

State Budget Office
Office of Regulatory Reinvention
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**REGULATORY IMPACT STATEMENT (RIS)
and COST-BENEFIT ANALYSIS**

PART 1: INTRODUCTION

Under the Administrative Procedures Act (APA), 1969 PA 306, the department/agency responsible for promulgating the administrative rules must complete and submit this form electronically to the Office of Regulatory Reinvention (ORR) no less than 28 days before the public hearing (MCL 24.245(3)-(4)). Submissions should be made by the department Regulatory Affairs Officer (RAO) to orr@michigan.gov. The ORR will review the form and send its response to the RAO (see last page). Upon approval by the ORR, the agency shall make copies available to the public at the public hearing (MCL 24.245(4)).

1. ORR-assigned rule set number:

ORR 2017-008 EQ

2. ORR rule set title:

Supplying Water to the Public, R 325.10101 through R 325.12820

3. Department:

Department of Environmental Quality (DEQ)

4. Division/agency/bureau:

Drinking Water and Municipal Assistance Division (DWMAD)

5. Name, title, and phone number of person completing this form:

Eric Oswald, Director, DWMAD, 517-643-2543
Amy Lachance, Community Water Supply Section Manager, DWMAD, 616-490-9590

6. Reviewed by department Regulatory Affairs Officer:

David Fiedler

PART 2: APPLICABLE SECTIONS OF THE APA

MCL 24.207a “Small business” defined.

Sec. 7a.

“Small business” means a business concern incorporated or doing business in this state, including the affiliates of the business concern, which is independently owned and operated and which employs fewer than 250 full-time employees or which has gross annual sales of less than \$6,000,000.00.

MCL 24.240 Reducing disproportionate economic impact of rule on small business; applicability of section and MCL 24.245(3).

Sec. 40.

(1) When an agency proposes to adopt a rule that will apply to a small business and the rule will have a disproportionate impact on small businesses because of the size of those businesses, the agency shall consider exempting small businesses and, if not exempted, the agency proposing to adopt the rule shall reduce the economic impact of the rule on small businesses by doing all of the following when it is lawful and feasible in meeting the objectives of the act authorizing the promulgation of the rule:

- (a) Identify and estimate the number of small businesses affected by the proposed rule and its probable effect on small businesses.
- (b) Establish differing compliance or reporting requirements or timetables for small businesses under the rule after projecting the required reporting, record-keeping, and other administrative costs.
- (c) Consolidate, simplify, or eliminate the compliance and reporting requirements for small businesses under the rule and identify the skills necessary to comply with the reporting requirements.
- (d) Establish performance standards to replace design or operational standards required in the proposed rule.

(2) The factors described in subsection (1)(a) to (d) shall be specifically addressed in the small business impact statement required under section 45.

(3) In reducing the disproportionate economic impact on small business of a rule as provided in subsection (1), an agency shall use the following classifications of small business:

- (a) 0-9 full-time employees.
- (b) 10-49 full-time employees.
- (c) 50-249 full-time employees.

(4) For purposes of subsection (3), an agency may include a small business with a greater number of full-time employees in a classification that applies to a business with fewer full-time employees.

(5) This section and section 45(3) do not apply to a rule that is required by federal law and that an agency promulgates without imposing standards more stringent than those required by the federal law.

MCL 24.245 (3) Except for a rule promulgated under sections 33, 44, and 48, the agency shall prepare and include with the notice of transmittal a **regulatory impact statement** which shall contain specific information (information requested on the following pages).

[**Note:** Additional questions have been added to these statutorily-required questions to satisfy the **cost-benefit analysis** requirements of Executive Order 2011-5].

MCL 24.245b Information to be posted on office of regulatory reinvention website.

Sec. 45b. (1) The office of regulatory reinvention shall post the following on its website within 2 business days after transmittal pursuant to section 45:

- (a) The regulatory impact statement required under section 45(3).
- (b) Instructions on any existing administrative remedies or appeals available to the public.
- (c) Instructions regarding the method of complying with the rules, if available.
- (d) Any rules filed with the secretary of state and the effective date of those rules.

(2) The office of regulatory reinvention shall facilitate linking the information posted under subsection (1) to the department or agency website.

PART 3: DEPARTMENT/AGENCY RESPONSE

Please place your cursor in each box, and provide the required information, using complete sentences. Please do not answer the question with “N/A” or “none.”

Comparison of Rule(s) to Federal/State/Association Standards:

1. Compare the proposed rule(s) to parallel federal rules or standards set by a state or national licensing agency or accreditation association, if any exist. Are these rule(s) required by state law or federal mandate? If these rule(s) exceed a federal standard, please identify the federal standard or citation, describe why it is necessary that the proposed rule(s) exceed the federal standard or law, and specify the costs and benefits arising out of the deviation.

The Lead and Copper Rule (LCR) is a component of the rules promulgated pursuant to the federal Safe Drinking Water Act (SDWA) and of the Michigan Supplying Water to the Public rules. Michigan’s Supplying Water to the Public rules currently contain all of the provisions of the federal SDWA rules, and therefore, Michigan has primacy for overseeing drinking water systems in the state.

The proposed new LCR rules contain some provisions that are more stringent than the federal regulations (40 CFR 141.80 – 141.91), including a lowering of the lead action level from 15 parts per billion (ppb) to 10 ppb and the removal of lead service lines prior to the exceedance of the lead action level. However, the federal rules are under revision, and it is likely that the revised rules will contain many of the same provisions as proposed in this rules package. It has been determined, based on a national dialogue, that the LCR provisions pertaining to household drinking water need to be strengthened in order to protect human health.

2. Compare the proposed rule(s) to standards in similarly situated states, based on geographic location, topography, natural resources, commonalities, or economic similarities. If the rule(s) exceed standards in those states, please explain why and specify the costs and benefits arising out of the deviation.

Other states in the country have closely paralleled the federal regulations with their LCRs, just as Michigan has done in the past. For instance, most if not all states have set the lead action level at 15 ppb, matching the federal regulations. Therefore, the new Michigan rules will exceed the current standards in all other states, including those in the Great Lakes region. However, as soon as the new federal rule is adopted, other states will need to follow suit in order to retain primacy. Michigan is in a position to be a leader with regard to lead and copper regulations in order to protect human health.

3. Identify any laws, rules, and other legal requirements that may duplicate, overlap, or conflict with the proposed rule(s). Explain how the rule has been coordinated, to the extent practicable, with other federal, state, and local laws applicable to the same activity or subject matter. This section should include a discussion of the efforts undertaken by the agency to avoid or minimize duplication.

No other rules or legal requirements pertain.

Purpose and Objectives of the Rule(s):

4. Identify the behavior and frequency of behavior that the proposed rule(s) are designed to alter. Estimate the change in the frequency of the targeted behavior expected from the proposed rule(s). Describe the difference between current behavior/practice and desired behavior/practice. What is the desired outcome?

The proposed rules are designed to alter the current practices of public water supplies (PWSs) in the state of Michigan in order to be more protective of public health. The current rules are designed to determine the impact of drinking water's corrosivity on the PWS's distribution systems, but not to fully protect health by eliminating the source of lead within these systems. This proposal will require PWSs to remove lead service lines (LSLs) when the 90th percentile levels exceed a 5 parts per billion (ppb) threshold and require PWSs not exceeding that limit to address LSL replacement in their Asset Management Plans, as well as lowering the lead action level from 15 ppb to 10 ppb by 2024, in order to protect public health from lead exposures.

5. Identify the harm resulting from the behavior that the proposed rule(s) are designed to alter and the likelihood that the harm will occur in the absence of the rule. What is the rationale for changing the rule(s) instead of leaving them as currently written?

Removing LSLs from homes all over Michigan and lowering the lead action level will clearly reduce the public exposure to lead, and therefore, protect the health of Michigan's current and future population.

6. Describe how the proposed rule(s) protect the health, safety, and welfare of Michigan citizens while promoting a regulatory environment in Michigan that is the least burdensome alternative for those required to comply.

The draft rule package will provide public health protection by requiring the removal of LSLs from the distribution systems of PWSs, reducing the presence of lead in drinking water. It will further protect public health by reducing the lead action level from 15 ppb to 10 ppb. There is a significant cost associated with these draft regulations. In particular, the cost of LSL removal is burdensome for communities. However, the removal of LSLs is the most effective way to reduce lead exposure from drinking water and therefore is incorporated in the rules. The best way to minimize this burden is to allow PWSs sufficient time to incorporate this work into their scheduled infrastructure improvement projects. These rules allow PWSs without high lead levels to perform LSL removal in accordance with their asset management plans, thereby reducing the financial and logistical burden. The DEQ engaged a group of stakeholders from a wide variety of viewpoints to focus the required efforts on tasks that would be most beneficial and also took into account comments to determine reasonable time lines.

7. Describe any rules in the affected rule set that are obsolete or unnecessary and can be rescinded.

There are no components that are obsolete.

Fiscal Impact on the Agency:

Fiscal impact is an increase or decrease in expenditures from the current level of expenditures, i.e. hiring additional staff, an increase in the cost of a contract, programming costs, changes in reimbursement rates, etc. over and above what is currently expended for that function. It would not include more intangible costs or benefits, such as opportunity costs, the value of time saved or lost, etc., unless those issues result in a measurable impact on expenditures.

8. Please provide the fiscal impact on the agency (an estimate of the cost of rule imposition or potential savings for the agency promulgating the rule).

These rules will impose a significant fiscal impact on the DEQ, due to increased oversight and data handling. More oversight will be required to review and adjust the corrosion control treatment design at all PWSs, particularly those proposing a change in source or treatment of drinking water. More frequent and rigorous sampling by PWSs will require upgraded data systems for tracking and processing lead and copper data in order to closely monitor these results. Additionally, the submittal of distribution system material inventories, new sampling pools, and updated Asset Management Plans will require more staff review. The DEQ is proposing a new Lead and Copper Unit with approximately 10 new (full-time employees) FTEs for this purpose. This will cost the DEQ approximately \$1.5 million annually.

9. Describe whether or not an agency appropriation has been made or a funding source provided for any expenditures associated with the proposed rule(s).

No identification of funding source or appropriation has taken place.

10. Describe how the proposed rule(s) is necessary and suitable to accomplish its purpose, in relationship to the burden(s) it places on individuals. Burdens may include fiscal or administrative burdens, or duplicative acts. Despite the identified burden(s), identify how the requirements in the rule(s) are still needed and reasonable compared to the burdens.

While this new set of regulations will impose a significant financial and administrative burden on all PWSs in Michigan, it is necessary in order to protect the public health of our citizens. Our state and country must invest substantially in its infrastructure, and removal of LSLs is an important piece of that upgrade.

Impact on Other State or Local Governmental Units:

11. Estimate any increase or decrease in revenues to other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Estimate the cost increases or reductions for other state or local governmental units (i.e. cities, counties, school districts) as a result of the rule. Please include the cost of equipment, supplies, labor, and increased administrative costs in both the initial imposition of the rule and any ongoing monitoring.

This rule will impose costs on local government units that own a public water supply, including most municipalities (community water supplies) along with some schools and other public entities that are on their own wells (nontransient noncommunity water supplies). There are approximately 1,390 community water supplies (CWSs) in the state, and 733 of them are owned by a local unit of government. There are approximately

1,300 nontransient noncommunity water supplies in the state, and 291 of them are owned publicly. These two categories make up the water supplies that will be impacted by this rule. The cost estimates below apply to all impacted water supplies, both private and public.

The largest source of the costs to all water supplies regulated by this rule will be the requirement to complete an inventory of all distribution system materials (water main, service lines, etc.) and remove LSLs when lead levels exceed a 5 ppb threshold. There will also be additional costs associated with increased sampling.

In order to estimate the costs of conducting distribution system materials inventories, attention was focused on the CWSs, since the smaller noncommunity supplies have a much smaller system to inventory and often have existing plans with this information. Out of the 1,390 community supplies, only 138 of them serve more than 10,000 people, and these 138 supplies will incur the majority of the costs due to the size of their distribution systems.

The inventory will require public outreach, records research, and database maintenance, as well as potentially a home inspection and, in some cases, a partial excavation (hydrovac procedure) of the service line. There are approximately two million service connections in Michigan, and it is estimated that half of them are of known and confirmed composition. It is estimated that one out of every 20 of these million supply lines, or 50,000 lines, will need to be fully investigated via partial excavation. The cost of this excavation is approximately \$500 per service line, based on work performed in Lansing and Flint, resulting in a total cost of \$25 million. The cost of all other inventory activities is estimated at \$5 million, resulting in a total inventory cost of \$30 million.

The cost of LSL replacement makes up the bulk of the funding required to be spent based on these rule changes. The proposed rule would require any system that has a 90th percentile lead level of 5 ppb or higher to remove LSLs at an average rate of 5% per year. Currently, there are 152 systems that would fall into this criteria with a total of 260,361 service connections. Assuming that 40% of these service lines are made of lead, based on data from LSL replacement in Flint, this amounts to 99,733 LSLs (some affected systems have no LSLs) that would be required to be replaced. Data provided by the Lansing Board of Water and Light, which has removed all of their LSLs, indicates that an average of \$5,000 per LSL removal is a good estimate of cost. This number was validated during the stakeholder process; although many removals can be accomplished for \$3,000-\$4,000, there are significant costs associated with homeowner follow up, tracking, and some more complicated removals that are more expensive. Therefore, the cost of LSL replacement in Michigan has been estimated at \$499 million, and this cost will be incurred over 20 years. Water systems could potentially test out of the mandatory LSL replacement if their 90th percentile lead level drops under the 5 ppb limit after a one-year period. New testing requirements and methods make estimating the number of systems that may test above or below this level highly complex. This cost represents only the mandated LSL removals. Water systems testing under 5 ppb will

still be required to address removal LSLs in their Asset Management Plans with a schedule that will be dependent on resources and risk.

Increased sampling costs are more difficult to estimate, as they impact segments of the regulated community differently. There are ~250 large supplies and customers of those supplies with optimal corrosion control, currently taking an average of 25 lead and copper samples every three years – 6,250 samples in three years, or 2,083 samples annualized. These supplies will be required to sample annually pursuant to the new regulations, taking 6,250 samples every year, or 4,167 more samples per year. It costs approximately \$114 per sample (including sampling, analysis, and data handling), so it will cost these 250 supplies approximately \$475,000 per year more under the new regulations, which works out to \$1,900 per supply per year. This is a worst case scenario, as some of these supplies may be able to stay on triennial sampling if they maintain a low 90th percentile.

Approximately 120 small and medium supplies with corrosion control technology will also be required to sample annually. These supplies currently average 10 samples every three years, totaling 1,200 samples or 400 samples annualized. Annual sampling will require 1,200 samples each year – 800 more samples than current regulations. Therefore, these 120 supplies will be paying \$91,200 more per year, or \$760 more per supply per year.

There are also additional water quality parameter monitoring costs in addition to the lead and copper monitoring. This mostly impacts the small and medium supplies with corrosion control, totaling 120 supplies. An average of three sites per supply would need to be sampled twice per year, for a total of 720 samples. At a cost of \$80 per water quality sample, this would total \$57,600 or \$480 per supply per year.

There is also the increased cost associated with the lead action level decreasing from 15 ppb to 10 ppb. From 2000 through 2016, approximately 150 regulated supplies exceeded the 15 ppb lead action level. During this same time frame, approximately 300 regulated supplies had at least one sampling round between 11 and 15 ppb. An estimated 300 additional supplies could be over the lead action level when it is lowered to 10 ppb. This will not occur immediately, but activities associated with an action level exceedance range from public notification and increased sampling frequency to full-scale corrosion control study and treatment plant modification.

In conclusion, there are many costs to regulated supplies, including ancillary administrative costs, but the largest expense will be the distribution system material inventory and LSL removal, totaling \$499 million over 20 years. Again, this is the cost for all impacted water supplies in the state, both public and private, with the largest impact to medium and large municipalities.

12. Discuss any program, service, duty or responsibility imposed upon any city, county, town, village, or school district by the rule(s). Describe any actions that governmental units must take to be in compliance with the rule(s). This section should include items such as record keeping and reporting requirements or changing operational practices.

Water supplies owned by governmental units will need to comply with all of the requirements of the new LCR, including distribution system materials inventory, LSL removal, and increased sampling with reporting. There are also expanded public notification requirements and follow up based on sampling results. Additionally, municipalities with a population above 30,000 will need to form a Local Advisory Council on drinking water.

13. Describe whether or not an appropriation to state or local governmental units has been made or a funding source provided for any additional expenditures associated with the proposed rule(s).

No identification of funding source or appropriation has taken place.

Rural Impact:

14. In general, what impact will the rules have on rural areas? Describe the types of public or private interests in rural areas that will be affected by the rule(s).

In general, rural areas will be less impacted by these rules than urban areas, since most of the LSLs are located in cities. There are more manufactured housing communities in the rural areas of the state; however, most of them do not have any LSLs in their infrastructure. However, smaller municipalities and local units of governments, as well as small nontransient noncommunity supplies (churches, schools, etc.), may be impacted from the administrative burden of complying with the proposed rules. DEQ staff will be gearing up to provide additional direct assistance to small rural supplies if these rules are promulgated.

Environmental Impact:

15. Do the proposed rule(s) have any impact on the environment? If yes, please explain.

No significant environmental impacts are associated with this rule change; the benefits are primarily associated with public health.

Small Business Impact Statement:

[Please refer to the discussion of “small business” on page 2 of this form.]

16. Describe whether and how the agency considered exempting small businesses from the proposed rule(s).

No – the DEQ did not consider exempting small businesses from the proposed rules.

17. If small businesses are not exempt, describe (a) the manner in which the agency reduced the economic impact of the proposed rule(s) on small businesses, including a detailed recitation of the efforts of the agency to comply with the mandate to reduce the disproportionate impact of the rule(s) upon small businesses as described below (in accordance with MCL 24.240(1)(a-d)), or (b) the reasons such a reduction was not lawful or feasible.

While small private water supplies do need to remove their LSLs and comply with other provisions of these proposed rules, schedules are less restrictive for smaller supplies with fewer LSLs in place. Due to their smaller populations, they will have to take fewer samples and remove fewer LSLs in any given year. Additionally, small supplies are exempted from the requirements to form a Local Advisory Council and can remain sampling every three years (rather than moving to annual sampling) as long as they are not currently required to optimize for corrosion control.

A. Identify and estimate the number of small businesses affected by the proposed rule(s) and the probable effect on small business.

There are approximately 650 privately-owned CWSs with populations under 10,000 and approximately 1,000 privately-owned nontransient noncommunity water supplies in Michigan. These two categories constitute the PWSs that are impacted by the proposed LCR rule. These PWSs will be required to comply with the requirements of the rule, including LSL replacement, creating a financial and administrative burden.

B. Describe how the agency established differing compliance or reporting requirements or timetables for small businesses under the rule after projecting the required reporting, record-keeping, and other administrative costs.

While small private PWSs do have to comply with the proposed rule requirements, they will have the ability to reduce sample frequency if they do not need to treat for corrosion.

C. Describe how the agency consolidated or simplified the compliance and reporting requirements and identify the skills necessary to comply with the reporting requirements.

The DEQ is working on a new database system that will allow laboratories to report monitoring results electronically, as well as accept electronic submittal of reports. This will significantly reduce the effort involved for all.

D. Describe how the agency established performance standards to replace design or operation standards required by the proposed rule(s).

Much of the LCR, including the lead and copper action levels and the water quality parameter testing, is already performance-based.

18. Identify any disproportionate impact the proposed rule(s) may have on small businesses because of their size or geographic location.

Small businesses should be impacted less by this regulation since they have fewer LSLs than municipalities due to their size and less urban location. Additionally, many small private water supplies are newer than municipalities, so they are much less likely to have lead in their underground infrastructure.

19. Identify the nature of any report and the estimated cost of its preparation by small businesses required to comply with the proposed rule(s).

Small privately-owned water supplies will have to prepare an inventory report, identifying all water distribution system materials and locations. However, most small

PWSs have plans to indicate this. In fact, most manufactured housing communities (the majority of private CWSs) were built using only PVC infrastructure so the inventory reports will be easy to complete.

20. Analyze the costs of compliance for all small businesses affected by the proposed rule(s), including costs of equipment, supplies, labor, and increased administrative costs.

The compliance costs for all PWSs are analyzed above in #11; however, these costs will impact the medium and large municipal systems far more than the smaller private supplies. Specific costs are directly related to the number of LSLs at the supply as well as whether corrosion control treatment is required. Many of the other ancillary costs associated with this rule have been minimized for small supplies.

21. Identify the nature and estimated cost of any legal, consulting, or accounting services that small businesses would incur in complying with the proposed rule(s).

It is possible that a small private PWS will hire an engineering firm to help them with rule compliance, but the majority of them will be able to comply without third party assistance. The DEQ will be placing considerable emphasis on providing compliance assistance to PWSs.

22. Estimate the ability of small businesses to absorb the costs without suffering economic harm and without adversely affecting competition in the marketplace.

Since the rule applies equally to all small private PWSs, there will not be an uneven distribution of burden between them. It is likely that some costs will be passed along to rate payers who are using the drinking water supply.

23. Estimate the cost, if any, to the agency of administering or enforcing a rule that exempts or sets lesser standards for compliance by small businesses.

None – there will be equal oversight for all impacted by the rule.

24. Identify the impact on the public interest of exempting or setting lesser standards of compliance for small businesses.

The rules still require small businesses to remove LSLs and adhere to the lowered action level, thereby protecting public health interests.

25. Describe whether and how the agency has involved small businesses in the development of the proposed rule(s). If small businesses were involved in the development of the rule(s), please identify the business(es).

Several small businesses and/or those serving small private water supplies were involved in the stakeholder process. These include: Elhorn Engineering Company, Infrastructure Alternatives, Michigan Manufactured Housing Association, Michigan Rural Water Association, Safe Water Engineering, and Nova Environmental, Inc.

Cost-Benefit Analysis of Rules (independent of statutory impact):

26. Estimate the actual statewide compliance costs of the rule amendments on businesses or groups. Identify the businesses or groups who will be directly affected by, bear the cost of, or

directly benefit from the proposed rule(s). What additional costs will be imposed on businesses and other groups as a result of these proposed rules (i.e. new equipment, supplies, labor, accounting, or recordkeeping)? Please identify the types and number of businesses and groups. Be sure to quantify how each entity will be affected.

The businesses that will be most affected by this rule will be those with their own water supply. This includes approximately 650 CWSs. More than half of these are manufactured housing communities, and many of the rest are condominiums, apartment buildings, and other residential units. It also includes approximately 1,000 nontransient noncommunity water supplies – industries, small businesses, etc. - that are not hooked up to municipal water.

The compliance costs for all PWSs are analyzed above in #11; however, these costs will impact medium and large municipal systems far more than smaller private supplies. Specific costs are directly related to the number of LSLs at the supply as well as whether corrosion control treatment is required. Many of the other ancillary costs associated with this rule have been minimized for small supplies.

27. Estimate the actual statewide compliance costs of the proposed rule(s) on individuals (regulated individuals or the public). Please include the costs of education, training, application fees, examination fees, license fees, new equipment, supplies, labor, accounting, or recordkeeping. How many and what category of individuals will be affected by the rules? What qualitative and quantitative impact does the proposed change in rule(s) have on these individuals?

There are no direct compliance costs to the public for this rule. There is a likelihood that PWSs will pass along at least some of the costs associated with rule compliance to their customers. Municipalities and other governmental bodies, in particular, will likely need to increase their utility rates to pay for their infrastructure upgrades and additional compliance costs. This will result in higher costs to homeowners, but it is very difficult to estimate this impact. It is important to note that drinking water has historically been the most affordable utility and will likely remain this way even with increases.

28. Quantify any cost reductions to businesses, individuals, groups of individuals, or governmental units as a result of the proposed rule(s).

There are no known cost reductions associated directly with these rules.

29. Estimate the primary and direct benefits and any secondary or indirect benefits of the proposed rule(s). Please provide both quantitative and qualitative information, as well as your assumptions.

The primary benefits of this rule package are reducing the exposure to lead in drinking water and protecting public health. The Ecology Center found that costs associated with elevated blood lead levels totaled \$270 million for the state of Michigan in 2014 (see the second bullet in #32). Of these costs, \$112 million were transferred to taxpayers. Estimated ongoing annual costs include: increased health care (\$18 million), increased crime (\$77 million), special education (\$2.8 million), and decreased lifetime earnings (\$171 million).

Additional benefits will be general improvement to water systems and quality, creation of jobs, and increased community goodwill through better service to customers.

30. Explain how the proposed rule(s) will impact business growth and job creation (or elimination) in Michigan.

The proposed rule has the potential to significantly impact the underground infrastructure construction industry due to the need to investigate and replace LSLs around the state. The rule will also cause laboratories to increase staffing and capabilities in order to provide necessary services. Additionally, more personnel will be needed in the water industry in order to administer this rule.

31. Identify any individuals or businesses who will be disproportionately affected by the rules as a result of their industrial sector, segment of the public, business size, or geographic location.

The majority of the remaining half-million LSLs are located in urban areas, and many of them are in economically-stressed communities. While these areas would be more disproportionately impacted by the cost and logistics of LSL removal, they are also the communities that are currently being more affected by lead in drinking water. Therefore, it is even more important that these PWSs upgrade their infrastructure and protect the public health of their citizens.

32. Identify the sources the agency relied upon in compiling the regulatory impact statement, including the methodology utilized in determining the existence and extent of the impact of a proposed rule(s) and a cost-benefit analysis of the proposed rule(s). How were estimates made, and what were your assumptions? Include internal and external sources, published reports, information provided by associations or organizations, etc., which demonstrate a need for the proposed rule(s).

- *National Cost Implications of Potential Long-Term LCR Requirements. Slabaugh et al., American Water Works Association, August 2015*
- *Costs of Lead Exposure and Remediation in Michigan: Update. Ecology Center and Michigan Network for Children’s Environmental Health, October 2016*
- *Financing Lead Risk Reduction Report. The Environmental Financial Advisory Board*
- *Flint Water Interagency Coordinating Committee Recommendations, September 2016*
- *Flint Water Advisory Task Force Recommendations, August 2016*
- *EPA Lead and Copper Revisions White Paper, October 2016*
- *Report of the Lead and Copper Rule Working Group to the National Drinking Water Advisory Council, August 2015*

Alternatives to Regulation:

33. Identify any reasonable alternatives to the proposed rule(s) that would achieve the same or similar goals. In enumerating your alternatives, please include any statutory amendments that may be necessary to achieve such alternatives.

There are no reasonable alternatives to these rules that would provide for the removal of LSLs in order to protect public health. There is available technology to line LSLs, but this would likely exacerbate the problem, moving particulate lead into the drinking water.

34. Discuss the feasibility of establishing a regulatory program similar to that proposed in the rule(s) that would operate through private market-based mechanisms. Please include a discussion of private market-based systems utilized by other states.

This is a federal law that must be implemented in Michigan; no other states have implemented a market-based system of regulation and this does not seem feasible.

35. Discuss all significant alternatives the agency considered during rule development and why they were not incorporated into the rule(s). This section should include ideas considered both during internal discussions and discussions with stakeholders, affected parties, or advisory groups.

Stakeholders had concerns regarding the cost and logistics of replacing the private portion of LSLs that could not be addressed within the scope of these rules. There were also calls for additional testing of schools, nursing homes, and daycares that will need to be addressed by separate legislation.

Many alternatives discussed dealt with changes to the timing and logistics of the new requirements, particularly the LSL replacement. The stakeholder group discussed the alternative of just requiring 5 percent of LSLs to be replaced every year, but changed it to an average of 5 percent per year after input from the Governor’s Council on 21st Century Infrastructure. There also were discussions about the frequency of sampling and the cost and logistics of the proposed second sample for homes with LSLs. There were also discussions about the correct value for the lead action level and the household advisory level. There were differing opinions on these issues, and the draft rules represent a middle ground – protective of public health while not imposing unnecessary burden.

Additional Information

36. As required by MCL 24.245b(1)(c), please describe any instructions regarding the method of complying with the rule(s), if applicable.

Significant guidance material will be available to provide compliance assistance.

PART 4: REVIEW BY THE ORR

Date Regulatory Impact Statement (RIS) received:

1/16/18

Date RIS approved:	1/26/2018
ORR assigned rule set number:	2017-008 EQ

Date of disapproval:	Explain:
More information needed:	Explain: