STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION
DOA-2049 (R09/2016)

DIVISION OF EXECUTIVE BUDGET AND FINANCE
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ADMINISTRATIVE RULES
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1. Type of Estimate and Analysis

☒ Original ☐ Updated ☐ Corrected

2. Date

July 30, 2025

3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable)

Chapter NR 809, Safe Drinking Water

4. Subject

Updating lead and copper requirements for public drinking water in order to be consistent with revised federal requirements (Board Order DG-04-24)

5. Fund Sources Affected

☐ GPR ☒ FED ☐ PRO ☐ PRS ☐ SEG ☐ SEG-S

6. Chapter 20, Stats. Appropriations Affected

20.370 (4)(nz)

7. Fiscal Effect of Implementing the Rule

☐ No Fiscal Effect ☐ Increase Existing Revenues ☐ Increase Costs ☐ Decrease Costs

☐ Indeterminate ☐ Decrease Existing Revenues ☒ Could Absorb Within Agency's Budget

8. The Rule Will Impact the Following (Check All That Apply)

☐ State's Economy
☒ Local Government Units
☐ Specific Businesses/Sectors
☒ Public Utility Rate Payers
☒ Small Businesses **(if checked, complete Attachment A)**

9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1).

The analysis in this EIA provides: 1) the baseline costs for Wisconsin's implementation and compliance with federal rules and 2) and the implementation and compliance costs of state rule requirements that are more stringent than the federal rules. The annual state implementation and compliance costs of state rule requirements above the federal baseline is estimated to be $33,610. The maximum estimated implementation and compliance costs for any two-year period is estimated to be $67,220.

10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be $10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)?

☐ Yes ☒ No

11. Policy Problem Addressed by the Rule

Under the federal Safe Drinking Water Act, the U.S. Environmental Protection Agency (EPA) establishes regulations that all public drinking water systems must meet. The EPA authorizes states to have primary enforcement responsibility for the Safe Drinking Water Act regulations (also called primacy) if states meet certain requirements, including that the state regulations must be no less stringent than the federal regulations. When the EPA issues new drinking water regulations, primacy agencies are required to adopt these new requirements within two years after the EPA regulation is finalized, with the possibility of an extension of up to two years.

The Wisconsin Department of Natural Resources (DNR) administers Wisconsin's safe drinking water program, codified in part in ch. NR 809, Wis. Adm. Code, including the control of lead and copper in public water systems. The DNR is the primacy agency responsible for enforcing the federal Safe Drinking Water Act for Wisconsin's public water systems. This rulemaking updates the state administrative code to be no less stringent than new federal regulations governing lead and copper, which is necessary for Wisconsin to retain its primacy.

On December 16, 2021, the EPA's Lead and Copper Rule Revisions (LCRR) went into effect, changing federal requirements for initial service line inventory, notification to persons served of known or potential lead service lines, Tier 1 public notification of a lead action level exceedance, and associated reporting requirements. Shortly thereafter, the EPA initiated a second federal rulemaking effort called the Lead and Copper Rule Improvements (LCRI) that added requirements and changed some LCRR requirements. The EPA finalized the LCRI in October 2024, and in doing so, the EPA delayed the compliance date of many parts of the LCRR. The LCRI also added new requirements, including changes to sampling, a lower action level threshold, requiring lead service line replacement within 10 years, additional communication and education requirements, and additional protections for schools and child care facilities.

As the primacy agency, the DNR must promulgate state rules that are no less stringent than the LCRR and LCRI no later than two years after the EPA finalizes the federal rule unless the EPA grants a two-year extension. To avoid the inefficient adoption of multiple rules over a short period, the EPA recommends that states group the promulgation of the LCRR and LCRI requirements into a single rulemaking effort.

If the DNR does not promulgate state rules that are no less stringent than the LCRR and LCRI, the federal rules will still apply to all Wisconsin public water systems. Wisconsin's public water systems would be required to comply with federal law and would be subject to regulation and enforcement by the EPA, rather than the DNR.

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12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments.

The proposed rule may affect the following entities:

- Municipal community water systems (cities, townships, sanitary districts)
- Other-than-municipal community water systems (mobile home parks, apartment buildings, condominium associations)
- Non-transient non-community water systems (small businesses or organizations with 25 or more employees that are not on a municipal source)
- Laboratories certified to perform lead and copper analysis in drinking water
- Environmental organizations
- Public health organizations
- Engineering/consulting firms
- Homeowners
- Drinking water consumers
- Schools and child care facilities

The DNR contacted the following entities that may be impacted by the rule via email at the beginning of the economic impact solicitation period to notify them of the opportunity to comment:

- Individuals who signed up for email notifications via GovDelivery, including lists for public drinking water engineers and agents, municipal drinking water system managers and operators, other-than-municipal drinking water system owners and operators, non-transient non-community drinking water system owners and operators, and the drinking water and groundwater study group. The GovDelivery notice was also sent to those subscribed to lists related to the lead service line replacement program, optimal water quality parameters, license, registration and certification, drinking water system laboratories, and private water laboratories.
- Members of the Lead and Copper Stakeholder Advisory Committee, including the Wisconsin Department of Children and Families and the Wisconsin Department of Health Services.

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

1) The Municipal Environmental Group-Water Division, an association representing 79 municipal water systems, and 2) the Wisconsin Rural Water Association, a nonprofit association representing 586 municipal water and wastewater systems, both provided comments during the economic impact solicitation period.

14. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

The LCRI was finalized on October 8, 2024, and has a compliance deadline for most components of November 1, 2027. This EIA analyzes both 1) statewide implementation and compliance with federal rules that will apply to public water systems in Wisconsin regardless of this state's rulemaking effort, and 2) the costs of state rule requirements that are more stringent than the federal baseline.

This EIA only analyzes the costs of the LCRR[1] that will continue to be in effect when the state proposed rule goes into effect. It does not include the development of the October 16, 2024, initial service line inventory, because this federal deadline has passed and was enforced by the EPA. The EIA considers the continuing costs of the LCRR components that will be incorporated into the state's proposed rule.

To develop the analysis of the baseline federal rule cost in this EIA, the DNR relied on the EPA's cost analysis methods[2,3] for the LCRI, and applied them to Wisconsin data obtained from Wisconsin public water systems (PWSs). Wisconsin-specific PWS data used to develop this cost estimate include all of the following: PWS type, population served, source water type, the presence of corrosion control treatment (CCT), most recent lead 90th percentile concentration, current monitoring requirements, whether the PWS is designated as a school or child care facility, and service line material characterization and replacement costs.

The annualized incremental costs of the federal rule baseline cost are broken into six categories: sampling; service line inventory and replacement; corrosion control technology; point-of-use installation and maintenance; public education and outreach; and rule implementation and administration (Table 1). Annualized incremental costs are further broken into periods of time when the costs will be incurred. A significant portion of costs will be incurred only within the first 10 years after the compliance deadline. For example, costs associated with service line inventory validation, and public education costs associated with lead service line replacement and sending notifications of known or potential service lines, will cease after 10 years.

[1] The LCRR's compliance deadline was October 16, 2024. Because of the overlapping LCRI federal rulemaking, this state rulemaking was postponed per the EPA's recommendation to include both the LCRR and LCRI. To bridge the gap in time between the LCRR's effective date of October 16, 2024, and the completion of this rulemaking that incorporates the LCRR, the EPA and many states, including Wisconsin, entered into an interim primacy agreement with the EPA. During this time, the DNR is responsible for communicating with public water systems and administering requirements, but the EPA has primary enforcement authority over the LCRR. The parts of the LCRR that were not modified by the LCRI, and therefore went into effect on October 16, 2024, include the initial service line inventory, notification to persons served by lead, galvanized requiring replacement, or lead status unknown service lines, Tier 1 public notification of a lead action level exceedance, and associated reporting requirements.

[2] USEPA, Office of Water, "Economic Analysis for the Final Lead and Copper Rule Improvements", EPA 810-R-24-005, 2024, https://www.epa.gov/system/files/documents/2024-10/508_lcri_final_ea_10-21-2024.pdf.

[3] USEPA, Office of Water, "Economic Analysis Appendices for the Final Lead and Copper Rule Improvements", EPA 810-R-24-005, 2024, https://www.epa.gov/system/files/documents/2024-10/508_lcri_final-ea_appendices_10_23_24.pdf.

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Some costs will be incurred only over the first 25 years, for example, construction costs associated with service line replacement may be funded through the Safe Drinking Water Loan Program, which provides low-interest loans and, in some cases, principal forgiveness. The DNR assumes that public water systems will apply for and receive a 20-year loan at some point within the first five years after November 1, 2027 (the start of the 10 years to replace all lead service lines). Therefore, service line replacement costs were annualized over 25 years. Lastly, a small amount of annually recurring costs will continue beyond the first 25 years. Note that after 25 years, annual costs associated with service line replacement are negative because after this time, public water systems will incur fewer costs associated with lead service line replacement than they would have if the pre-2021 lead and copper rule (LCR) was to remain in effect.

The lead and copper rule applies to the following types of public water systems: community water systems (CWSs) and non-transient non-community water systems (NTNCWSs). CWSs serve at least 15 service connections (e.g. residential homes) used by year-round residents or regularly serve at least 25 year-round residents, which include both municipal community water systems and other-than-municipal community water systems (OTMs). NTNCWS regularly serve at least 25 of the same persons over six months per year (e.g., schools, factories).

Based on these categories and time periods, the DNR estimated the total statewide cost to all public water systems for implementing the baseline federal rule, as described in the table below.

Table 1: Wisconsin Statewide Annualized Incremental Costs of Federal LCRI in Comparison to pre-2021 Lead and Copper Rule (in millions USD)

Rule Components	CWS-Municipal Owned			CWS-Other-Than-Municipal Owned			NTNCWS		
	Yr 1-10	Yr 11-25	Yr 25+	Yr 1-10	Yr 11-25	Yr 25+	Yr 1-10	Yr 11-25	Yr 25+
Sampling	$1.27	$0.94	$0.94	$0.09	$0.08	$0.08	$0.29	$0.27	$0.27
Service Line inventory and Replacement	$54.48	$49.81	($0.74)	$0.22	$0.04	($0.01)	$0.00	$0.00	$0.00
Corrosion Control Technology	$1.11	$0.68	$0.68	$0.37	$0.27	$0.27	$0.03	$0.00	$0.00
Point-of-Use Installation and Maintenance	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.02	$0.01	$0.01
Public Education and Outreach	$10.56	$0.35	$0.35	$0.72	$0.13	$0.13	$0.08	$0.05	$0.05
Rule Implementation and Administration	$0.08	$0.00	$0.00	$0.06	$0.00	$0.00	$0.13	$0.00	$0.00
Baseline Statewide Cost of Federal LCRI Implementation	**$67.50**	**$51.77**	**$1.22**	**$1.45**	**$0.52**	**$0.47**	**$0.55**	**$0.33**	**$0.33**
Costs to PWS Above Baseline Associated with State Adoption of Federal LCRI Implementation*	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

* Costs that are not part of the federal requirements under the LCRI and are included in state rule only are found in Table 2.

In cases where the state rulemaking was more stringent than the federal rules, the DNR estimated statewide implementation and compliance costs beyond the Table 1 baseline cost of federal baseline LCRI compliance. The state costs are summarized in Table 2 below and include costs to all public water system types.

Table 2: Wisconsin Statewide Annualized Incremental Costs of State Rule Compliance (in USD)

Rule Components	Annual Statewide Cost	Timeframe
Increased Contact Attempts at Schools and Child Care Facilities	$18,114	Years 1-5
Temporary Treatment and Source Change Requirement	$12,134	All years
Compliance Flexibility Plan Requirement	$1,002	All years
Dissolved Lead Monitoring Requirement	$2,360	All years
Additional Cost of State Rule	**$33,610**	

15. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

There is no safe level of lead in drinking water. Lead is shown to have a causal relationship to numerous detrimental health effects throughout the body,

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including nervous system effects in children and adults, reproductive and developmental effects, and cardiovascular effects.[4] Lead may increase the risk of certain diseases, such as cancer.[3] Implementing this rule would benefit all Wisconsinites by removing lead components from public water systems and improving responses to lead detected in drinking water.

Preventing the health consequences of lead exposure results in significant monetized benefits. The EPA's cost analysis estimates the national annualized monetized benefits from the LCRI to be from $13.5 to $25.1 billion.

- *Nervous system effects:* Lead affects children and adolescents more than adults, and ingestion of lead causes different effects on the nervous system. Lead has a causal effect on externalizing behaviors, such as impulsivity and hyperactivity, as well as on cognitive effects in children, adolescents, and young adults. Higher concentrations of lead in blood and teeth correlate with a lower full-scale IQ, executive function, and academic performance and achievement in children.[3] Additionally, lead has a likely causal effect on conduct disorders, aggression, and criminal behavior.[3] Adult ingestion of lead can reduce cognitive function, and recent evidence indicates that it is likely to cause anxiety and depression.[3]
- *Cardiovascular effects*: Lead also affects the cardiovascular system and increases risk of high blood pressure and hypertension.[3] Additionally, there is a causal relationship between lead exposure and increases in mortality from coronary heart disease.[3]
- *Immune system effects*: The EPA also found a likely causal relationship between exposure to lead and immunosuppression.

An alternative would be to not promulgate the state rules that incorporate the federal LCRR and LCRI. In this situation, the federal rules would continue to apply to Wisconsin's public water systems. Each Wisconsin public water system would be required to comply with the LCRI, including the lead service line replacement deadlines and the lower lead action level. However, the EPA would administer and enforce the regulations in Wisconsin rather than the DNR. Wisconsin's public water systems would be required to interact with two regulating entities (the EPA and the DNR) and comply with two sets of rules (federal and state). The DNR would no longer be a primacy agency for purposes of implementing the Safe Drinking Water Act and would no longer be empowered to work with public water systems on compliance. All enforcement and regulatory oversight would belong to the EPA, and each public water system in Wisconsin would need to work directly with the EPA on implementation, compliance, and enforcement. This could result in more complex enforcement processes, less regulatory responsiveness to public water system needs, and less communication with each public water system.

16. Long Range Implications of Implementing the Rule

The long-range implications include safer drinking water for Wisconsin due to reduced lead concentrations, and the DNR's continued primacy authority over the Safe Drinking Water Act. See also #15, above.

17. Compare With Approaches Being Used by Federal Government

This state rulemaking proposes changes to ch. NR 809, Wis. Adm. Code, safe drinking water regulations that would implement the requirements of the federal regulation changes made under the LCRR and LCRI. The proposed state rule is no less stringent than the federal rules.

18. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

The DNR has reached out to neighboring states to determine the status of any ongoing rulemaking efforts. All neighboring states have been delegated primacy over the Safe Drinking Water Act by the EPA.

Minnesota incorporates the federal requirements of the Safe Drinking Water Act by reference and intends to adopt the LCRI by reference. They do not anticipate any state modifications to the federal rule.

Illinois statute enacted in 2022 required all systems to develop a materials inventory and provide notice of identified lead materials. Additionally, Illinois Administrative Code has been updated to include the LCRR requirements, and Illinois has accounted for the October 16, 2024, compliance deadline (Ill. Adm. Code tit. 35, s. 611.350 and Ill. Adm. Code tit. 35 s. 611.1350).

Iowa has formed LCRI rule committees to work on various aspects of the rule and is early in LCRI rulemaking process. It has not yet decided whether it will adopt its own LCRI rule or adopt the federal LCRI by reference.

Michigan undertook its own rulemaking in 2018, which incorporated many the LCRR requirements, and implemented stricter requirements than the LCR. This includes, but is not limited to, more stringent sample collection methods, 90th percentile calculations, tiering criteria, service line inventory and replacement requirements, and a lowering of the lead action level. Most lead and copper provisions are found in Michigan Adm. Code R 325.604f; R 325.10710a, b, c, and d; and R 325.10410(2) and (3). Michigan incorporates the analytical methods of the federal lead and copper rule through Mich. Adm. Code R. 325.10605. Michigan intends to adopt LCRI requirements into their state rule and is in the planning stage of this rulemaking.

19. Contact Name	20. Contact Phone Number
Ann Hirekatur	(608) 419-2452

This document can be made available in alternate formats to individuals with disabilities upon request.

[4] USEPA, Office of Research and Development, Center for Public Health and Environmental Assessment, "Integrated Science Assessment for Lead" (and Appendices), EPA 600-R-23-375, 2024, https://assessments.epa.gov/isa/document/&deid=359536.

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ATTACHMENT A

1. Summary of Rule's Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

The costs for small businesses were estimated by using the costs for other-than-municipal and non-transient non-community water systems presented in Table 2. Based on current DNR data on the types of facilities that comprise these public water systems, the DNR estimates that 70% of other-than-municipal and non-transient non-community water systems' compliance cost can be assumed to be a small business cost, as summarized in Table 3 below.

Table 3: Wisconsin Small Business Statewide Annualized Incremental Costs of State Rule Compliance (in USD)

Rule Components	Annual Statewide Cost to NTNCWSs and OTMs
Increased Contact Attempts at Schools and Child Care Facilities	$0
Temporary Treatment and Source Change Requirement	$8,089
Compliance Flexibility Plan Requirement	$1,002
Dissolved Lead Monitoring Requirement	$1,573
Total Costs to NTNCWSs and OTMs	$10,664
Small Business Costs[1] (70% of Total Costs to NTNCWSs and OTMs)	**$7,465**

[1] Small business costs in Table 3 reflect costs from state rule compliance. The DNR estimates that the baseline statewide cost of the federal LCRI implementation for small businesses is $1.41 million per year 1-10, $0.59 million per year 11-25, and $0.56 million per year beyond year 25.

2. Summary of the data sources used to measure the Rule's impact on Small Businesses

Data from Wisconsin's Drinking Water System Database (DWS) was used to estimate impact on small businesses. The DWS database includes detailed information on public water system (PWS) classification, population served, source water type, service line material characterization, the use of corrosion control treatment (CCT), the most recent lead 90th percentile concentration results, current monitoring requirements, and whether the PWS is a school.

The labor rates used in this EIA are based on labor rates provided by the EPA in Section 3.3.11 of EPA's costs analysis (USEPA, 2024a). A uniform labor rate of $33.39 was applied to estimate labor costs for PWSs, regardless of system size. This approach was taken because non-transient non-community water systems in Wisconsin only serve populations of 3,300 or fewer.

Lead service line replacement cost data from the DNR's Bureau of Community Financial Assistance were used to estimate the cost of replacement per service line.

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

☐ Less Stringent Compliance or Reporting Requirements
☐ Less Stringent Schedules or Deadlines for Compliance or Reporting
☐ Consolidation or Simplification of Reporting Requirements
☐ Establishment of performance standards in lieu of Design or Operational Standards
☐ Exemption of Small Businesses from some or all requirements
☒ Other, describe: Due to federal primacy requirements were unable to consider any less stringent requirements. However, wherever possible, we simplified and clarified federal requirements in our proposed rule.

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

Community water systems serving 3,300 persons or fewer and non-transient non-community water systems that exceed the lead action level but not the copper action level may elect to use the corrosion control treatment compliance flexibility options.

5. Describe the Rule's Enforcement Provisions

The enforcement process will be similar to the existing lead and copper rule. Monitoring, reporting, and treatment technique violations will typically be addressed with notices of noncompliance. Notices of violation and consent orders may be used when further enforcement is needed for a public water system to return to compliance.

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

☐ Yes ☒ No

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