feel that there needs to be any regulation in this area at all)?**

The purpose for adopting such regulations is ensuring the availability of a safe and adequate supply of public drinking water and to prevent contamination of the ground waters in the state. These rules help to achieve this purpose by ensuring wells and public water systems are designed and constructed according to industry and public health standards, thereby preventing contamination of drinking water.

**6. How will the Agency measure the success of this regulation in terms of outputs and/or outcomes?**

The Agency will base success of all of the rules in this package on public water system compliance rates within our various drinking and ground water programs. PWS compliance rates are typically discovered through proposed well design and construction plans, reported monitoring data, and during required sanitary surveys and additional site visits of said system.

**Development of the Regulation**

**7. Please list the stakeholders included by the Agency in the development or initial review of the draft regulation.**

*If applicable, please include the date and medium by which the stakeholders were initially contacted.*

Stakeholders include public water system owners and operators, consultants, environmental organizations, other state agencies, businesses and in general, the public at large. The only measure someone has to take to be notified of DDAGW's potential rule activity is to request to be added to our electronic or hard-copy mailing list.

Stakeholders were notified of DDAGW's plans to revise rules on February 6, 2013 and

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January 6, 2014 by electronic or regular mail in accordance with their request. In addition, DDAGW will be seeking comment from stakeholders during the division's interested party review period. The interested party review period occurs before the rules are filed with JCARR and is used to address any concerns or questions from staff and our stakeholders.

**8. What input was provided by the stakeholders, and how did that input affect the draft regulation being proposed by the Agency?**

Stakeholders did not provide any comments during early stakeholder outreach, held from February 6 – March 6, 2013. However, one minor comment was provided during the January 6 – February 7, 2014 review period. The comment resulted in a minor change to the draft of a water well standard rule.

**9. What scientific data was used to develop the rule or the measurable outcomes of the rule? How does this data support the regulation being proposed?**

Statutory authority for these rules is established in Section 6109. and Section 6111.42 of the Revised Code. Ohio EPA promulgated these rules under OAC Chapters 3745-9 and 3745-91. References used include the latest revisions to 40 CFR Parts 141 and 142, as well as industry standards and other states primacy programs. Additionally, DDAGW participates in state-wide workgroups with industry representatives and consults with them about rule revisions.

**10. What alternative regulations (or specific provisions within the regulation) did the Agency consider, and why did it determine that these alternatives were not appropriate? If none, why didn't the Agency consider regulatory alternatives?**

The regulations in OAC Chapter 3745-9 and 3745-91 maintain consistency with existing industry and agency-wide standards, and create some flexibility in rule to use approved alternatives.

**11. Did the Agency specifically consider a performance-based regulation? Please explain. *Performance-based regulations define the required outcome, but don't dictate the process the regulated stakeholders must use to achieve compliance.***

The plan approval rules (Chapter 3745-9 and 3745-91) are performance-based in that they establish guidelines in which to measure the design, construction and repairs of PWSs.

**12. What measures did the Agency take to ensure that this regulation does not duplicate an existing Ohio regulation?**

Ohio EPA reviewed internal regulations and determined there are no duplications.

**13. Please describe the Agency's plan for implementation of the regulation, including any measures to ensure that the regulation is applied consistently and predictably for the regulated community.**

Ohio EPA implementation of this rules package includes the following:

- Seeking input from staff on implementation problems and developing solutions.
- DDAGW staff in each district office was integral in developing the rule amendments.
- Developing internal procedures and guidance documents for staff to use in implementing rules. New internal procedures have been developed for rules in OAC Chapter 3745-9.
- Regularly notifying staff of rule changes.
- Giving presentations on rule updates. A staff presentation on changes to rules in OAC Chapter 3745-9 was made on May 8, 2014.

**Adverse Impact to Business**

**14. Provide a summary of the estimated cost of compliance with the rule. Specifically, please do the following:**

**a. Identify the scope of the impacted business community;**

OAC Chapter 3745-9 (Water Well Standards): These rules impact owners of potable and nonpotable wells as defined in rule 3745-9-01 that intend on drilling, constructing, altering or abandoning wells. Additionally, the rules impact the owners of monitoring wells.

OAC rule 3745-91-02 and 3745-91-08 impact any person(s) intending to construct a new PWS or make a substantial change to an existing system.

**b. Identify the nature of the adverse impact (e.g., license fees, fines, employer time for compliance); and**

3745-9-02: The proposed rule will require a contractor intending to drill, construct, alter or seal a well, or to install a pitless adapter or pitless unit to hold a valid registration with the Ohio Department of Health. The cost for the contractor to be registered and obtain a bond and liability insurance is approximately \$250 for the

registration, a \$10,000 for the annual registration bond and proof of not less than \$500,000 of general business liability insurance. These costs may partially be passed along to the property owner. It was determined after a review of registered installers that most if not all companies known to install PWS wells are currently registered.

3745-9-03: The costs related to this rule are associated with installing a monitoring well and sealing an unused monitoring well, and would affect the PWS owner.

3745-9-04: The potential costs incurred by this rule would be to owners that choose to purchase or make lease agreements for land sited as in the isolation radius and that may have direct impact on the PWS well. Additionally, a hydrogeological investigation could be required for community water systems pumping 100,000 gallons per day or 'high use' wells when then geologic conditions are such that they promote well contamination, whenever the pumping has the potential to influence the performance of the well.

3745-9-05 and 3745-9-07: The costs related to these rules would be to PWS owners and include construction of a well in accordance with industry standards and the fee paid to the agency for review and approval of plans.

3745-9-06: Costs from the construction of a well may be incurred from this rule as well, impacting PWS owners. However, costs depend on the existing geologic conditions of where the well is proposed to be located. The conditions may determine the construction of the well.

3745-9-08: The potential costs incurred by this rule are for the disinfection of a well in accordance with industry standards and would fall to the PWS owner.

3745-9-09: Costs incurred from this rule include the analysis of drinking water of a new well, and conducting and reporting a well pump test. The costs would fall upon the PWS owner.

3745-9-10: The cost of compliance with this rule again, would fall upon the PWS owner and include abandoning a well in accordance with industry standards.

3745-91-02 and 3745-91-08: These rules require plans prior to the construction of a new well or prior to substantially changing an existing well. The cost for plan submittal falls to the PWS owner.

**c. Quantify the expected adverse impact from the regulation.**

*The adverse impact can be quantified in terms of dollars, hours to comply, or other factors; and may be estimated for the entire regulated population or for a “representative business.” Please include the source for your information/estimated impact.*

3745-9-02, 3745-9-05, 3745-9-06, 3745-9-07, and 3745-9-08: The cost of compliance for these rules includes costs related to the construction of a well in accordance with the standards and the fee paid to the agency for review and approval of plans. The cost of compliance was estimated from a database of projects submitted for plan approval. These estimates often include associated costs such as those for pressure tanks, lines and softening, making the actual cost of constructing a well difficult to determine.

In 2013, approximately 20 projects were completed for construction of one or more wells. The costs of these projects ranged from approximately \$3,000 to \$524,000. The associated plan approval fee for these projects ranged from \$160 to \$475, with an average fee of \$280. These costs are primarily personnel costs and new equipment or other capital costs. Cost for installation of a standard water well range between \$20 to \$45 per borehole foot, depending on the drilling method, well diameter, depth and casing material. In Ohio, well depth ranges from 50 to 500 feet. Typical well depths are between 100 to 150 feet. The average cost would vary between \$2,000 to \$7,000 plus the cost of the pump, pumping test requirements and new well chemical analysis requirements.

3745-9-03: The cost to comply with this rule includes costs associated with installing a monitoring well and sealing an unused monitoring well. The cost of compliance was estimated using information from project cost estimates for Ohio EPA’s Hydrogeologic Investigations at Construction and Demolition Debris Facilities and from estimates provided by Voluntary Action Program Certified Professionals. The range for installing a monitoring well is between \$2,000 and \$10,000 based on depth, diameter, drilling method, mobilization cost, and subsurface material (unconsolidated or bedrock). The range for sealing an unused monitoring well is between \$500 and \$10,000 based on removing the upper 2 to 4 feet of casing and sealing the well in place or the potential need for complete well casing removal and over drilling of the borehole.

3745-9-04: The cost of compliance for this rule includes, in some cases, the cost of obtaining control of the land near the well to meet the 50 to 300 feet sanitary isolation radius requirement. This is usually accomplished through direct ownership of the land or lease agreements. Ohio EPA approves approximately 80 to 120 new water supply wells annually that must meet the sanitary isolation distance requirements of the rule. Some systems may incur the cost of purchasing the land or covering the cost of an easement agreement. Depending on the size of the isolation radius and ownership of the land, the cost would range from \$0 to \$25,000. The majority of new well approvals are for small PWSs that have a small sanitary isolation distance requirement, 50 feet, which can be met on the property they own.

A new requirement affecting the cost to comply may fall upon a community water system pumping 100,000 gallons of water per day. They may be required to consult with and/or hire a hydrogeologist to perform an investigation if specific conditions exist, such as a) there is potential or known contamination and the hydrogeologic setting may allow transport of contaminants; b) there is an initial development or expansion of a community water system well field; c) an existing or proposed well with the capacity of pumping 100,000 or more gallons per day has the potential to influence the performance of the proposed well; or d) the proposed well has the potential to influence the operational performance of surrounding wells not under the system's control.

The hydrogeologist would look at the subsurface and geologic conditions for selecting a well to determine the potential for contamination and whether a sufficient quantity of ground water exists for the intended purpose. A simple hydrogeologic investigation, such as documenting what's known about the geology and ground water resources of a new wellfield location may take 4 to 8 hours of work. At a rate of \$125 to \$250 per hour, a simple investigation might range anywhere from \$500 to \$2,000. A more complex investigation would include additional wells, pump testing or modeling and could take up to 80 hours and range anywhere from \$10,000 to \$20,000. (Note: these costs should already be covered in the overall project costs when a new wellfield is proposed to be developed.)

3745-9-09: The aquifer or pumping test requirements specified in rule 3745-9-09 cost between \$700 to \$9,000 depending on the well classification (high, medium or low use) and the duration of the pumping test. The vast majority of new public water

supply wells are low use wells and the cost for the test is approximately \$700 to \$1,500.

The cost of compliance for rule 3745-9-09 also includes costs related to analyzing the water quality of a new well for various chemicals. The complete list of chemicals is included in the appendix to rule 3745-9-09. The average cost, based on a survey of Ohio EPA approved laboratories, is \$1,200 with a range from \$800 to \$1,700. The rule as proposed reduces the number of analyses to be performed and thereby, reduces these costs to \$300 to \$685 with an average \$492. The proposed revisions will result in a cost reduction of 60% to 65% to transient public water systems.

3745-9-10: The cost of compliance is associated with the abandonment of a well and based on Ohio EPA records and information provided by consultants, it is estimated to range from \$650 to \$25,000. Abandoning a well typically includes mobilization costs, pulling the pump, cutting the casing and bentonite placement.

3745-91-02 and 3745-91-08: The cost of compliance for these rules includes the costs associated with developing plans, providing required copies of plan drawings and specifications and application fees. Approvable plans must meet the engineering standards established in the rules, which are no more stringent than would otherwise be required for similar projects that involve the practice of engineering.

The formula for calculating plan approval fees authorized by section 3745.11 of the Revised Code is \$150 plus 0.35% of the estimated project cost, not to exceed \$20,000. The fee varies commensurate with project size.

It is possible that PWSs may incur additional costs to meet rule by reference requirements for the document, “Planning and Design Criteria for Establishing Approved Capacity for: 1) Surface Water and Ground Water Supply Sources, 2) Drinking Water Treatment Plants, and 3) Source/WTP Systems.” Some PWSs will be required to document the capacity of their water-supply source. The cost for this provision depends on how the system chooses to perform the analysis, which may include performing field tests and/or hiring a professional hydrogeologist. The estimated cost for a hydrogeologist to perform this analyses for typical 8 to 12 inch tubular wells around 100 feet in depth is approximately \$5,418\* per well. Additional costs will likely be incurred as water system size and complexity increases.

Some PWSs may also be required to perform water demand projections and initiate design or other appropriate planning activities to address changes in capacity. The costs associated with this provision may include labor costs associated with performing the projections whether done in-house or by hiring a consultant, and the cost of capital improvements if identified as necessary. These costs are expected to range from \$173\* for one day of an operator's time up to \$10,836\* if a consultant is hired.

\* U.S. Department of Labor, Bureau of Labor Statistics Inflation Calendar used to account for inflation from 2010 - 2014.

**15. Why did the Agency determine that the regulatory intent justifies the adverse impact to the regulated business community?**

The Agency considers the overall cost for complying with these regulations to be minor in comparison with ensuring the public is supplied with a safe and reliable source of drinking water.

**Regulatory Flexibility**

**16. Does the regulation provide any exemptions or alternative means of compliance for small businesses? Please explain.**

A provision in OAC rule 3745-9-02 gives the Agency authority to grant a variance in Chapter 3745-9 (well standards), so long as the requested variance does not contaminate ground water nor affect the public health and welfare. A variance application must be submitted and approved. An example of a variance in draft rule 3745-9-05 could be for approval of a well with modifications that will not be able to meet all industry specifications.

Rule 3745-91-12 provides the option to investor-owned public utilities or political subdivisions to have a professional engineer licensed by the state of Ohio certify certain types of plans which the Director will then agree to approve without further review. In addition, DDAGW drafted an exemption permitting hauled water systems from obtaining plan approval if they meet specific conditions. An exemption for small ground water noncommunity systems obtaining plan approval prior to installing ion exchange softeners and cartridge filters under certain conditions has also been drafted.

**17. How will the agency apply Ohio Revised Code section 119.14 (waiver of fines and penalties for paperwork violations and first-time offenders) into implementation of the regulation?**

Ohio EPA does not assign fines and penalties for first-time offenders, and prefers to obtain

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compliance through outreach first and if needed, written notice of violations prior to any type of formal enforcement.

**18. What resources are available to assist small businesses with compliance of the regulation?**

Small businesses PWSs can turn to their Ohio EPA District Office Inspector or Rural Community Assistance Program (RCAP) for technical assistance. Ohio EPA contracts with RCAP to provide assistance for PWSs with a population of 10,000 or less. RCAP can help small business PWSs with a number of tasks, such as:

- Preparing loan applications, including determining the ability to repay;
- Determining the most cost effective action for providing a safe drinking water supply;
- Developing and/or completing their capability assurance plan.

RCAP also sponsors training seminars such as utility board training, financial management, asset management and budget and rate setting training. Ohio EPA also provides both administrative and technical training for PWSs at low to no-cost. In addition to these informational resources, financial assistance may be available through Ohio EPA's Drinking Water Assistance Fund (DWAF).