CSI - Ohio
The Common Sense Initiative

Business Impact Analysis

Agency Name: Ohio Environmental Protection Agency

Regulation/Package Title: Primary Drinking Water Standards, No Changes 2015

Rule Number(s): 3745-81-10, 3745-81-11, 3745-81-19, 3745-81-23, 3745-81-31, 3745-81-64, 3745-81-67, 3745-81-68, 3745-81-69, 3745-81-77

Date: 09/17/2014

Rule Type:

- ☐ New
- ☐ Amended
- X 5-Year Review
- ☐ Rescinded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.**
   Rules in Chapter 3745-81 of the Ohio Administrative Code (OAC) set forth primary drinking water standards for public water systems (PWS), as set forth in the federal Safe Drinking Water Act Amendments. OAC rules in Chapter 3745-81 proposed to be filed with no changes establishes the following requirements:
   - Maximum residual disinfectant levels.
   - Maximum contaminant levels and best available technologies for inorganic contaminants.

- Use of bottled water and point-of-use or point-of-entry treatment devices.
- Inorganic chemical monitoring requirements.
- Reporting requirements for public water systems.
- General requirements of the Long Term 2 (LT2) Enhanced Surface Water Treatment Rule.
- LT2 bin classification (Cryptosporidium bin concentration for water treatment plant) and treatment technique requirements.
- Microbial toolbox options for meeting Cryptosporidium treatment requirements.
- Reporting and recording requirements for public water systems affected by the LT2 rule.
- Treatment techniques for the control of disinfection byproduct (DBP) precursors.

These rules have been reviewed pursuant to the five-year rule requirements set forth in ORC Section 106.031 and no changes are being proposed at this time.

2. **Please list the Ohio statute authorizing the Agency to adopt this regulation.**
   The Agency is authorized by ORC Section 6109.04 to propose rules in Chapter 3745-81 to be filed with no changes.

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.
   Yes, these regulations enable Ohio EPA to administer the Safe Drinking Water Act (SDWA), as well as retain primary enforcement authority from the Federal Government. These rules, including 3745-81-10, 3745-81-11, 3745-81-19, 3745-81-23 and 3745-81-31 are used by Ohio EPA to protect drinking water sources from potential contaminants as outlined in the SDWA. Rules 3745-81-64, 3745-81-67 to 3745-81-69 of the OAC assist the state with implementing the federal LT2 Enhanced Surface Water Treatment Rule and rule 3745-81-77, the federal Disinfectants/Disinfection Byproducts Rule.

4. **If the regulation includes provisions not specifically required by the federal government, please explain the rationale for exceeding the federal requirement.**
   Rules that exceed the federal requirement include:
   - 3745-81-64, 3745-81-67 and 3745-81-68: Ohio requires all PWSs using surface water, in whole or in part, to provide filtration treatment.
   - 3745-81-67 and 3745-81-68: Ohio requires all PWSs to obtain approval of plans prior to any substantial change or modification to their system, such as treatment design or operation.

- 3745-81-68: DDAGW requires systems to monitor turbidity, maintain daily logs and assure an operator of record is signing operator logs, which is consistent with established requirements in OAC Chapter 3745-7 and Chapter 3745-81.

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 public purpose for adopting such regulations is ensuring the availability of a safe and adequate supply of public drinking water. These rules help to achieve this purpose by ensuring PWSs have drinking water sources that are protected from contaminants through the implementation of the Safe Drinking Water Act Amendments, the LT2 Enhanced Surface Water Treatment Rule and the Disinfectants/Disinfection Byproducts Rule.

6. **How will the Agency measure the success of this regulation in terms of outputs and/or outcomes?**
   The success of the rules in Chapter 3745-81 is based on compliance rates. Compliance may be determined through monitoring and reporting results, review of plans and confirmation of installation, during sanitary surveys (onsite inspections) or a combination thereof.

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 and the general public. The only measure a person 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 file this rule package with no changes on January 6, 2014 by electronic or regular mail in accordance with their request.

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 on this rules package during early stakeholder outreach.

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?**
   Ohio EPA obtained statutory authority in Chapters 6109 of the Revised Code and promulgated these rules under OAC Chapter 3745-81. References used include the latest revisions to 40 CFR Parts 141. The federal counterparts, which include the SDWA Amendments of 1996, are the foundation for these rules.

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?**
    In order to retain primary enforcement authority, Ohio EPA is required to adopt the federal counterparts of rules. Therefore, Ohio EPA could not consider alternatives to these rules in Chapter 3745-81.

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.
    Yes, the rules in this package are performance-based. OAC Chapter 3745-81 establishes the required outcome for meeting public drinking water standards, including monitoring and reporting for contaminants and providing treatment for reducing them if needed to achieve compliance.

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 not 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 provides draft rule revisions to staff for internal review and comment. When needed, procedures, guidance and policy are developed to support consistent application. Additionally, training may be provided and all effective rule revisions are distributed to staff.

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;**

Public water systems in the state of Ohio of all population sizes and types are impacted by at least some of these rules. Rules 3745-81-64 and 3745-81-67 to 3745-81-69 will impact PWSs with a surface water source.

Rule 3745-81-31 directly impacts laboratories, which may or may not also be a public water system.

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

The majority of costs to public water systems will be for monitoring for contaminants, and obtaining plan approval and installing or replacing treatment equipment when necessary for compliance with maximum contaminant levels. Laboratories are provided with the software and forms from the Agency to submit data, so they should not acquire an additional expense outside of normal business operations.

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.

3745-81-10: This rule requires community and nontransient noncommunity water systems to limit the amount of the most commonly used disinfecting chemicals added to their water supplies. For systems that have a practice of using excessive amounts of disinfectant, the rule may result in a cost savings by reducing the amount of chemicals used. For other systems, it will not require any addition to current operating expenses. Note that monitoring to determine compliance with this rule is required by OAC rule 3745-81-70.

3745-81-11: The costs of compliance with this rule is not likely to affect the cost to the public water system unless they install a best available technology (BAT) not already being used at their system. Installing a different treatment technology would require the system to submit plans to Ohio EPA for approval. The costs associated with submitting plans include developing plans, providing required copies of plan drawings and specifications and application fees. Approvable plans must meet engineering standards established in rules (Chapter 3745-91 of the OAC), 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. Below is a cost summary

for rules directly associated with the D/DBP Rule, and inorganic and organic chemical monitoring in OAC Chapter 3745-81.

Once plans are approved, additional costs would be dependent on the best available technology used to reduce the organic chemical contaminant. These costs can vary widely on the size of the system and type of treatment installed.

3745-81-19: There is no requirement for public water systems to install point-of-use or point-of-entry devices specifically, however OAC rule 3745-81-11 does require that community and nontransient noncommunity public water systems comply with a maximum contaminant level (MCL) of 0.10 μg/L for arsenic in drinking water. It is estimated that the cost of complying with that requirement is between $8,442 and $123,290 per year depending on the size of the system and the type of treatment installed.* For nontransient noncommunity public water systems that choose one of these alternatives to centralized treatment, we estimate the annual cost of complying with OAC rule 3745-81-11 may be less than the estimate provided above, particularly for smaller systems.

* U.S. Department of Labor, Bureau of Labor Statistics Inflation Calendar used to account for inflation from 2005 - 2014.

3745-81-23 and 3745-81-77: This cost estimate is based on an economic analysis conducted by USEPA as it applies to public water systems in Ohio. The federal economic analysis was published with the final Stage 2 Disinfectants/Disinfection Byproducts Rule (DBPR) on January 4, 2006 in Volume 71, Number 388 of the Federal Register. That cost estimate represented total annualized capital and operational costs to comply with all requirements of the Stage 2 DBPR. These costs include non-treatment costs of rule implementation, Initial Distribution System Evaluations (IDSEs), Stage 2 DBPR monitoring plans, additional routine monitoring, and operational evaluations. Systems required to install treatment to comply with the MCLs will accrue the additional costs of treatment installation as well as operation and maintenance.

Because the requirements associated with the Stage 2 DBPR are distributed among multiple rules, this cost estimate represents costs associated with OAC rules 3745-81-12, 3745-81-22, 3745-81-23, 3745-81-24, 3745-81-70 and 3745-81-77.

Table 1 provides a summary of the federal analysis broken down according to system size and type of source water (i.e., surface water or ground water).

Table 1 (D/DBP). USEPA Economic Analysis Summary

System Type, Source Water and Population Served	Number of Systems	Total Cost * (in $ Millions/Year)	Cost per System *
Community surface water >10,000	2406	$ 39.98	$ 16,617
Community ground water >10,000	1424	$ 11.60	$ 8,146
Community surface water <10,000	9397	$ 11.89	$ 1,265
Community ground water <10,000	28806	$ 17.05	$ 592
Nontransient noncommunity surface water >10,000	6	$ 0.09	$ 15,000
Nontransient noncommunity ground water >10,000	3	$ 0.02	$ 6,666
Nontransient noncommunity surface water <10,000	771	$ 0.84	$ 1,089
Nontransient noncommunity ground water <10,000	5479	$ 1.80	$ 329

* U.S. Department of Labor, Bureau of Labor Statistics Inflation Calendar used to account for inflation from 2009 - 2014.

Ohio EPA determined how many public water systems in Ohio fall into the above categories and broke the categories down further by type of ownership. This breakdown is presented in Table 2 below.

Table 2 (D/DBP). Summary of Affected Ohio Water Systems

System Ownership	Source Water and Population Served			
	Surface Water >10,000	Ground Water >10,000	Surface Water <10,000	Ground Water <10,000

School Districts	0	0	0	128
Counties	11	17	17	46
Townships	1	1	1	7
Municipalities	54	45	74	306
All Systems [1]	66	65	96	1040

[1] Includes government and non-government owned systems.

Ohio EPA then applied the USEPA cost estimate to the different categories of water systems identified in Table 2 to arrive at a very approximate cost estimate for Ohio. A summary is provided in Table 3 below.

Table 3 (D/DBP). Summary of Costs to Affected Ohio Water Systems

System Ownership	**Source Water and Population Served**				**Totals**
	Surface Water >10,000	**Ground Water**	**Surface Water <10,000**	**Ground Water <10,000**	
School Districts	0	0	0	128 systems X $328/system = $41,984	$41,984
Counties	11 systems X $16,616/system = $182,776	17 systems X $8,143/system = $138,431	17 systems X $1,264 system = $21,488	46 systems X $592/system = $27,232	$369,927
Townships	1 system X $16,616 /system = $16,616	1 system X $8,143/system = $8,143	1 system X $1,264/system = $1,264	7 systems X $592/system = $4,144	$30,167
Municipalities	54 systems X $16,616/system = $897,264	45 systems X $8,143 system = $366,435	74 systems X $1,264/system = $93,563	306 systems X $592/system = $181,152	$1,538,414

All systems [1]	66 systems X $16,616/system = $1,096,656	65 systems X $8,143/system = $529,295	96 systems X $1,264/system = $121,344	1,040 systems X $592/system = $615,680	$2,362,975

[1] Includes government and non-government owned systems
* U.S. Department of Labor, Bureau of Labor Statistics Inflation Calendar used to account for inflation from 2009 - 2014.

It should be noted that USEPA assigned an uncertainty factor of ± 30 per cent to their cost estimate. The uncertainty is associated with the anticipated number of affected systems, the unit costs estimates for different technologies as they are applied to individual systems, and monitoring costs. The cost per water system can only be considered a numerical average and not an accurate estimate of the actual cost per system. The actual costs per system will vary widely depending on technologies employed by each system and monitoring costs.

3745-81-31: The cost to comply with this rule is negligible because Ohio EPA provides each lab with software and forms and therefore the majority of the labs do not charge the public water systems for reporting their monitoring results. Filing this rule with no changes is not expected to have an effect on the current negligible cost of compliance.

3745-81-64 and 3745-81-67 to 3745-81-69: These were previously adopted in response to the federal Long Term 2 Enhanced Surface Water Treatment Rule (LT2). The rules supplement existing microbial treatment regulations and targets public water systems (PWS) with higher potential risk from Cryptosporidium. Existing regulations require most PWS that filter to remove at least 99% of the Cryptosporidium. However, there are a subset of systems with a greater vulnerability to Cryptosporidium and require additional treatment. The rules require surface water systems or ground water systems under the direct influence of surface water to monitor their source water to determine an average Cryptosporidium level. In addition, these systems will likely have to adopt new practices and/or install more treatment for Cryptosporidium.

Cost estimates are derived from the National Primary Drinking Water Regulations: Long Term 2 Enhanced Surface Water Treatment Rule; Final Rule, and are annualized over 25 years at a 7% discount rate. The costs include one-time costs that occur near the beginning of rule implementation and annual, steady costs that systems (and the State Agency) will incur after systems have made necessary changes to treatment and/or monitoring to comply with the LT2 rule.

Annualized Total Costs

Total on-going annual costs are expected to be $26,916 regardless of system size. These costs cover the additional water system functions, such as operation and maintenance, reporting costs, and wages for technical and managerial support that are likely to occur in result of the LT2 rule. These estimates are per year costs and are estimated for a 25 year time span at a 7% discounted rate (prior to having to make any capital improvements). This figure are based on 2003 data and inflated to the present year per the Bureau of Labor Statistics calculator.

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.**
    The federal rules on which these rules are based include monitoring requirements that are based on population. Additional exemptions or alternative means of compliance for small businesses have been written into this rules package, as Ohio must adopt rules that are no less stringent than the federal counterpart.

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 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).

Ohio EPA also has the authority from the 1996 Amendments to the Safe Drinking Water Act to help fund infrastructure improvements, through capitalization grants, needed to comply with state requirements. These grants fund the Water Supply Revolving Fund, which provides low-interest loans to community and not for profit water systems. Loans can provide support design work in addition to capital improvements. Operating costs would be supported through conventional mechanisms such as collecting fees from customers based on the amount of water used or rental fees.