BOARD OF ENVIRONMENTAL REVIEW
AGENDA ITEM
EXECUTIVE SUMMARY FOR ACTION ON RULE ADOPTION

Agenda # III.B.1.

Agenda Item Summary: Adoption of the Revised Total Coliform Rule and the 2015 Code of Federal Regulations.

List of Affected Rules: ARMs 17.38.104, 17.38.201A, 17.38.202, 17.38.207, 17.38.208, 17.38.211, 17.38.215, 17.38.225, 17.38.234, and 17.38.271.

Affected Parties Summary: All public water systems will be affected by this proposal.

Scope of Proposed Proceeding: The Board is considering final action on adoption of amendments to the above-referenced rules as proposed in MAR Notice No. 17-386.

Background: The 1989 Total Coliform Rule, a National Primary Drinking Water Regulation, became effective in 1990. This rule was designed to protect public health by having every public water system in the United States test and meet maximum contaminant levels for coliform bacteria, a group of bacteria that can indicate the presence of pathogenic bacteria. This rule was revised in 2013, and is now known as the Revised Total Coliform Rule (RTCR). The RTCR became effective, under federal jurisdiction, on April 1, 2016.

As part of these rulemaking proceedings, the Department has identified the monitoring requirements in the proposed amendments for certain small groundwater systems as being more stringent than the comparable federal monitoring requirements, although these requirements are the same as existing Montana rules. In accordance with Section 75-6-116, MCA, otherwise known as HB 521, the Department requests that the Board make written findings that the proposed requirements for these systems protect public health, can mitigate harm to the public health, and are achievable under current technology. Enclosed with this Executive Summary are proposed written findings and the Department's HB 521 memo.

Section 2-4-111, MCA, requires an agency to determine if a rule adoption will have a significant effect on small businesses and to prepare a small business impact analysis. This rulemaking triggers this analysis, and a small business impact analysis is attached.

Finally, while adopting the RTCR, the Department requests the Board to adopt changes that update references in the rules from the 2009 to the 2015 Code of Federal Regulations and that make several housekeeping updates.

Hearing Information: Ben Reed conducted a public hearing on November 22, 2016. The Department testified in favor of adoption as proposed. No other person testified, and no written comments were received at or outside the hearing.

Board Options: The Board may:

1. Adopt the amendments as proposed, the HB 521/311 analysis, and the small business impact analysis.
2. Adopt the proposed amendments with revisions that the Board finds are appropriate and that are consistent with the scope of the Notice of Public Hearing on Proposed Amendment and the record in this proceeding; or
3. Decide not to adopt the amendments.

DEQ Recommendation: The Department recommends that the Board adopt the HB 521/311 analysis, the attached written findings, the small business impact analysis, and the rule amendments as proposed.

Enclosures:

1. Notice of Public Hearing on Proposed Amendment,
2. Proposed Written Findings,
3. Draft Notice of Amendment,
4. HB 521/311 Analysis, and
5. Small Business Impact Analysis.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM 17.38.104, 17.38.201A, 17.38.202, 17.38.207, 17.38.208, 17.38.211, 17.38.215, 17.38.225, 17.38.234, and 17.38.271 pertaining to rules and regulations governing public water supply systems	)	NOTICE OF AMENDMENT (PUBLIC WATER SUPPLY)

TO: All Concerned Persons

1. On October 28, 2016, the Board of Environmental Review published MAR Notice No. 17-386, regarding a notice of proposed amendment of the above-stated rules at page 1900, 2016 Montana Administrative Register, Issue Number 20.

2. The board has amended the rules exactly as proposed.

3. No public comments or testimony opposing or proposing amendments to the rulemaking were received.

Reviewed by:

JOHN F. NORTH
Rule Reviewer

BOARD OF ENVIRONMENTAL REVIEW

By: _____
JOAN MILES
Chairman

Certified to the Secretary of State, February 6, 2017.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM 17.38.104, 17.38.201A, 17.38.202, 17.38.207, 17.38.208, 17.38.211, 17.38.215, 17.38.225, 17.38.234, and 17.38.271 pertaining to rules and regulations governing public water supply systems	))))))))	NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENT (PUBLIC WATER SUPPLY)

TO: All Concerned Persons

1. On November 22, 2016, at 11:00, a.m., the Board of Environmental Review will hold a public hearing in Room 111, Metcalf Building, 1520 East Sixth Avenue, Helena, Montana, to consider the proposed amendment of the above-stated rules.

2. The board will make reasonable accommodations for persons with disabilities who wish to participate in this public hearing or need an alternative accessible format of this notice. If you require an accommodation, contact Denise Hartman, Administrative Rules Coordinator, no later than 5:00 p.m., November 15, 2016, to advise us of the nature of the accommodation that you need. Please contact Denise Hartman at Department of Environmental Quality, P.O. Box 200901, Helena, Montana 59620-0901; phone (406) 444-2630; fax (406) 444-4386; or e-mail dhartman2@mt.gov.

3. The rules proposed to be amended provide as follows, stricken matter interlined, new matter underlined (see the general reason statement for further explanation):

17.38.104 SIGNIFICANT DEFICIENCY (1) For the purposes of this rule, "significant deficiency" means any defect in design, operation, or maintenance of a public water supply system or public sewage system, or a failure or malfunction of the system, that the department determines causes, or has the potential to cause, the introduction of fecal, chemical, or other contamination into a drinking water supply or a source of ice. The term also includes ~~fecal contamination in water used by a public water supply system~~ practices and conditions that hinder the determination of the source or potential source of contamination, such as improper sample locations or sample taps.

(2) and (3) remain the same.

AUTH: 75-6-103, 75-6-112, MCA
IMP: 75-6-103, 75-6-112, MCA

REASON: In order to determine a source or potential source of contamination, practices and conditions that allow such determination must be in

place. For example, proper sampling locations and proper sampling taps need to be in place. If they are not, it is challenging, if not impossible, to quickly track down a source of contamination. This rule change gives the department express authority to ensure that necessary practices and conditions are in place.

GENERAL REASON STATEMENT: On February 13, 2013, the Environmental Protection Agency adopted a new set of regulations, collectively called the "revised total coliform rule" (RTCR), under the Safe Drinking Water Act. See 78 FR 10354. The RTCR modified coliform requirements from the 1989 Total Coliform Rule (TCR). The RTCR, like the 1989 Total Coliform Rule (1989 TCR), applies to all public water systems. There are several updates to provisions of other rules, like the Ground Water Rule and Public Notification Rules, which reference analytical methods and other requirements of the 1989 TCR. In addition, there are three major changes dictated by the RTCR, all expected to protect public health above and beyond that of the 1989 TCR. First, the RTCR, like the 1989 TCR, will require systems to test for coliforms. Currently, the 1989 TCR requires monitoring and reporting of coliform test results. Systems are not required to determine the cause of any positive results. The RTCR, however, will require a system to apply a "find and fix" strategy that identifies the actual and/or potential causes of the positive coliform test results. The system is then required to take corrective action and fix the problem(s). Since total coliforms are indicators of microbial contamination entering the distribution system, this "find and fix" strategy will add an additional layer of protection for public health. Systems with positive coliform test results will be required to look closely at all aspects of their system, including the source water, treatment process, distribution system, and operating procedures. Then, any identified problems that could result in pathogens entering the system, and making people sick, need to be fixed.

Second, the RTCR requires seasonal systems to perform a department-approved start-up procedure and to certify to the department that the procedure has been completed before opening for the operating season and serving water to the public. The start-up procedure will include flushing stagnant water from pipes, inspecting equipment to determine if repairs are needed, checking to ensure disinfectants are fresh, and testing a sample of water for coliforms. This procedure, not required under the 1989 TCR, is designed to protect public health by ensuring that the water system is fully operational and ready for the season. The final step, testing a sample of water for coliforms, will determine whether there are potentially harmful microbes in the water before it is served to the public.

Third, under the 1989 TCR rule, total-coliform samples are tested for either fecal coliforms or E. coli. However, studies conducted since adoption of this rule have shown that fecal coliform tests can turn positive due to bacteria that are not necessarily fecal in origin. Therefore, at times, positive samples may not contain waterborne pathogens that are hazardous to human health, and boil orders are implemented when they are not necessary to protect public health. As a result, the RTCR will require total-coliform samples to be tested specifically for E. coli. Choosing to test for fecal coliforms is no longer an option. E. coli, unlike fecal coliforms, almost always originate in the guts of humans and other mammals so therefore are indicators of potential fecal contamination and the possibility of

pathogenic organisms in the water supply. This rule change is beneficial in two ways. It will decrease the likelihood of boil orders when public health is not at risk, and it will substantiate the need of boil orders when public health is truly in jeopardy.

Under 42 U.S.C. 300g-2 of the Safe Drinking Water Act, states can assume primary enforcement responsibility, called "primacy," for enforcement of federal drinking water requirements if the EPA determines that the state has adopted rules that are no less stringent than the EPA regulations. The Montana Legislature's policy is for DEQ to retain primacy over environmental programs. Therefore, in order to maintain primacy for enforcement of safe drinking water laws, the board is proposing to adopt the RTCR requirements. The extensive changes required to adopt the RTCR will be accompanied by: 1) adoption by reference of the July 1, 2015, edition of the Code of Federal Regulations (CFR); 2) several housekeeping changes; and 3) several non-RTCR updates and/or clarifications to existing rules.

The 1989 TCR specified that community water systems (CWS) must test for coliforms monthly, unless the state adopts quarterly monitoring for small qualified systems. In addition, non-community water systems (NCWS) using only ground water and serving 1,000 or fewer people must test for coliforms quarterly, unless the state adopts annual monitoring for small qualified systems. NCWS include transient (TNC) and nontransient systems (NTNC).

In 1991, the Department of Health and Environmental Sciences (DHES) was responsible for public water supply rules, including those related to the 1989 TCR. They adopted monthly monitoring for community and NTNC systems, and quarterly monitoring for TNC systems using only ground water and serving 1,000 or fewer people. However, the rule was written to trigger TNCs to sample monthly starting in 1993.

In 1998, the department proposed that all TNC systems move from monthly to quarterly sampling to be consistent with federal requirements. Sanitarians, city-county health departments, and others commented during the rule writing process that quarterly sampling was not frequent enough, and the board agreed. MAR Notice Number 17-089, published in 1999, documents the reasoning and support for keeping the more stringent rules requiring these systems to monitor monthly, and the guidelines for qualifying for and staying on reduced quarterly monitoring. The ways to qualify for quarterly monitoring were agreed upon between the above-mentioned groups and the department, and written into the rule in ARM 17.38.215(1)(c).

Therefore, the state of Montana currently requires all public water systems to monitor monthly for coliform bacteria. However, a TNC system that uses only ground water and serves a maximum daily population of 1,000 or fewer may apply for quarterly monitoring if they meet the requirements of ARM 17.38.215(1)(c).

The RTCR, just like the 1989 TCR, specifies that CWS's must test for coliforms monthly, unless the department adopts quarterly monitoring for small qualified systems. In addition, NCWSs using only ground water and serving 1,000 or fewer people must test for coliforms quarterly, unless the department adopts annual monitoring for qualified systems.

Each state has the discretion to adopt baseline and reduced monitoring provisions of 40 CFR Part 141 that are appropriate for that state. In order to fully protect public health, the board is proposing to keep all of the current coliform

monitoring frequencies in place, including the rules requiring TNC systems to monitor monthly unless the system qualifies and applies for quarterly monitoring, except for two major changes. First, the requirements for triggering TNC systems to return to monthly coliform monitoring have been strengthened by incorporating RTCR triggers that mandate increased monitoring. This change will help ensure that only well-maintained systems that are complying with Safe Drinking Water regulations will qualify for and remain on reduced monitoring. This process will reduce the risk of serving contaminated water to the public. Second, only non-seasonal transient systems will be able to qualify for reduced monitoring under proposed ARM 17.38.215(3). Seasonal transients were required to sample monthly starting in April 2016. This change will emphasize the importance of the start-up procedure and upkeep for systems that are depressurized or without maintenance for part of the year.

The RTCR became effective April 1, 2016. Because the board has not yet adopted the rules necessary to implement the RTCR, it is currently being implemented under federal jurisdiction. EPA has given the department an RTCR primacy revision extension, until February 2017.

Most of the following rule amendments are necessary to adopt the RTCR. For amendments that are not necessary for RTCR compliance, additional reason statements are provided.

17.38.201A INCORPORATION BY REFERENCE--PUBLICATION DATES AND AVAILABILITY OF REFERENCED DOCUMENTS (1) Unless expressly provided otherwise, in this subchapter where the board has adopted and incorporated by reference a federal regulation, the reference is to the July 1, ~~2009~~ 2015, edition of the Code of Federal Regulations (CFR).

(2) remains the same.

(3) Copies of federal materials may also be obtained from the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402; or from the Environmental Protection Agency ~~internet~~ web site at ~~epa.gov/docs/epacfr40/chapt-I.info/subch-D/~~ http://www.gpo.gov/fdsys/pkg/CFR-2015-title40-vol23/pdf/CFR-2015-title40-vol23.pdf.

(4) remains the same.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The board is proposing the incorporation of the 2015 edition of the CFR, which is the most current edition, for several reasons. First, adoption of the most recent edition of the CFR is reasonably necessary to ensure that the department retains primacy for the regulation of public water supplies under the federal Safe Drinking Water Act. Second, the federal revised total coliform rule is contained in the 2015 edition. Third, the 2015 edition is more readily available to the public than the 2009 edition. The proposed amendment to ARM 17.38.201A(3) is proposed to update a non-functioning EPA website link. The proposed amendment will update the link so that current federal regulations can be accessed easily. The

new link will take an interested party to the July 1, 2015 electronic version of 40 CFR, the version the board is proposing to adopt.

17.38.202 DEFINITIONS In this subchapter, the following terms have the meanings indicated below and must be used in conjunction with and supplemental to those definitions contained in 75-6-102, MCA. In addition, the board adopts and incorporates by reference the definitions in 40 CFR 141.2, except for the following terms: "clean compliance history," "person," "public water supply system (PWS)," "ground water under the direct influence of surface water (GWUDISW)," "special irrigation district," and "state." The terms "person," "public water supply system," "ground water under the direct influence of surface water," and "state," as used in this subchapter and in the portions of 40 CFR Parts 141 and 142 adopted by reference in this subchapter, have the meanings defined below.

(1) through (6) remain the same.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The proposed amendments to 17.38.202 are necessary to 1) avoid adopting the term "clean compliance history"; and 2) to clarify that state definitions apply not only to federal code, but also to Montana rule. The term "clean compliance history" is not used in the existing rules or in the proposed rule amendments.

The board has defined several terms used in both Montana rule and the federal code. The second proposed amendment is a housekeeping change and will clarify that state-defined terminology used in this subchapter is applicable to both this subchapter and the federal code.

17.38.207 MAXIMUM MICROBIOLOGICAL CONTAMINANT LEVELS

(1) The board hereby adopts and incorporates by reference 40 CFR 141.63(a), 141.63(b), ~~and~~ 141.63(c), and 141.63(d), which set forth maximum contaminant levels for microbiological contaminants.

~~(2) Failure to submit the required number of repeat samples for a public water supply system is a violation of the coliform bacteria MCL set forth in 40 CFR 141.63.~~

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: Incorporation by reference of 141.63(d) is necessary because this provision is part of the RTCR. Deletion of ARM 17.38.207(2) is proposed to remove language that is contained in the 2015 CFR. The RTCR, unlike the 1989 TCR, specifically states in 40 CFR 141.63(c)(3) and 141.859(a)(1)(iii) the ramifications for failure to submit the required number of repeat samples. Therefore, (2) is now redundant.

17.38.208 TREATMENT REQUIREMENTS (1) through (3) remain the same.

(4) The board adopts and incorporates by reference the following:

(a) through (c) remain the same.

(d) 40 CFR 141.63~~(d)~~ (e) and 141.63 (f), which set~~s~~ forth BATs for microbiological contaminants;

(e) through (w) remain the same.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: Incorporation by reference of 141.63(e) and (f) is necessary because this provision is part of the RTCR.

17.38.211 GROUND WATER RULE (1) The board adopts and incorporates by reference 40 CFR Part 141, subpart S except for 40 CFR 141.402(a)(2)(iv), which sets forth the requirements to ensure that systems using ground water sources are adequately protected.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The proposed amendment to ARM 17.38.211 would prohibit dual purpose sampling. A state, per the RTCR implementation guide, is given a choice whether to adopt this provision or not. If adopted, this rule would allow ground water systems utilizing only one well and serving 1000 people or fewer to use a repeat sample collected from a ground water source to meet both a requirement of the Ground Water Rule (GWR) and a requirement of the RTCR. The proposed amendment would protect public health by increasing the chance of isolating the contamination problem more quickly by requiring the collection of four samples rather than three after positive monthly total coliform routine sample for testing.

Community public water systems utilizing ground water are required to have a minimum of two sources. Therefore, even if the use of dual samples were allowed, the use of dual samples would not be an option for most of the state's community groundwater systems, which comprise approximately 32 percent of the groundwater systems serving 1000 people or fewer.

17.38.215 BACTERIOLOGICAL QUALITY SAMPLES (1) The total coliform monitoring frequency for all public water supply systems serving 1,000 or fewer people is one sample/month.

(2) The board adopts and incorporates by reference the table in 40 CFR ~~141.21(a)(2)~~ 141.857(b), which sets forth total coliform monitoring frequency requirements for all public water supply systems serving more than 1,000 people.

(a) The minimum monitoring frequency for total coliforms ~~for community and nontransient noncommunity public water supply systems~~ is based on the average daily population served by the system during the month of peak use~~, and must be in accordance with the table in 40 CFR 141.21(a)(2)~~.

~~(b)~~ (3) ~~The supplier of water for a transient noncommunity water system shall sample according to the table in 40 CFR 141.21(a)(2), except that a supplier of~~

~~water for a~~ Upon written request of the water supplier, the department may reduce the required coliform sampling frequency for a non-seasonal transient noncommunity water system that uses only ground water that is not under the direct influence of surface water and serves a maximum daily population of 1,000 persons or fewer ~~shall sample for coliform bacteria in each calendar month during which the system provides water to the public unless allowed to sample quarterly as provided in (1)(c) or (d)~~ to once in each calendar quarter. ~~The department may not, however, grant permission to sample quarterly pursuant to (1)(c) for a minimum of 24 months of system operation after a system initially becomes regulated under this rule.~~

~~(c) Upon the written request of the water supplier, the department may reduce the required sampling frequency for coliform bacteria for a transient noncommunity public water supply system that uses only ground water and serves a maximum daily population of 1,000 persons or fewer to once in each calendar quarter during which the system provides water to the public if the department determines that quarterly sampling is adequate to protect public health.~~

(a) Before applying for quarterly monitoring, the system must operate and sample coliform bacteria monthly for a minimum of 24 consecutive months;

(b) ~~This~~ The determination to reduce monitoring must be based upon the results of coliform bacteria samples from the past 24 consecutive months of system operation, sanitary surveys, and any other information that indicates quarterly sampling is adequate~~.~~ to protect public health;

~~(d)~~ (c) A water supplier, who is ~~allowed~~ authorized to sample quarterly ~~pursuant to (1)(c) or who was authorized to conduct quarterly sampling on June 3, 1999, and is not required by the department to sample more frequently~~ may continue to sample quarterly ~~except that~~ unless triggered to return to monthly monitoring. The following will trigger monthly monitoring, or more frequent monitoring pursuant to (4), the month following the event:

(i) ~~if E. coli bacteria or other microorganisms commonly found only in the intestinal tract of warm-blooded animals are detected in coliform bacteria samples taken under the requirements of this chapter, the supplier shall sample at least monthly, or more frequently if required by the department, until valid samples that do not contain coliform bacteria have been taken for at least 12 consecutive months of system operation. However, if the department determines before expiration of the 12-month period that the source of the contamination has been positively identified and removed, the department may allow the supplier to monitor in accordance with (c).~~ the system triggers a Level 2 assessment or two Level 1 assessments under the provisions of 40 CFR 141.859 in a rolling 12-month period;

(ii) ~~if a maximum contaminant level violation occurs as a result of coliform bacteria samples taken under the requirements of this chapter, the supplier shall sample at least monthly, or more frequently if required by the department pursuant to (e), until valid samples that do not contain coliform bacteria have been taken for at least 12 consecutive months of system operation. If the department determines before expiration of the 12-month period that the source of the contamination has been positively identified and removed, the department may allow the supplier to monitor in accordance with (c).~~ the system has an E. coli MCL violation;

(iii) ~~a supplier who fails to submit the required routine or repeat samples in two or more quarters during any consecutive four calendar quarters of operation~~

~~shall sample at least monthly for at least 12 consecutive months.~~ the system has a coliform treatment technique violation;

(iv) the system has two 40 CFR Part 141, subpart Y, monitoring violations or one subpart Y monitoring violation and one Level 1 assessment under the provisions of 40 CFR 141.859 in a rolling 12-month period for a system on quarterly monitoring;

(v) ~~a supplier who constructs~~ constructing or modifying a system or system components without ~~approval or who has modified a system without~~ prior department approval, in violation of 75-6-112, MCA, and ARM 17.38.101~~, shall sample at least monthly, or more frequently if required by the department pursuant to (1)(e), until the supplier has submitted plans and specifications in accordance with 75-6-112, MCA, and ARM 17.38.101, the system modifications have been approved and the department has reduced sampling frequency pursuant to (1)(c).~~ ;

(vi) ~~if the department determines and notifies a supplier that its~~ determination that a source or distribution system is vulnerable to contamination based upon the results of a sanitary survey, sample analyses, technical investigations or other scientifically defensible information~~, the supplier shall sample at least monthly, or more frequently if required by the department pursuant to (e). If the department determines that the source of the contamination has been positively identified and removed, the department may allow the supplier to monitor in accordance with (c).~~ ; or

(vii) ~~a supplier that does not maintain or operate~~ not maintaining or operating a system in accordance with the requirements of this chapter ~~may be required to sample monthly, or more frequently if required by the department pursuant to (1)(e),~~ when the department determines that the violation may affect the microbiological quality of the water supply system. ~~If the department determines that appropriate improvements in maintenance and operation have been implemented, it may allow the supplier to monitor in accordance with (1)(c). A supplier shall implement any increase in sampling frequency immediately upon receipt of written notice from the department of the increase.~~

(d) When monthly monitoring is triggered, the department shall provide written notice to the system that monthly monitoring is required;

(e) Under extreme circumstances, for the purpose of determining eligibility for remaining on or qualifying for quarterly monitoring, the department may elect to not count monitoring violations under 40 CFR 141.860(c)(1) if the missed sample is collected no later than the end of the monitoring period following the monitoring period in which the sample was missed. The system must collect the make-up sample in a different week than the routine sample for that monitoring period and must collect the sample as soon as possible during the monitoring period. This authority does not affect the provisions of 40 CFR 141.860(c)(1) and 141.861(a)(4);

(f) The system must continue monthly monitoring until the following criteria have been met:

(i) within the last 12 months, the system must have completed a sanitary survey or a site visit by the department or a voluntary Level 2 assessment by a party approved by the department, be free of sanitary defects, and have a protected water source;

(ii) no MCL violations under 40 CFR 141.63, no monitoring violations under 40 CFR 141.21 or subpart Y, and no coliform treatment technique trigger

exceedances or treatment technique violations under subpart Y, for a minimum of 12 months;

(iii) valid samples that do not contain coliform bacteria have been taken for at least 12 consecutive months of system operation;

(iv) the department has approved all submitted plans and specifications for system construction and modifications in accordance with 75-6-112, MCA, and ARM 17.38.101;

(v) the identified sources of contamination have been removed;

(vi) appropriate improvements in maintenance and operation have been implemented; and

(vii) the public water system petitions the department and the petition is approved in writing.

(g) Systems collecting samples on a quarterly frequency must conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment technique trigger). Systems must collect at least three routine samples during the next month. Systems may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. Systems must use the results of additional routine samples in coliform treatment technique trigger calculations under 40 CFR 141.859(a).

~~(e)~~ (4) The department may increase the required sampling frequency of any public water supply system based upon sampling results or other conditions that indicate a risk to the health of the water users. The department shall provide the supplier with a written explanation of any revised sampling requirements. A supplier shall implement any increase in sampling frequency immediately upon receipt of written notice of the increase from the department.

~~(2)~~ (5) The board ~~hereby~~ adopts and incorporates by reference ~~40 CFR 141.21~~ the following, which set~~s~~ forth ~~monitoring and analytical requirements for coliform bacteria, except as modified in the sections that follow.~~ requirements for the revised total coliform rule (RTCR):

~~(3) 40 CFR 141.21(a)(2) is not adopted, except for the table adopted in (1)(a). 40 CFR 141.21(a)(3) is not adopted.~~

(a) 40 CFR 141.851, except that the term "April 1, 2016" is replaced with "[the effective date of this rule]." This rule sets forth general requirements for the RTCR;

(b) 40 CFR 141.852, which sets forth analytical methods and laboratory certification requirements for coliform testing, except that, for the purpose of this subchapter, the phrase "laboratory certified by the EPA or a primacy State" means "approved laboratory" as defined in ARM 17.38.202;

(c) 40 CFR 141.853, except for subsection (a)(5)(ii) and subsection (b). And except that the term "March 31, 2016" is replaced with "[the effective date of this rule]." This rule sets forth general monitoring requirements for all systems;

(d) 40 CFR 141.854(a)(1) through 141.854(a)(3), which set forth general requirements for non-community water systems serving 1,000 or fewer people using only ground water;

(e) 40 CFR 141.854(i)(1), 141.856(a)(4)(i), and 141.857(a)(4)(i), except that the term "April 1, 2016" is replaced with "[the effective date of this rule]." This rule

provides start-up procedure requirements for seasonal systems. The department may exempt any seasonal system from some or all of the requirements for seasonal systems if the entire distribution system remains pressurized during the entire period that the system is not operating;

(f) 40 CFR 141.855(a), which sets forth general requirements for community systems serving 1,000 or fewer people using only ground water;

(g) 40 CFR 141.856(a)(1) through 141.856(a)(3) and 141.856(c), which set forth general requirements for subpart H public water systems serving 1,000 or fewer people;

(h) 40 CFR 141.857(a)(1) through 141.857(a)(3) and 141.857(c). This rule sets forth general requirements for public water systems serving more than 1,000 people;

(i) 40 CFR 141.858, which sets forth repeat monitoring and E. coli requirements, except for the following changes:

(i) the first sentence in 141.858(a)(1) is changed to "If a sample taken under ARM 17.38.215(1) through (3), 40 CFR 141.856(c), or 40 CFR 141.857(c), is total coliform-positive, the system must collect a set of repeat samples within 24 hours of being notified of the positive result."; and

(ii) 141.858(a)(5) is changed to "Results of all routine and repeat samples taken under ARM 17.38.215, not invalidated by the State, must be used to determine whether a coliform treatment technique trigger specified in 40 CFR 141.859 has been exceeded.";

(j) 40 CFR 141.859, except for subsection (a)(2)(iii) and subsection (b)(4)(ii). This rule sets forth requirements for coliform treatment technique triggers and assessments for protection against potential fecal contamination;

(k) 40 CFR 141.860, which sets forth requirements for violations; and

(l) 40 CFR 141.861, which sets forth requirements for reporting and recordkeeping.

~~(4)~~ (6) ~~40 CFR 141.21(a)(6) is replaced with the following: "~~A special purpose sample, including a sample taken to determine whether adequate disinfection has occurred after pipe placement or repair, may not be taken from a part of the public water supply distribution system that is actively serving the public and must not be used to determine compliance with the RTCR. Repeat samples taken pursuant to 40 CFR ~~141.21(b)~~ 141.858 are not special purpose samples and must be used to determine whether the coliform treatment technique trigger has been exceeded.~~"~~

(7) The department shall perform a special monitoring evaluation during each sanitary survey of ground water systems serving 1,000 or fewer people to review the status of the system, including the distribution system, to determine whether the system is on an appropriate monitoring schedule. After the department has performed the special monitoring evaluation during each sanitary survey, the department may modify the system's monitoring schedule, as necessary, or it may allow the system to stay on its existing monitoring schedule, consistent with this rule. The department may not allow systems to begin less frequent monitoring under the special monitoring evaluation unless the system has already met the applicable criteria for less frequent monitoring in (3)(b).

~~(5) 40 CFR 141.21(b)(5) is replaced with the following: "If a supplier who collects fewer than five routine samples per month has one or more total coliform-positive samples and the department does not invalidate the sample or samples under 40 CFR 141.21(c), the supplier shall collect at least five routine samples during the next month the system provides water to the public. At least one of these routine samples must be collected from the site where the previous month's contaminated sample was taken unless that site was invalidated according to 40 CFR 141.21(c)(1)(ii)."~~

~~(6)~~ (8) A supplier shall collect at least two samples that must be analyzed for coliform bacteria from any new source of water supply to demonstrate compliance with this subchapter before the source is connected to a public water supply system.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: See GENERAL REASON STATEMENT.

17.38.225 CONTROL TESTS (1) through (2)(c) remain the same.

(3) The department may waive, on a case-by-case basis, disinfection residual testing at the entry point ~~sampling~~, in the distribution ~~sampling~~ system, or both for ground water and consecutive systems ~~that are referenced in ARM 17.38.225(2)(c)~~.

(4) A test for chlorine residual in the distribution system must be made at selected points consistent with the department-approved microbiological sample siting plan ~~specified in 40 CFR 141.21~~ and changed regularly so as to cover the system completely at least each week.

(5) through (5)(d) remain the same.

(6) All control test ~~M~~measurements, except for bacteriological samples, ~~for pH, temperature, turbidity, and residual disinfectant concentrations~~ for community and nontransient noncommunity water supply systems must be conducted by a person certified under the provisions of Title 37, chapter 42, MCA, or by a person who has been properly trained to conduct these measurements by the operator in responsible charge or by the department. Bacteriological samples for community and nontransient noncommunity water supply systems must be collected by a person approved by the department or certified under the provisions of Title 37, chapter 42, MCA. Measurements for total coliform bacteria, fecal coliform bacteria, and heterotrophic plate count must be conducted by an approved laboratory.

(7) through (8) remain the same.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The proposed amendments to (3) are necessary to clarify parts of the rule that are confusing. The proposed amendment is housekeeping in nature, and will make the rule easier to understand, and therefore easier for operators to follow.

The amendment to (4) is proposed to specify that the sampling plan required by the RTCR is the plan to be used to implement this rule. 40 CFR 141.132(c) requires community and nontransient, non-community water systems to sample coliforms at their approved RTCR sample sites and at the same time.

The proposed amendments to (6) are necessary to update the list of control test measurements that must be taken by a certified operator or properly trained individual. Currently, pH, temperature, turbidity, and residual disinfectant concentration are specified in the rule. However, there are other control tests that are important for maintaining public health. These include testing fluoride and other process chemical concentrations, the results of which can be used to make changes to the water treatment process. The amendment is proposed to ensure that test results for these chemical tests are accurate and reliable, so that any resulting treatment process changes are truly necessary and are protective of public health and the environment.

17.38.234 TESTING AND SAMPLING RECORDS AND REPORTING REQUIREMENTS (1) through (3) remain the same.

(4) Actual laboratory reports may be kept or data may be transferred to tabular summaries, provided the following information is included:

(a) and (b) remain the same.

(c) identification of the sample as to whether it was a routine distribution system sample, ~~check~~ repeat sample, triggered source sample, confirmation sample, composite sample, raw or process water sample, or other special purpose sample;

(d) date and time of analysis;

(e) through (g) remain the same.

(5) A supplier of a public water supply system that has exceeded the microbiological contaminant MCLs specified in ARM 17.38.207 shall report the violation to the department by the end of the ~~next business~~ day ~~after learning~~ it learns of the violation either electronically, by fax, or by telephone to (406) 444-1947. If the supplier chooses to report by telephone, and a person does not answer the telephone, leaving a voicemail message will constitute compliance with this reporting requirement.

(6) through (10) remain the same.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The proposed amendments to (4)(c) are proposed to ensure that samples collected and submitted to an approved laboratory are more precisely labeled and thereby reduce confusion and the time required to verify sample identification when sample results are submitted incorrectly to the department.

The proposed amendment to (4)(d) is proposed to ensure compliance with 40 CFR 141.852(a)(3) of the RTCR, which requires sample testing within 30 hours of collection.

The amendments to (5) are proposed to comply with 40 CFR 141.858(b)(1) of the RTCR.

17.38.271 DEPARTMENT RECORDKEEPING (1) remains the same.

(2) The department hereby adopts and incorporates by reference 40 CFR 142.14 and 142.15, which describe recordkeeping and reporting requirements for state drinking water programs~~.~~, except as listed below:

(a) The first portion of 40 CFR 142.14(a)(10)(i)(B) is modified to read "Section 141.854(j) of this chapter –";

(b) 40 CFR 142.14(a)(10)(ii)(A), 142.14(a)(10)(ii)(B), and 142.14(a)(10)(ii)(C) are not adopted; and

(c) 40 CFR 142.15(c)(3) is not adopted.

(3) Copies may be obtained by contacting the Department of Environmental Quality, P.O. Box 200901, Helena, MT 59620-0901, (406) 444-2406.

AUTH: 75-6-103, MCA
IMP: 75-6-103, MCA

REASON: The proposed amendments are necessary to adopt the applicable recordkeeping and reporting requirements necessary to revise primacy to include the RTCR. The exceptions to adoption relate to recordkeeping and reporting requirements for reduced monitoring provisions that the board is proposing not to adopt. The proposed amendments are necessary to retain primary enforcement responsibility for National Primary Drinking Water Regulations.

4. Concerned persons may submit their data, views, or arguments, either orally or in writing, at the hearing. Written data, views, or arguments may also be submitted to Denise Hartman, Administrative Rules Coordinator, Department of Environmental Quality, 1520 E. Sixth Avenue, P.O. Box 200901, Helena, Montana 59620-0901; faxed to (406) 444-4386; or e-mailed to dhartman2@mt.gov, no later than 5:00 p.m., November 25, 2016. To be guaranteed consideration, mailed comments must be postmarked on or before that date.

5. Ben Reed, attorney for the board, or another attorney for the Agency Legal Services Bureau, has been designated to preside over and conduct the hearing.

6. The board maintains a list of interested persons who wish to receive notices of rulemaking actions proposed by this agency. Persons who wish to have their name added to the list shall make a written request that includes the name, e-mail, and mailing address of the person to receive notices and specifies that the person wishes to receive notices regarding: air quality; hazardous waste/waste oil; asbestos control; water/wastewater treatment plant operator certification; solid waste; junk vehicles; infectious waste; public water supply; public sewage systems regulation; hard rock (metal) mine reclamation; major facility siting; opencut mine reclamation; strip mine reclamation; subdivisions; renewable energy grants/loans; wastewater treatment or safe drinking water revolving grants and loans; water quality; CECRA; underground/above ground storage tanks; MEPA; or general procedural rules other than MEPA. Notices will be sent by e-mail unless a mailing preference is noted in the request. Such written request may be mailed or delivered

to Denise Hartman, Administrative Rules Coordinator, Department of Environmental Quality, 1520 E. Sixth Ave., P.O. Box 200901, Helena, Montana 59620-0901, faxed to the office at (406) 444-4386, e-mailed to Denise Hartman at dhartman2@mt.gov, or may be made by completing a request form at any rules hearing held by the board.

7. The bill sponsor contact requirements of 2-4-302, MCA, do not apply.

8. With regard to the requirements of 2-4-111, MCA, the board has determined that the amendment of the above-referenced rules may significantly and directly impact small businesses.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

/s/ John F. North BY: */s/ Joan Miles*
JOHN F. NORTH JOAN MILES, CHAIRMAN
Rule Reviewer

Certified to the Secretary of State, October 17, 2016.

DEQ
Montana Department
of Environmental Quality

To: Board of Environmental Quality

From: Aaron Pettis
DEQ Legal Counsel

Re: HB 521 Analysis and Takings Checklist
MAR Notice No. 17-386

In the matter of the amendment of ARM 17.38.104, 17.38.201A, 17.38.202, 17.38.207, 17.38.208, 17.38.211, 17.38.215, 17.38.225, 17.38.234, and 17.38.271 pertaining to rules and regulations governing public water supply systems.

Date: November 25, 2016

HB 521 Analysis

The Board's authority to adopt the proposed rules is found in the public water supply statutes at § 75-6-103, MCA. Under § 75-6-116, MCA ("HB 521"), the Board may not adopt a rule to implement Title 75, Chapter 6, that is more stringent than comparable federal regulations or guidelines that address the same circumstances, unless the Board makes a written finding that the proposed state standard or requirement (1) protects public health or the environment of the state, (2) can mitigate harm to the public health or environment, and (3) is achievable under current technology. § 75-6-116(2), MCA. No findings are required if the Board incorporates by reference comparable federal regulations or guidelines. § 75-6-116(1), MCA. The written finding must reference information and peer-reviewed scientific studies contained in the record that forms the basis for the Board's conclusion. § 75-6-116(3), MCA. The written finding also must include information regarding costs to the regulated community that are directly attributable to the proposed state standard or requirement. *Id.*

Most of the proposed amendments to the public water supply rules implement the Revised Total Coliform Rule (RTCR). The proposed amendments also serve to adopt the 2015 Code of Federal Regulations (CFR), as well as various other housekeeping and non-RTCR updates and clarifications. Each of the proposed amendments is discussed below.

ARM 17.38.104

The amendment to ARM 17.38.104 modifies the existing state definition of "significant deficiency." The comparable federal regulation is found at 40 CFR 141.403(a)(4), which provides only a nonexhaustive list of examples of significant deficiencies. Because the

comparable federal regulation allows states to define the term, the amendment is not more stringent than the comparable federal regulation, and no stringency findings are required. *See* § 75-6-116(1), MCA.

ARM 17.38.201A

The amendment to ARM 17.38.201A updates the incorporation by reference in the public water supply laws of the CFR from the July 1, 2009, edition, to the July 1, 2015, edition. No findings are required under HB 521 for these amendments because they simply incorporate current federal requirements. *See* § 75-6-116(1), MCA.

ARM 17.38.202

The proposed changes to ARM 17.38.202, which adopts certain federal definitions and provides other state definitions, amend the state rule to avoid the adoption of the federal definition of "clean compliance history," which is a term that is not used in the existing rules or the proposed rule amendments. The amendments also clarify that certain terms that are used in both the Montana rules and the federal regulations have the same meaning. Because these amendments are housekeeping in nature and do not impose more stringent requirements than federal regulations, no findings under HB 521 are necessary. *See* § 75-6-116(1), MCA.

ARM 17.38.207

The amendments to ARM 17.38.207 make incorporations that are necessary as part of the RTCR. The amendments also delete language that would be redundant upon the adoption of the 2015 CFR. No findings are required under HB 521 for these amendments because they simply incorporate current federal requirements and delete redundant language. *See* § 75-6-116(1), MCA.

ARM 17.38.208

The amendment to ARM 17.38.207 makes incorporations that are necessary as part of the RTCR. No findings are required under HB 521 for these amendments because they simply incorporate current federal requirements. *See* § 75-6-116(1), MCA.

ARM 17.38.211

The amendment to ARM 17.38.211 updates the incorporation by reference of 40 CFR Part 141, Subpart S, by excluding from incorporation 40 CFR § 141.402(a)(2)(iv). Under that federal regulation, states may choose to allow certain ground water systems to use a single sample to comply with requirements of both the Ground Water Rule and the RTCR. *See* 40 CFR § 141.402(a)(2)(iv). Because the federal regulation allows states to choose whether to adopt such dual purpose sampling, the decision not to adopt dual purpose sampling does not result in a

state rule that is more stringent than the comparable federal regulation, and no finding is necessary under HB 521. *See* § 75-6-116(1), MCA.

ARM 17.38.215

The amendments to ARM 17.38.215 have been proposed to comply with the requirements of the RTCR. For the most part, these amendments adopt by reference the federal requirements or incorporate federal language into the state rule. To that extent, the amendments are not more stringent than the comparable federal regulations, and no findings under HB 521 are required. *See* § 75-6-116(1), MCA.

There are some differences between the federal regulations and the Montana rule amendments with regard to monitoring frequency requirements. Under the federal RTCR, all public water systems serving more than 1,000 people must monitor according to the frequency established in the table in 40 CFR § 141.857(b). Subpart H systems serving 1,000 or fewer people must monitor monthly. 40 CFR § 141.856(b). Community water systems serving 1,000 or fewer people and using only ground water must monitor monthly, although a state may reduce the monitoring frequency from monthly monitoring to quarterly monitoring for qualified systems. *Id.* § 141.855(b), (d). Non-community water systems serving 1,000 or fewer people and using only ground water must monitor quarterly, although a state may reduce the monitoring frequency for a well-operated ground water system from quarterly monitoring to annual monitoring. *Id.* § 141.854(b), (e). Seasonal non-community systems that serve 1,000 or fewer people and use only ground water must monitor monthly, although states may reduce the monitoring frequency to quarterly or annual monitoring. *Id.* § 141.854(g), (*i*)(2)(ii)–(iii).

Under existing Montana rules, all public water systems must monitor monthly, except qualifying seasonal and non-seasonal transient non-community systems that serve 1,000 or fewer people and use only ground water may apply for quarterly monitoring. As for these latter systems, the Board adopted the existing baseline requirement of monthly monitoring after finding, through the course of rule-making proceedings in 1998 and 1999, that the federal baseline of quarterly monitoring might not adequately protect public health. 1999 MAR Notice No. 17-089, at 257, 259 (Feb. 11, 1999).[1] The Board explained:

> Groundwater flow directions may change locally in unconfined groundwater aquifers during a calendar quarter. Contaminants may be carried from a contaminant source toward a transient water supply well during a period of changing flow direction. Similar risks may occur when groundwater levels rise in unconfined aquifers during periods of runoff in streams or during flood irrigation. Microbiological contaminants from nearby septic systems that have been adsorbed onto soil particles during periods of lower groundwater levels may be flushed into the groundwater

[1] This notice has been attached as Appendix 1 for the Board's convenience.

> as levels rise. These contaminants may then be transported seasonally into a transient water supply well during a period of higher groundwater levels. Quarterly sampling may not be sufficiently frequent to provide detection of contamination during one of these periods of higher risk before the public is unnecessarily exposed to waterborne disease.

Id. at 259–60.

The Board concluded that the monthly monitoring baseline for these systems was more stringent than the comparable federal requirement and proceeded to make the necessary findings under HB 521 that the rule protected the public health, could lessen the risk of harm to the public health, and was achievable under current technology. 1999 MAR 1222, 1222–23 (June 3, 1999).[2] The Board explained that this determination was based on testimony and comments in its current and previous rule-making. *Id.* at 1223. The Board described some of that testimony, explaining, among other things, that there was testimony that monthly monitoring was more likely to detect contamination and that quarterly sampling might not detect seasonal variations in water quality. *Id.* The Board also cited testimony involving the amendment's cost to the regulated community. *Id.* The Board ultimately concluded that the record demonstrated the need to require monthly sampling as a baseline, with provisions to allow quarterly monitoring under certain circumstances. *Id.* at 1223–24.

The current amendments to implement the RTCR keep in place the existing coliform monitoring frequencies, except that seasonal transient non-community systems no longer can qualify for quarterly monitoring. With regard to community water systems serving 1,000 or fewer people and using only ground water, Montana has chosen not to allow such systems to reduce their monitoring frequency from monthly monitoring to quarterly monitoring. Likewise, Montana has chosen not to allow seasonal transient non-community systems to monitor quarterly. These rules are not more stringent than comparable federal regulations because the federal regulations allow states to choose whether to adopt decreased monitoring frequencies for these systems. 40 CFR §§ 141.854(g), (*i*)(2)(ii)–(iii), 141.855(d). Accordingly, no findings are required by HB 521.

As for non-community water systems serving 1,000 or fewer people and using only ground water, the rule amendments keep in place the monthly baseline monitoring requirement, and allow qualifying non-seasonal transient systems to monitor quarterly. As discussed above, the Board already has found under HB 521 that a monthly baseline monitoring requirement protects public health or the environment, can mitigate harm to the public health or the environment, and is achievable under current technology. To the extent that HB 521 would require the Board to re-make those findings, those findings can be made based on the same information on which the Board relied in its previous rule-making proceedings. Attached as

[2] This has been attached as Appendix 2 for the Board's convenience.

Appendix 3 to this memo are relevant excerpts of the written testimony and comments from those previous proceedings.

For instance, in a letter dated February 23, 1998, Ruth Powers, an Environmental Health Specialist and Registered Sanitarian representing the Missoula City-County Health Department, testified that the Missoula Health Department opposed quarterly sampling, explaining that in many situations a quarterly sampling baseline would unnecessarily expose the public to microbial contamination. She discussed the health risks of waterborne diseases and described a waterborne disease outbreak in Milwaukee that killed more than 100 people. She stated that continual and frequent monitoring of contamination is vital and explained that quarterly sampling likely will not sample when microbial contamination is most likely to occur. She concluded that monitoring quarterly is likely ineffective at detecting microbial contamination, which often occurs on an intermittent and sporadic basis.

In addition to the statements of the Missoula City-County Health Department, the record from the previous proceedings contains statements from the Ravalli County Sanitarian's Office, the Lolo Sewer and Water District, the Flathead City-County Health Department, and the Great Falls City-County Board of Health. All of these statements concluded that a monthly baseline testing frequency better protected the public than a quarterly baseline. A statement from Robert A. Davidson, a licensed microbiologist, reached the same conclusion.

Attached to this memo as Appendix 4 is a memo from Jon Dilliard, Bureau Chief for the Department's Public Water Supply Bureau, which provides an updated description of the costs to the regulated community that are attributable to the proposed rule amendments. He estimates that the total cost of sampling is about $40 per sample, so systems in Montana that are required to monitor monthly will spend about $320 ($40 x 8) more per year than if they had a quarterly monitoring requirement. Non-seasonal transient non-community systems serving 1,000 or fewer people and using only ground water can qualify for quarterly monitoring after two years of monthly monitoring. Because those systems will have to collect an additional 16 samples over two years before they can qualify for quarterly monitoring, new systems will incur costs of about $640 ($40 x 16) before being eligible for quarterly monitoring. These requirements are not new, so the proposed amendments will not increase costs for these systems. Mr. Dilliard concludes that the cost attributable to the proposed amendments is reasonable, since the cost of sampling is not high, the monthly monitoring baseline already exists under Montana rules, and the monthly monitoring requirement is more protective of public health.

The information described above shows that a monthly monitoring baseline is more likely to detect bacteriological contamination, which is often intermittent and sporadic. Accordingly, the Board can find that a monthly monitoring baseline is appropriate for non-community systems serving 1,000 or fewer people and using only ground water, with quarterly monitoring available to qualifying non-seasonal transient systems. Thus, the proposed rule amendment (1) protects public health or the environment of the state, (2) can mitigate harm to the public health or

environment, and (3) is achievable under current technology. § 75-6-116(2), MCA. Further, the memo from Jon Dilliard regarding the financial burden to the regulated community demonstrates that the cost of monthly monitoring is not burdensome. *See* § 75-6-116(3), MCA.

HB 521 also requires that the Board's written finding must reference "peer-reviewed scientific studies contained in the record that form[] the basis of the board's conclusion." § 75-6-116(3), MCA. The legislative history of HB 521 shows that the intent of the bill was not to require peer-reviewed studies before the Board could adopt rules, but to require the Board to review in its findings any studies contained in the record that formed the Board's conclusions. Accordingly, the Board is not required to have peer-reviewed studies before adopting the proposed amendments, and there is sufficient information, as described above, for the Board to make the findings necessary under HB 521.

Finally, the monitoring frequencies for the remaining types of systems are the same in the amendments and the comparable federal regulations. Accordingly, no findings are required under HB 521 for those systems. *See* § 75-6-116(1), MCA.

ARM 17.38.225

The amendments to ARM 17.38.225 clarify parts of the existing rule that are confusing. These amendments are housekeeping in nature, so no stringency findings are necessary. *See* § 75-6-116(1), MCA.

ARM 17.38.234

The amendments to ARM 17.38.234(4)(c) make changes in the labeling requirements for samples collected and submitted to laboratories. The comparable federal rule is 40 CFR § 141.33(a)(2). No findings are necessary because the amendments merely change how samples are labeled and thus do not impose more stringent requirements. *See* § 75-6-116(1), MCA.

The amendments to ARM 17.38.234(4)(d) and (5) are proposed to comply with the requirements of the RTCR. As such, no findings are necessary under HB 521. *See* § 75-6-116(1), MCA.

ARM 17.38.271

The amendments to ARM 17.38.271 adopt the applicable recordkeeping and reporting requirements of the RTCR. No findings are necessary under HB 521 because these amendments merely adopt the federal requirements. *See* § 75-6-116(1), MCA.

Private Property Assessment Act Analysis

Under § 2-10-105, MCA, an agency must complete a takings impact assessment before taking an action with taking or damaging implications. Such an action is defined as "a proposed state agency administrative rule, policy, or permit condition or denial pertaining to land or water management or to some other environmental matter that if adopted and enforced would constitute a deprivation of private property in violation of the United States or Montana constitution." § 2-10-103(1), MCA.

Section 2-10-104, MCA, requires the Montana Attorney General to develop guidelines, including a checklist, to assist agencies in determining whether an agency action has taking or damaging implications. A completed Attorney General checklist for the proposed rules is attached as Appendix 5 to this memo. Based on the guidelines provided by the Attorney General, the proposed rule amendments do not constitute an "action with taking or damaging implications" in violation of the United States or Montana constitution.

Enclosed:

Appendix 1: 1999 MAR Notice No. 17-089, at 257 (Feb. 11, 1999)

Appendix 2: 1999 MAR 1222 (June 3, 1999)

Appendix 3: Testimony Excerpts from Previous Rule-Making Proceedings

Appendix 4: Memo from Jon Dilliard

Appendix 5: Takings Checklist

Appendix 1

1999 MAR Notice No. 17-089, at 257 (Feb. 11, 1999)

to state implementation plans (SIPs), designed to eliminate, or reduce the severity and number of, violations of the national ambient air quality standards (NAAQS) and achieve expeditious attainment of such standards. EPA's transportation conformity regulations apply to all federal highway and transit transportation actions approved under the Federal Highway Act (23 USC 101, et seq.) or the Federal Transit Act (40 USC 1601, et seq.) that occur within an air quality nonattainment area. EPA's general conformity regulations apply to all federal actions, other than those related to highway and transit transportation, that occur within an air quality nonattainment area.

On November 30, 1993, EPA promulgated general conformity regulations, regarding direct and indirect air pollution emissions or their precursors that are reasonably foreseeable as a result of federal actions and can practicably be controlled by the federal agency responsible for those actions. On August 15, 1997, EPA promulgated revisions to its transportation conformity regulations. The revisions to the federal transportation conformity regulations provide state and local governments more authority in selecting the performance measures used as tests of conformity and more discretion when a transportation plan does not conform to an air quality control plan within the SIP.

The CAA requires each state to adopt the federal transportation and general conformity regulations and subsequent revisions and submit the state rules to EPA for approval as a SIP revision, to demonstrate protection of the NAAQS. Under the CAA, failure to adopt the federal conformity regulations may result in an EPA finding of SIP inadequacy and result in economic sanctions being placed on the state.

The Board is also proposing to make minor editorial revisions to the state transportation conformity rules to clarify the rules and make them easier to read.

5. Interested persons may submit their data, views or arguments concerning the proposed rules either in writing or orally at the hearing. Written data, views or arguments may also be submitted to the Board of Environmental Review, P.O. Box 200901, Helena, Montana, 59620-0901, no later than April 2, 1999. To be guaranteed consideration, the comments must be postmarked on or before that date.

6. Jim Wheelis, Board Attorney, has been appointed to preside over and conduct the hearing.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

David Rusoff By: *Joe Gerbase*

David Rusoff, Rule Reviewer

JOE GERBASE, Chairperson

Certified to the Secretary of State January 29, 1999.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of 17.38.215 pertaining to bacteriological quality samples for public water supply systems	NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENT (PUBLIC WATER SUPPLY)

TO: All Interested Persons

1. On March 23, 1999, at 2 p.m. or as soon thereafter as the matter may be heard, the Board will hold a public hearing in Room 240 of the Metcalf Building, 1520 East Sixth Avenue, Helena, Montana, to consider the proposed amendment of the above-captioned rule.

The Board will make reasonable accommodations for persons with disabilities who wish to participate in this hearing. If you need an accommodation, contact the Board no later than 5 p.m., March 15, 1999, to advise us of the nature of the accommodation you need. Please contact the Board at P.O. Box 200901, Helena, Montana, 59620-0901; phone (406) 444-2544; fax (406) 444-4386.

2. The rule as proposed to be amended appears as follows. Matter to be added is underlined. Matter to be deleted is interlined.

17.38.215 BACTERIOLOGICAL QUALITY SAMPLES (1)(a) Remains the same.

(b) The supplier of water for a transient non-community water system shall sample according to the table in (a) above, except that:

~~(i) beginning August 1, 1998,~~ a supplier of water for a transient non-community water system that uses only groundwater that is not under the direct influence of surface water and serves a maximum daily population of 1,000 persons or fewer shall sample for coliform bacteria in each calendar ~~quarter~~ month during which the system provides water to the public unless ~~required to sample more frequently~~ allowed to sample quarterly as provided in (c) or (d) below. The department may not, however, grant permission to sample quarterly pursuant to (c) for a minimum of 24 months of system operation after a system initially becomes regulated under this rule.

~~(ii) uses surface water or groundwater under the direct influence of surface water must sample according to the table in (a) above.~~

(c) Upon the written request of the water supplier, the department may reduce the required sampling frequency for coliform bacteria for a transient non-community public water supply system that uses only groundwater and serves a maximum daily population of 1,000 persons or fewer to once in each calendar quarter during which the system provides water to the

public if the department determines that quarterly sampling is adequate to protect public health. This determination must be based upon the results of coliform bacteria samples from the past 24 months of system operation, sanitary surveys and any other information that indicates quarterly sampling is adequate.

(d) A water supplier who is allowed to sample quarterly pursuant to (c) above or who was authorized to conduct quarterly sampling on [the day before the effective date of this rule amendment] may continue to sample quarterly except that:

(i) if E. coli bacteria or other microorganisms commonly found only in the intestinal tract of warm-blooded animals are detected in coliform bacteria samples taken under the requirements of this chapter, the supplier shall sample at least monthly, or more frequently if required by the department, until valid samples that do not contain coliform bacteria have been taken for at least 12 consecutive months of system operation. However, if the department determines before expiration of the 12-month period that the source of the contamination has been positively identified and removed, the department may allow the supplier to monitor in accordance with (c) above.

(ii) if a maximum contaminant level violation occurs as a result of coliform bacteria samples taken under the requirements of this chapter, the supplier shall sample at least monthly, or more frequently if required by the department pursuant to (e) below, until valid samples that do not contain coliform bacteria have been taken for at least 12 consecutive months of system operation. If the department determines before expiration of the 12-month period that the source of the contamination has been positively identified and removed, the department may allow the supplier to monitor in accordance with (c) above.

(iii) a supplier who fails to submit the required routine or repeat samples in two or more quarters during any consecutive four calendar quarters of operation shall sample at least monthly for at least 12 consecutive months.

(iv) a supplier who constructs a system or system components without approval or who has modified a system without approval pursuant to 75-6-112, MCA, and ARM 17.38.101 shall sample at least monthly, or more frequently if required by the department pursuant to (e) below, until the supplier has submitted plans and specifications in accordance with 75-6-112, MCA, and ARM 17.38.101 and the system modifications have been approved and the department has reduced sampling frequency pursuant to (c) above.

(v) if the department determines and notifies a supplier that its source or distribution system is vulnerable to contamination based upon the results of a sanitary survey, sample analyses, technical investigations or other scientifically defensible information, the supplier shall sample at least monthly, or more frequently if required by the department pursuant to (e) below. If the department determines that the source of the contamination has been positively

identified and removed, the department may allow the supplier to monitor in accordance with (c) above.

(vi) a supplier that does not maintain or operate a system in accordance with the requirements of this chapter may be required to sample monthly, or more frequently if required by the department pursuant to (e) below, if the department determines that the violation may affect the microbiological quality of the water supply system. If the department determines that appropriate improvements in maintenance and operation have been implemented, it may allow the supplier to monitor in accordance with (c) above. A supplier shall implement any increase in sampling frequency immediately upon receipt of written notice of the increase from the department.

(e) The department may increase the required sampling frequency of any public water supply system based upon sampling results or other conditions that indicate a risk to the health of the water users. The department shall provide a written explanation to the supplier of any revised sampling requirements. A supplier shall implement any increase in sampling frequency immediately upon receipt of written notice of the increase from the department.

(2) through (8) Remain the same.

AUTH: 75-6-103, MCA; IMP: 75-6-103, MCA

3. On June 25, 1998, ARM 17.38.215 was amended to reduce bacteriological sampling from monthly to quarterly for transient non-community public water supply systems that use groundwater and serve a maximum daily population of 1,000 people or fewer. (1998 Montana Administrative Register, page 1730) On August 3, 1998, the Missoula City-County Health Department (MCCHD) submitted a petition to the Board of Environmental Review to implement rulemaking. The petition requested amendments to the rule that would require transient non-community public water supply systems that use groundwater and serve a maximum daily population of 1,000 people or fewer to sample monthly, but it would allow systems that met certain criteria to monitor quarterly.

The Board denied the petition, primarily because agreement could not be reached over the quarterly monitoring criteria. However, the Board directed Department staff to meet with representatives of MCHHD and other interested parties to develop the criteria under which quarterly monitoring would be allowed. The Department has now done so and these proposed amendments are the result of those discussions.

The Board has determined that quarterly sampling as provided in the current rule may not adequately protect public health, and that monthly sampling should be the basic requirement. Groundwater flow directions may change locally in unconfined groundwater aquifers during a calendar quarter. Contaminants may be carried from a contaminant source toward a transient water supply well during a period of changing flow

direction. Similar risks may occur when groundwater levels rise in unconfined aquifers during periods of runoff in streams or during flood irrigation. Microbiological contaminants from nearby septic systems that have been adsorbed onto soil particles during periods of lower groundwater levels may be flushed into the groundwater as levels rise. These contaminants may then be transported seasonally into a transient water supply well during a period of higher groundwater levels. Quarterly sampling may not be sufficiently frequent to provide detection of contamination during one of these periods of higher risk before the public is unnecessarily exposed to waterborne disease.

Additionally, the Board has determined that quarterly monitoring will be protective for certain systems that have monthly sampling records for 24 months. Because of the cost associated with monthly sampling, the Board is proposing to allow those operators to apply for Department approval to decrease sampling frequency. The Board has determined that those operators whom the Department recently allowed to sample quarterly should be allowed to continue that sampling frequency because the Department allowed those persons to sample quarterly based on sampling records showing no apparent source contamination problems.

4. Interested persons may submit their data, views or arguments concerning the proposed rules either in writing or orally at the hearing. Written data, views or arguments may also be submitted to the Board of Environmental Review, P.O. Box 200901, Helena, Montana, 59620-0901, no later than April 2, 1999. To be guaranteed consideration, the comments must be postmarked on or before that date.

5. Jim Wheelis, Board Attorney, has been appointed to preside over and conduct the hearing.

Reviewed by: BOARD OF ENVIRONMENTAL REVIEW

David Rusoff By: *Joe Gerbase*

David Rusoff, Rule Reviewer

JOE GERBASE, Chairperson

Certified to the Secretary of State January 29, 1999.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM 17.8.705 and 17.8.733 and the repeal of 17.8.708, regarding de minimis changes that may be made to a facility without an application to revise the facility's air quality permit	NOTICE OF PUBLIC HEARING ON PROPOSED AMENDMENT (AIR QUALITY)

TO: All Interested Persons

1. On March 24, 1999, at 2 p.m. or as soon thereafter as the matter may be heard, the Board will hold a public hearing in Room 111 of the Metcalf Building, 1520 East Sixth Avenue, Helena, Montana, to consider the proposed amendment and repeal of the above-captioned rules.

The Board will make reasonable accommodations for persons with disabilities who wish to participate in this hearing. If you need an accommodation, contact the Board no later than 5 p.m., March 17, 1999, to advise us of the nature of the accommodation you need. Please contact the Board at P.O. Box 200901, Helena, Montana, 59620-0901; phone (406) 444-2544; fax (406) 444-4386.

2. The rules, as proposed to be amended, appear as follows. Matter to be added is underlined. Matter to be deleted is interlined.

17.8.705 WHEN PERMIT REQUIRED--EXCLUSIONS (1) Except as hereafter specified, no person shall construct, install, alter or use any air contaminant source or stack associated with any source without first obtaining a permit from the department or the board. A permit is not required for the following:

(a) through (o) Remain the same.

(p) temporary process or emission control equipment, replacing malfunctioning process or emission control equipment, and meeting the requirements of ARM 17.8.110(7); ~~and~~

(q) routine maintenance, repair or replacement of equipment; and

(r) de minimis changes as specified below:

(i) construction or changed conditions of operation at a facility holding an air quality preconstruction permit issued under this chapter that do not increase the facility's potential to emit by more than 15 tons per year of any pollutant except:

~~(i)~~ (A) any construction or changed conditions of operation at a facility that would violate any condition in the facility's existing air quality preconstruction permit or any applicable rule contained in this chapter is prohibited, except

Appendix 2

1999 MAR 1222 (June 3, 1999)

BOARD OF ENVIRONMENTAL REVIEW

by: *Joe Gerbase*
JOE GERBASE, Chairperson

Reviewed by:

David Rusoff
David Rusoff, Rule Reviewer

Certified to the Secretary of State May 21, 1999.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM 17.38.215 pertaining to bacteriological quality samples for public water supply systems	)))))	NOTICE OF AMENDMENT (PUBLIC WATER SUPPLY)

TO: All Interested Persons

1. On February 11, 1999, the Board of Environmental Review published notice of public hearing on the proposed amendment outlined above at page 257 of the 1999 Montana Administrative Register, Issue No. 3.

2. The Board has amended rule 17.38.215 as proposed.

3. The Board received the following comments; Board responses follow:

COMMENT #1: Two commenters stated that monthly sampling is unnecessary to protect public health. Both are owners of public water supplies that are small and serve relatively few people.

RESPONSE: Public water suppliers that have been allowed to sample quarterly under the existing rule will be allowed to continue quarterly sampling unless one or more of the conditions in (1)(d) of the rule occur. These criteria were developed to determine when quarterly sampling will not be adequate to ensure water quality. Additionally, public water suppliers that are now sampling monthly and can meet the conditions of ARM 17.38.215(1)(b) may be allowed to sample quarterly.

COMMENT #2: One commenter stated that the Board must consider appropriate scientifically defensible information before a rule is adopted that is more stringent than the comparable federal rule.

RESPONSE: The Board acknowledges HB 521 (codified at Section 76-2-116, MCA) prohibits adoption of state administrative rules which are more stringent than comparable federal regulations or guidelines that address the same circumstances, unless certain findings are made.

The record in this rulemaking proceeding indicates that the amended rule will result in a more stringent state requirement than the present comparable federal requirement. These regulations require sampling for coliform bacteria by transient noncommunity public water supply systems not under the direct influence of surface water and serving a maximum daily population of 1,000 persons or fewer. The comparable federal regulation for this same class of system is found at 40 CFR 141.21(a)(3)(i). The federal regulation provides that this class of system must monitor quarterly unless allowed by the

state to monitor less frequently based on a sanitary survey. Monitoring frequency cannot be reduced to less than once per year.

The Board has considered this matter over the course of a previous rulemaking proceeding commencing in January 1998 in which the same provision of this rule was amended to change the required sampling frequency for this class of system from monthly to quarterly. The Board heard testimony and considered written comments on this matter at its meetings on April 3, 1998, and June 12, 1998. (See 1998 MAR Issue #8, page 1167; and Issue #12, page 1730). On August 28, 1998, the Board considered the petition of the Missoula City-County Health Department to implement rulemaking. These prior proceedings, as well as the present rulemaking proceedings, constitute the record upon which the Board bases its decision in this matter.

Based upon these deliberations, the Board concludes that the amended rule, which returns the required sampling frequency to monthly subject to certain exceptions, protects the public health, can lessen the risk of harm to the public health, and is achievable under current technology.

At the August 28, 1998, Board meeting, the Missoula City-County Health Department (Missoula) provided testimony in support of its August 3, 1998, petition to require monthly, rather than quarterly, coliform bacteria sampling of this class of public water supplies.

Missoula stated in the petition and in testimony that monthly monitoring is simply more likely to detect contamination that may be present in the water. Missoula also stated that quarterly sampling may not detect seasonal variations in water quality that may occur during spring runoff, for example. Missoula stated nearly 6 months could lapse between samples that are taken at the beginning of one quarter and at the end of the subsequent quarter.

In a letter dated February 23, 1998, Missoula also presented testimony in opposition to the Department's original proposal to allow quarterly sampling. In the letter, Missoula cited a waterborne disease outbreak in Milwaukee that resulted in numerous deaths. Missoula also referenced two public water supplies in Missoula County that have experienced seasonal water contamination that was detected through monthly sampling. Missoula asserted in the letter that quarterly sampling would not be adequate to detect contamination discovered through monthly sampling at these water supplies. Several other local health officers submitted testimony in support of Missoula's position.

Jim Melstad, supervisor of the Department's public water supply section testified that the cost of sampling is estimated to be about $35 per sample including the time involved in taking and mailing the sample and postage. The amendment will not increase costs for those water suppliers who have already been allowed to go to quarterly sampling but will apply mostly to new public water supplies. New systems will be required to sample monthly for 24 months before being allowed to sample quarterly.

The testimony and petition demonstrated the need to revise

ARM 17.38.215 to require monthly sampling. For these reasons, the Board decided to again request that the Department develop a rule to require monthly monitoring for this group of public water suppliers, with provisions to allow quarterly monitoring under certain circumstances.

BOARD OF ENVIRONMENTAL REVIEW

by: *Joe Gerbase*
JOE GERBASE, Chairperson

Reviewed by:

David Rusoff
David Rusoff, Rule Reviewer

Certified to the Secretary of State May 21, 1999.

Appendix 3

Testimony Excerpts from Previous Rule-Making Proceedings

MISSOULA COUNTY

MISSOULA CITY-COUNTY HEALTH DEPARTMENT
301 W ALDER ST
MISSOULA, MONTANA 59802-4123

PHONE (406) 523-4770 FAX (406) 523-4857

February 23, 1998

Cindy E. Younkin, Chairperson
Board of Environmental Review
Department of Environmental Quality
Metcaff Building
PO Box 200901
Helena, MT 59620-0901

Dear Ms. Younkin:

Subject: **Agenda #5(4), Hearing on Proposed Rule Changes to ARM 17.38.215 (1)(b)(i)**

I am Ruth Powers, an Environmental Health Specialist and Registered Sanitarian representing the Missoula City-County Health Department. I have a B.S. in microbiology and have been primary analyst for the Missoula City-County Health Department Water Lab for almost 7 years. Please accept the following comments regarding the proposed changes to ARM 17.38.215 Bacteriological Quality Samples, section (1)(b)(i).

The Missoula Health Department opposes the proposed rule changes, that would allow transient non-community public water supplies serving a maximum daily population of 1000 persons or fewer to sample quarterly, instead of monthly. While there may be circumstances that warrant quarterly sampling for public water supplies that are not at risk to microbial contamination, in many situations reducing the sampling frequency would unnecessarily expose the public to microbial contamination.

We propose new language that would allow the department to reduce monthly sampling to quarterly for systems that have no history of contamination, and are not at risk of contamination, while maintaining monthly sampling for systems at risk.

Health Effects of Contaminated Water

Microbial contamination of drinking water from bacteria, viruses, and protozoa continues to be a real health threat to the public. Water borne disease is often an acute event of gastrointestinal upset with diarrhea, but can be an ongoing affliction in some cases such as giardiasis and hepatitis A. In the Milwaukee outbreak in 1993 of *crypto sporidium*, more than 400,000 people became ill, and more than 100 people with compromised immune systems met a premature death. Consuming as little as one 8 ounce glass of contaminated water is enough to cause illness.

Flood water and spring runoff carry these pathogenic microorganisms from saturated septic systems, surface contamination, and animal wastes. Poorly constructed wells and porous soils

can allow contaminated groundwater or surface water runoff to enter the well water. These microorganisms can cause illness, yet not persist in the well for months at a time. Continual and frequent monitoring of contamination is vital.

Coliform as an Indicator of Contamination

The proposed change in this rule affects the monitoring requirement for coliform bacteria. Coliform bacteria indicates contamination because they are found in high numbers with pathogenic bacteria, viruses and protozoa.

Coliform bacteria is a large group, including species of *Escherichia, Klebsiella, Citrobacter*, and *Enterobacter*. They normally inhabit the intestines of people and other warm-blooded mammals. They also live in soil. According to Standard Methods for the Examination of Water and Wastewater, APHA, AWWA, WEF, "experience has established the significance of coliform group density as a criterion of the degree of pollution and thus of sanitary quality. The significance of the tests and the interpretations of results are well authenticated and have been used as a basis for standards of bacteriological quality of water supplies."

Adequate Testing Frequency

Sampling frequency should be based on sound science for the protection of public health. Sampling on a quarterly basis would allow a public water supply to sample January 1 and again on June 30. Another system could sample on April 1 and again on September 30 . Almost six months may pass before the system is in violation for inadequate sampling. In both of these scenarios, it is likely the system was not sampled in the period of high ground water, when flooding and microbial contamination is most likely to occur.

Actual Examples

There is a public water supply in East Missoula, Eastview Homeowners Association, which has a history of low levels of fecal coliform. Every spring and sporadically throughout the year bacteria samples show contamination. If this system had been sampled on a quarterly basis, the period of contamination would likely have been missed, and the homeowners would have been drinking this water for years without knowing it was contaminated. Wells such as this one, along river beds experience a seasonal directional shift in groundwater, which moves away from the river in spring, then toward the river in late summer. Exposure to pathogenic microorganisms can change with the rise and fall of ground water.

Another example is River Road Trailer Court. For a considerable time, this system was free of bacterial contamination. In May of 1996, one sample had coliform bacteria. No other samples that year were contaminated. Then on May 21, 1997, fecal coliform bacteria was detected and confirmed with check samples taken May 28. A boil order was issued on May 30. Virus sampling on May 29 indicated viral contamination. At this time, the rivers in Missoula were flooding and ground water was reaching high levels. Even though there was no visible flood water at the trailer park, the well became contaminated. The samples taken previous to this event and after this event showed no contamination. People were drinking water containing fecal bacteria and viruses up to three weeks, even with a monthly monitoring requirement.

These are only two examples of contamination episodes in Missoula County, which demonstrate the risks of microbial contamination to public water supplies. Changing the sampling frequency from monthly to quarterly leaves the public unaware of what they are drinking.

Conclusion

Microbial contamination, unlike chemical contamination, often occurs on an intermittent and sporadic basis. Monitoring quarterly is likely to be ineffective at detecting this type of contamination. Microbial contamination can occur without any noticeable change in taste or odor. The only way to know for sure is to test the water. Consider eating at your favorite rural restaurant and bar and not knowing if the water is safe to drink, because it hasn't been sampled for several months. We recommend the sampling frequency for bacteria remains monthly for all transient non-community public water supplies open to the public, except in those circumstances where the supply is not at risk.

Recommendation

We recommend that the following changes be made.

17.38.215 (1)(a) Remains the same.

(b) The supplier of water for transient non-community water system that:

(i) uses only ground water (except ground water under the direct influence of surface water) ~~and serves a maximum daily population of 1000 persons or fewer shall sample for coliform bacteria in each calendar quarter during which the system provides water to the public; except that beginning October 1, 1993, these suppliers~~ must sample according to the table (a) above~~.~~ , during which the system provides water to the public, except the department may allow systems that serve a maximum daily population of 1000 person or fewer to sample for coliform each calendar quarter if no routine samples from the previous three years contained coliform, and a sanitary survey conducted by the department or county sanitarian within the past three years shows no relevant risk to the well or distribution system, and no changes have been made to the well or distribution system.

Ruth Powers, R.S.
Environmental Health Specialist

COUNTY
OF
RAVALLI

STATE
OF
MONTANA
The Bitterroot Valley

Hamilton, Montana 59840
Courthouse Box 5019
(406) 375-6268

February 26, 1998

Cindy E. Younkin, Chairperson
Board of Environmental Quality
Post Office Box 200901
Helena, Montana 59620-0901

Dear Ms. Younkin:

My name is Jake Kammerer, and I am the Director of the Ravalli County Sanitarian's Office. We are a contracted county with D.E.Q. for the administration of sanitary surveys on small public water systems. As such, we are required to inspect small public water systems. From experience, I can tell you that there are many fine and conscientious operators; but for those who do not seem to realize the importance of safe potable drinking water, the proposed changes are a setback--not a step in the right direction. I do not feel it is necessary for me to go into detail about the possible health risks involved with contaminated drinking water.

Adequate testing is essential, and the frequency of that testing can only be effective if a problem is caught and corrected in a timely manner. As proposed, if an operator neglects to send in the quarterly sample, it would be six months before the Department would verify that the public is consuming safe water. I feel that prudence should dictate that if you have systems which have consistently shown safe results, we at the contracted local level should be able to reward those operators by allowing quarterly testing. If an operator fails to send in a quarterly sample, then place them back on monthly sampling for six months or a year.

I have a concern and request regarding sample taking. If you choose to go to quarterly sampling, I believe you should contract with the counties to take the samples. I have always had reservations concerning certain operators and their sample taking techniques.

There are several systems in Ravalli County where seasonal groundwater fluctuation could easily lead to contamination problems which would not show up for months depending on when the last sample was taken.

In closing, let me say that I have read the letter to you from Ruth Powers of Misssoula City/County Health Department, and I feel she expresses many of my own concerns. I respectfully request that you please take the comments of those of us in the trenches with the sincerity and dedication to the task that they were made with.

Sincerely,

Jake Kammerer R.S.

Jake Kammerer, R.S.
RAVALLI COUNTY SANITARIAN

JK/ik

February 25, 1998

Board of Environmental Review
Department of Environmental Quality
Metcalf Building
POB 200901
Helena, MT 59620-0901

Attn: Cindy E. Younkin, Chairman

Subject: **Agenda #5(4) Hearing on Proposed Rule Changes to ARM 17.38.215 (1)(b)(I)**

My name is David Haverfield, Superintendent of Missoula County RSID #901 (a.k.a. Lolo Sewer and Water District), I am also an operator for the Shelby Water District in Lolo . I am certified Class 1 Water Treatment, Class 1 Water Distribution and Class 1 Wastewater Treatment here in the State of Montana. Montana Certification # 1456. (Montana's highest certification) - I have been certified and operating in the water/wastewater field for 26 years. Please accept my comments regarding the charges to ARM 17.38.215 Bacteriological Quality Samples, section (1)(b)(I).

I oppose the proposed rule changes that would allow transient non-community public water supplies serving a maximum daily population of 1000 persons or fewer to sample quarterly, instead of monthly. While there may be circumstances that warrant quarterly sampling for public water supplies that are less a risk to microbial contamination, in many situations reducing the sampling frequency may unnecessarily expose the public to dangerous bacteria. One should not underestimate public outrage in such an event and place a poor image on the Department of Environmental Quality and the rest of us in the field.

Sources of Contaminated Water

Other possible sources of contamination may come from wells that are affected by flood water, runoff, poorly grouted or wells that have not been grouted at all, surface contamination, animal wastes, failing nearby septic systems or underground rock with cracks and fissures that can carry untreated wastes long distances to the water table. The last and most common sources of contamination are illegal cross-connections during temporary pressure losses in the system. These cross-connections can be back-siphonage as simple as a pipe attached to a janitorial sink or an open hose lying in a pool of water on a residential lawn. The Watts Regulator Company describes many common cross-connections that resulted in life threatening contamination.

Actual Examples

We had a case of contamination a few years ago that I hope will illustrate my point. I operated a system a few years ago that was on quarterly sampling who on occasion would come up with an occasional coliform positive sample. After a year had passed with quarterly sampling, some tests negative and others positive that we decided to investigate the system reservoirs as flushing the mains and chlorinating the reservoir did not seem to be effective. We drained down the reservoir and found seven decaying snakes that had found their way inside the reservoir. Once removal was completed and the man way hatches sealed with rubber gaskets, samples no longer indicated positive coliform. Perhaps with a mandatory, monthly schedule we could have been alerted to the problem sooner and taken care of the situation sooner. We now sample monthly.

One case involved an air-conditioning unit at a college where untrained or poorly trained maintenance personnel created a situation where dangerous bacteria entered into a potable water system, 23 persons became ill as a result. They site records indicating that cross-connections are increasing at an estimated rate of 100,000 cases per day! (See **50 Cross-Connection Questions, Answers & Illustrations # F-50 - Watts Regulator Company, Lawrence, MA**)

About five years ago the Mountain Water Company was ordered to place over ½ of it's water system in Missoula on a mandatory boil order due to a leaking potable main near a leaking sewer line. Mountain Water now chlorinates the entire system on a continuous basis. Many instances of contamination may be occurring daily that go unnoticed. Removing these important testing tools from the operator may only further endanger our fragile potable water supplies. Even very small systems, long distances away from labs can fill a bottle and mail for testing. All systems can afford a few minutes of inconvenience for such protection once per month. Imagine the costs in lost revenue to water systems like restaurants, trailer courts and rest stops when they are required to report and post that they have contaminated water. The cost per sample in most places is for small systems is less than $10.00 per month.

Summary

In summary, microbial contamination may occur sporadically, sampling one sample, four times per year, may not be sufficient to protect the public. In most cases taste and odor are unaffected by bacteria unless in vast quantities. Putting a little water in a bottle and mailing it to a lab once per month, all for a low as $10.00 per sample does not seem a significant hardship to this operator. It would seem good policy for any business to prominently display the fact that the water is tested regularly and found pure.

Thanks for the opportunity to comment on this important subject. If you have any questions or concerns please feel free to call or write any time.

Sincerely,

David H. Haverfield, Supr.
Lolo Sewer & Water District - Montana State Operator # 1456

dhh

Environmental Health Services

Flathead City-County Health Department
723 Fifth Avenue East, Kalispell, MT 59901
(406) 758-5760 Fax: 758-5859

February 25, 1998

CINDY E YOUNKIN, CHAIRPERSON
BOARD OF ENVIRONMENTAL REVIEW
DEPARTMENT OF ENVIRONMENTAL QUALITY
METCALF BUILDING
P O BOX 200901
HELENA MT 59620-0901

RE: Agenda #5(4), Hearing on Proposed Rule Changes to ARM 17.38.215(1)(b)(I)

Dear Ms. Younkin:

Please accept the following comments regarding the above referenced rule changes:

We oppose rule changes that would allow all transient non-community public water supplies serving a maximum daily population of 1000 persons or fewer to sample quarterly instead of monthly.

Microbiological contamination of groundwater (well) sources may occur sporadically in response to seasonal effects or other influencing factors and does not necessarily persist for a lengthy time period. Therefore, infrequent microbiological sampling such as would occur under the quarterly sampling rule may miss the period of contamination and sampling schedules could be designed around periods such as Spring runoff.

From a public health perspective, contaminated water can result in contamination of foods, utensils, dishes, food preparation surfaces and ice and can be a significant causal factor of food borne illness. The potential health effect is not limited to the water that people drink. Water or food associated with water are consumed by customers or residents, including the very young and elderly, in restaurants and campground/trailer courts and this is the population most at risk for severe food/waterborne illness.

Therefore, we propose a class of modified transient non-community public water supplies to include those which have a track record of satisfactory microbiological sampling and current satisfactory sanitary survey of the water source. These facilities would qualify for quarterly microbiological sampling while the remaining sources would continue with monthly sampling. This would require a monthly update of facility status, however, with current data processing technology this should not be a major time issue.

Sincerely,

Dick Quist, Ph.D., R.S.
Environmental Health Director

City-County Health Department
Cherry Loney, Health Officer
1130 17th Avenue South
Great Falls, Montana 59405
(406) 454-6950
FAX: (406) 454-6959

RECEIVED
FEB 25 1998
BOARD OF
ENVIRONMENTAL REVIEW

February 25, 1998

Cindy E. Younkin, Chairperson
Board of Environmental Review
DEQ
P O Box 200901
Helena, Mt 59620-0901

RE: Proposed rule change to
ARM 17.38.215 (1)(b)(i)

Dear Ms. Younkin:

It is our understanding that DEQ and the Board of Environmental Review are proposing to change the above referenced rule to allow transient non-community public water supplies serving a maximum daily population of 1000 persons to sample quarterly rather than monthly. Although there are probably a number of systems through out the state where monthly sampling may not be warranted, there are many systems where quarterly monitoring could put the public at risk. Therefore, we wish to go on record supporting the proposed language offered by the Missoula City-County Health Department that would allow DEQ to reduce monthly sampling to quarterly only for those systems that have no history of contamination in the last three years, the most recent sanitary survey shows no relevant risk for contamination, and no changes have been made to the well or distribution system.

This proposed language is a good, common sense approach that allows for the protection from risk where the protection is needed, without creating a major financial hardship to any operator. Monthly sampling is more expensive than quarterly, but is still substantially less in cost that the cost the system operator would incur should a water borne disease outbreak occur due to inadequate sampling. Bacteriological water sampling is one of the least expensive of all required water tests, but serves one of the most important public health roles available.

The Board's consideration and adoption of the above discussed language would be greatly appreciated and would serve the citizens of Montana well.

Sincerely,

CITY-COUNTY BOARD OF HEALTH

Peter M., Frazier, Dir.
Environmental Health

AMATEC™
1537 Avenue D • P.O. Box 20873 • Billings, MT 59104 • (406) 248-2159
e-mail amatec@wtp.net

February 11, 1998

Mark Golz
D.E.Q.
Lee Metcalf Building
P.O. Box 200901
Helena, MT. 59620-0901

Dear Mark:

I received the notification from Abe Horpestad concerning the up coming hearing February 23rd before the Board of Environmental Review. I'd like to express my concerns and trust that you will forward them to the Board in advance of their meeting.

My particular concern centers on the proposal to move transient non-community systems from monthly bacterial testing to quarterly testing. It seems obvious that this change will affect AMATEC since we have been testing many of these systems since 1993 and for that we may seem self-centered. Of course we are no more so than those TNC systems who will be affected. So the economics balance out.

My point is from our twenty years of experience working with very small systems, exactly like and including those classified as TNC is <u>without</u> regulatory constraints now in place, these systems get ignored, neglected or become a non-priority. We see this change just before a sample for bacteria either has to be done or a contamination test result is reported. In between times no maintenance, pressure testing or flow measurements are made, in fact not even a visual inspection is routinely performed. Because these systems will not have a regularly scheduled required testing schedule, all the other jobs that have to be done get prioritized ahead of testing because testing is now once per quarter.

On several occasions we have had persons operating these very small systems inadvertently tell us that they were worried whether the "Clorox" they put in the night before they took their test had cleared and whether pumping it for a hour ahead of sampling was enough to get rid of the clorox. We know this practice is very common based upon the number of phone calls I answer. It seems there is a wide misconception concerning when and why wells should be sanitized and especially why dumping clorox twenty-four hours before you collect your monthly sample is inappropriate.

Another concern is whether these seasonal systems run by camp directors, campground hosts, or the cafe, bar or restaurant owners/managers will get attention period.Without regular tests, the chances are that these systems will be ignored not because they are negligent but for lack of time and priority.

There is no current requirement that knowledgeable, or trained people even know what should be routinely done or that even the same people familiar with the system will operate it year to year.

The seasonal tourists traveling Montana often stop at the highway rest areas many of which are TNC systems. The actual number who stop is not accurately known only estimated. Because the summer is so terribly busy with construction projects, it is very difficult to keep up these water supplies as things now stand. We've seen this happen over the past six years. Perhaps the frequency of contaminated water is equal to that of the larger systems, nevertheless going to quarterly samples would increase the tendency to deprioritize the monthly inspections even if those only occur at the time of sampling; at least they are done once per month.

Another point I want to make is that wells are mechanical in nature and rarely ever experience actual aquifer contamination. Whatever gets into the well generally does so for "mechanical" reasons like from surface water, a broken pipe, pump failure, or other reasons such as chlorination failure or the failure of like disinfection devices, filters, U.V. or R.O. When these occur, one certain method of detection is the monthly coliform test. The problem can then be promptly addressed without waiting two or three months to find the quarterly sample contaminated. Furthermore since these TNC systems are seasonal they sit unused for months. Therefore their use is compressed into just 3 or 4 months and they really get used heavily during this time. These systems experience maximum use during the hottest and most active time of the year. Camps, campgrounds, R.V. sites, cafes and bars have longer hours and because it is light longer, people use these facilities longer and more frequently. People are vacationing or just spending more time during the day relaxing and frequent these areas to a greater degree. So although seasonal, the actual water use increases simply because it is summer.

Transient non-community supplies are also subject to the influence of higher water volumes moving in and out during run off and during irrigational applications. We have seen ground water wells with static levels of 15-20 feet during the "off" season have these levels increase 10-15 feet just during this seasonal period. This hydraulic stress creates potential problems. This is true because in the "off" season, during the lowest water movement and while the ground is frozen, these same systems seem to have fewer problems. Since these factors are beyond control, it would seem that cutting back testing during this period would be ill advised.

The preceding discussion is based upon my experience having been certified to test public waters in Montana since 1993 and for twenty years prior to that working with very small systems both as a Microbiologist and consultant.

When something is out of sight it is out of mind, and therein lies my concern. Prior to the Safe Drinking Water Act, none but the very largest Montana cities routinely tested their drinking water. I am concerned that should the decision be made to cut TNC testing from monthly to quarterly the mind set will become, "well that's no longer something we have to worry about except quarterly." So it becomes less urgent and since the monthly testing would become de-emphasized, the attitude becomes one of the problem has gone away.

My observations based upon many years of working directly with the consumer public and my awareness that they give little thought in general to the safety of their drinking water before they drink it, i.e. they just take it for granted, that changing the sampling frequency from monthly to quarterly is not a practical idea.

Thank you for talking the time to review my concerns and to convey them to the Board.

Robert A. Davidson, B.A. Microbiology
Licensed Microbiologist

Appendix 4

Memo from Jon Dilliard

DEQ
Montana Department
of Environmental Quality

Memo

TO: Aaron Pettis

FROM: Jon Dilliard

DATE: November 25, 2016

SUBJECT: RTCR Total Coliform Testing Cost

The federal regulations for Total Coliform samples establish a quarterly monitoring baseline for non-community systems that serve 1,000 or fewer people and use only ground water, while Montana rules establish a monthly monitoring baseline. Sample costs range from approximately $20.00 to $25.00 depending on the laboratory. For this analysis $25.00 will be used. Normal postage/shipping for the sample can vary depending on location but can be from $7.00 and up depending on the service. For this analysis $15.00 will be used. For systems in Montana that are required to sample monthly but would be able to sample quarterly under the federal regulations, the cost that is directly attributable to the monthly sampling requirement is the cost of eight additional samples, for a total of $320.00 [$40.00 x 8]. Because these monitoring frequencies are already established in Montana, the new rules will not increase costs on these systems.

The Montana rules do allow qualifying non-seasonal transient non-community systems serving 1,000 or fewer people and using only ground water to apply for quarterly monitoring. Among other requirements, these systems must monitor monthly for at least two years before they are eligible for quarterly monitoring. This means that the owners of new systems must collect an additional 16 samples over the course of two years before they can qualify for quarterly monitoring. A new system would therefore incur additional costs of about $640.00 [$40.00 x 16] before being eligible for quarterly monitoring. The non-seasonal transient systems that currently are allowed to sample quarterly will not be affected by the new rules, since they will be allowed to continue sampling quarterly under the new rule.

The new rules will not allow seasonal systems to qualify for quarterly monitoring, which means that those seasonal systems that currently qualify for quarterly monitoring will have to return to monthly monitoring. However, federal regulations give Montana the choice whether to adopt a reduced monitoring frequency for seasonal systems, so the new Montana rule is not more stringent than federal regulations.

I believe that the cost attributable to these new rules is reasonable because the cost of sampling is not high, the monthly monitoring baseline already exists under Montana rules, and the monthly monitoring requirement is more protective of public health.

Appendix 5

Private Property Assessment Act Checklist

MAR Notice No. 17-386

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

YES	NO		
☒	☐	1.	Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
☐	☒	2.	Does the action result in either a permanent or indefinite physical occupation of private property?
☐	☒	3.	Does the action deprive the owner of all economically viable uses of the property?
☐	☒	4.	Does the action deny a fundamental attribute of ownership?
☐	☒	5.	Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is NO, skip questions 5a. and 5b. and continue with question 6.]
☐	☐	5a.	Is there a reasonable, specific connection between the government requirement and legitimate state interests?
☐	☐	5b.	Is the government requirement roughly proportional to the impact of the proposed use of the property?
☐	☒	6.	Does the action have a severe impact on the value of the property?
☐	☒	7.	Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is NO, do not answer questions 7a. – 7c.]
☐	☐	7a.	Is the impact of government action direct, peculiar, and significant?
☐	☐	7b.	Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
☐	☐	7c.	Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.

DEQ
Montana Department
of Environmental Quality

Memo

To: Board of Environmental Quality

From: Tammy Filliater
Sanitary Survey Specialist

Re: Revised Total Coliform Rule Implementation – Small Business Impact Analysis

In the matter of the amendment of ARM 17.38.104, 17.38.201A, 17.38.202, 17.38.207, 17.38.208, 17.38.211, 17.38.215, 17.38.225, 17.38.234, and 17.38.271 pertaining to rules and regulations governing public water supply systems.

Date: November 23, 2016

The 1989 Total Coliform Rule (1989 TCR), a National Primary Drinking Water Regulation, became effective in 1990. This rule was designed to protect public health by having every public water system in the United States test and meet maximum contaminant levels for coliform bacteria, a group of bacteria that can indicate the presence of pathogenic bacteria. This rule was revised in 2013, and is now known as the Revised Total Coliform Rule (RTCR). The RTCR became effective, under federal jurisdiction, on April 1, 2016. DEQ implemented the rule under EPA authority. This means that, while DEQ implemented and runs compliance for the rule, EPA has primary enforcement responsibility. In order to gain primary enforcement responsibility for the State, called "primacy," the Department needs to propose and write rules to incorporate the RTCR into Montana Administrative Rule.

Prior to the adoption of a proposed rule, DEQ must determine if the rule will have a significant and direct impact on small businesses. This analysis must, at a minimum, do the following: (a) identify by class or group the small businesses probably affected by the proposed rule, (b) include a statement of the probable significant and direct effects of the proposed rule on the small businesses identified in subsection (a), and (c) include a description of any alternative methods that may be reasonably implemented to minimize or eliminate any potential adverse effects of adopting the proposed rule, while still achieving the purpose of the proposed rule. § 2-4-111(1), MCA.

A small business is a business entity, including its affiliates, that is independently owned and operated and that employs fewer than 50 full-time employees. § 2-4-102(13), MCA. The Department of Labor and Industry helped identify the public water systems that are likely to be categorized as small businesses. Then, since the RTCR is a revision of the 1989 TCR, DEQ pulled 1989 TCR data from the Safe Drinking Water Information System (SDWIS) to estimate the number of times the RTCR would have been triggered between 2013 and 2015 if the rule had

been in effect. The database used to estimate RTCR triggers is dynamic, so only estimates for affected small businesses will be used. The Department's analysis is as follows:

(a) Identify by class or group the small businesses probably affected by the proposed rule.

These proposed rules are applicable to all 2,167 public water supply (PWS) systems in Montana, of which approximately 49% are small businesses. The small businesses are mainly day care centers, hotels and motels, mobile home parks, restaurants and bars, recreation areas, service stations, and wholesalers of water.

(b) Include a statement of the probable significant and direct effects of the proposed rule on the small businesses identified in subsection (a).

EPA completed an Economic Analysis that considered both benefits and costs for a 25-year period. This analysis is summarized in 78 Federal Register 10270. EPA estimated that public water systems will incur greater than 90% of the RTCR's net annualized cost, with States incurring the remaining 10%.

The following table, calculated by DEQ, summarizes the costs for public water systems categorized as small businesses.

Task from Revised Rule that Will Affect Costs	Approx. # of Small Systems Affected	Direction of Cost Change	Approx. Cost to System
1. rule implementation and annual administration	all	increase	12 hours of time (1X only)
2. sample siting plan revision	all		2-3 hours of time (1X only)
3. seasonal systems moving quarterly to monthly monitoring	50		$240/year
4. seasonal system must complete a start-up procedure at the beginning of each operating season	200		$30 plus time to perform procedure
5. positive test results triggering level assessments to determine the source of the problem	55/year		*
6. dual sampling no longer allowed	100/year	no change	$0
7. collecting additional routines after a positive test result	400/year	decrease	$60-$150/event
8. public notice for total coliform MCL violations	55/year		*

*hard to estimate (see text)

Cost Increases to Small Businesses

First, RTCR implementation entailed one-time costs to read and understand the RTCR, and to train employees. EPA estimated that each small business would require four hours to read and understand the rule, and eight hours to plan and assign appropriate personnel and resources to carry out the rule. It is hard to quantify these costs, which have already been incurred.

Second, under the 1989 TCR, each PWS should already have had a sample siting plan that conforms to the 1989 TCR. With the RTCR, there were one-time costs to revise this sample siting plan and submit it to the State. EPA estimated that each PWS would require two hours (small systems) to eight hours (large systems) to revise the plan and submit it to the State. Since this cost analysis is specific to small businesses, the State is estimating two to three hours for each small business. It is hard to quantify these costs, which have already been incurred.

Third, under the 1989 TCR, some seasonal systems qualified for quarterly monitoring. These systems have already moved to monthly coliform testing under the RTCR. DEQ estimates that about 50 systems have been affected, each having to pay approximately an additional $240 per year to cover the cost of testing and shipping the samples to the lab. However, with monthly testing, problems with the system will be discovered more quickly, allowing some systems to fix small problems before they become big (more expensive and/or make people sick) problems.

Fourth, under the 1989 TCR, seasonal systems were able to start-up without any mandated testing and/or inspections to see that everything is working properly. Under the RTCR, seasonal systems are required to perform a yearly start-up procedure (including testing for coliform), document that the procedure has been completed, and turn the documentation in to the State before opening for a season. Most seasonal systems have already completed this task for this year's operating season. This procedure cost approximately $30 for the coliform test, plus the time required to perform the start-up procedure. The coliform monitoring requirement could save the system money in the long run. The sample collected before opening is known as a "special" sample, which is collected when water is not being served to the public. Therefore, a positive test result will not trigger assessments, violations, or additional repeat monitoring. Instead, the system can fix what they believe is the problem before opening for the season.

Finally, under the 1989 TCR, a confirmed positive test result would trigger an MCL violation and additional sampling requirements. Under the RTCR, a confirmed positive test result will trigger the system to conduct assessments to find the source(s)/potential source(s) of contamination, called sanitary defects. A Level 1 assessment is triggered when total coliform is present, and a Level 2 assessment is triggered when *E. coli* is present. During these assessments, sanitary defects are identified. All sanitary defects have to be fixed by the system. This change affects all of the small businesses. However, it is important to note that between 2013 and 2015 only approximately 165 small businesses would have triggered a total of 170 Level 1 assessments and 122 Level 2 assessments.

Costs as a result of these assessments are likely to rise for businesses that trigger the assessment, but they are hard to estimate. EPA predicts that the most common Level 1 sanitary defects will result in flushing the system and training the sampler. The prediction for Level 2 sanitary defects is that components of the distribution system will need replaced or repaired. However, these components have a useful life that should be accounted for in water system capital planning.

Level 1 assessments can be completed by PWS operators, while Level 2 assessments are completed by DEQ personnel, at no cost to the PWS. After completion, a form is filled out and filed at DEQ. Depending on the problem, the fix may be free (e.g., talking to a lab or a DEQ employee and learning the correct procedure to collect coliform samples), hundreds of dollars (a split well cap needs replaced), thousands of dollars (a backflow preventer needs to be installed), or more (a storage tank is leaking and needs replaced). Some of the fixes may be budgeted in capital improvements. In some cases, even if there is a cost to the fix, it is not an additional cost. For example, if a split well cap is found, it would be discovered on a sanitary survey and be required to be fixed at that point in time (or, the system fixes it on its own and DEQ never knows it was broken). The RTCR has not necessarily increased the cost to the system—it has just made the problem important now instead of later.

Unless samples are collected improperly, a triggered level assessment means that there is contamination in the system. The "find and fix" strategy is designed to fix problems before people get sick. Therefore, the amount of money a system spends to fix a problem may be balanced by public perception, fewer people getting sick (and thus less chance of litigation), and finding problems before they get worse and/or cause other problems in the system.

Direct Cost Savings to Small Businesses

First, under the 1989 TCR, some ground water systems were eligible to use dual sampling. Under the RTCR, ground water systems are no longer eligible to use dual sampling. However, the system is still required to collect only four more samples to test (just like under the 1989 TCR). This would affect all small businesses affected under this rule (of which approximately 100 submit dual samples every year). Now that the State no longer accepts dual samples, these systems will no longer trigger two rules with one positive sample. This potentially means fewer violations, less time spent conversing with the State to mitigate both rules, and fewer additional testing requirements to fulfill the requirements of two rules.

Second, costs for collecting additional routines after a positive test result will decrease. Under the 1989 TCR, small systems on quarterly monitoring were triggered to collect five routines the month following a routine positive. Under the RTCR, these systems will trigger three routines the month following a routine positive, instead of five. This will affect about 117 small businesses per year, saving them about $60 per event. Under the 1989 TCR, small systems on monthly monitoring were triggered to collect five routines the month following a positive test

result. Under the RTCR, these systems will no longer trigger the collection of five routines. This would affect about 283 small businesses per year, saving them about $150 per event.

Third, under the 1989 TCR, a system could trigger total coliform MCL violations. Under the RTCR, there is no longer an MCL violation regarding total coliforms. Therefore, Tier 2 public notification for this violation category is eliminated under the RTCR. This could affect all affected businesses (approximately 55 small businesses a year submitted public notice between 2013 and 2015). A typical Tier 2 notification involves posting a standard notice in a public location(s) and including a statement with monthly water bills.

(c) Include a description of any alternative methods that may be reasonably implemented to minimize or eliminate any potential adverse effects of adopting the proposed rule, while still achieving the purpose of the proposed rule.

1. DEQ offered free trainings to help operators understand the RTCR. In addition, trainings have been offered at water schools, where operators need to earn CECs (and are attending anyways, regardless of the RTCR).

2. DEQ helped operators prepare and submit sample siting plans both at water schools and during telephone conversations.

3. DEQ will conduct Level 2 assessments, at no charge to the system.

4. Sanitary defect determinations will be made by committee. This will increase uniformity in what constitutes a "sanitary defect" and will lower time and money spent by a public water system in making appropriate fixes.

Conclusion

Costs will outweigh the financial benefits for most of the 1,050 small businesses affected under the RTCR. However, some small businesses will benefit from cleaner water, fewer violations, and contributing to increased societal health.

Data Sources

Matthew Betcher, DLI

National Primary Drinking Water Regulations: Revisions to the Total Coliform Rule; Final Rule, 78 Fed. Reg. 10270 (Feb. 13, 2013).

Libby Hendrickson, RTCR Rule Manager

SDWIS (Safe Drinking Water Information System) Software

MAR 17-386: Written Findings

Montana law prohibits the Board of Environmental Review from adopting rules to implement the public water supply laws that are more stringent than the comparable federal regulations or guidelines that address the same circumstances, unless the Board makes specific written findings. § 75-6-116, MCA. To satisfy that requirement, the Board makes the following written findings with regard to the amended rules relating to the federal Revised Total Coliform Rule.

The record in this rulemaking proceeding indicates that the amended rules will result in a more stringent state requirement than the present comparable federal requirement. Specifically, the amended rules require a monthly baseline monitoring requirement for non-community water systems serving 1,000 or fewer people and using only ground water, with qualifying non-seasonal transient systems allowed to monitor quarterly. The comparable federal regulation is 40 CFR § 141.854, which requires this type of system to monitor quarterly, with qualifying systems allowed to monitor yearly.

The monthly baseline monitoring requirement for this type of system has been long established under Montana law, so the amended rule will not impose a new monitoring requirement on this type of system. Nevertheless, in light of Section 75-6-116, MCA, the Board finds that this monitoring requirement protects public health, can mitigate harm to the public health, and is achievable under current technology.

The Board bases its conclusion on a number of statements that are contained in the record from various registered sanitarians, city and county health departments, and other individuals, which were submitted in this rulemaking proceeding as Appendix 3 to the Department's HB 521 memo. These statements formed the basis of the Board's initial decision to adopt a monthly monitoring requirement, and the concerns that prompted the Board to adopt that requirement remain unchanged.

For instance, in a letter dated February 23, 1998, Ruth Powers, an Environmental Health Specialist and Registered Sanitarian representing the Missoula City-County Health Department, stated that the Missoula Health Department opposed quarterly sampling, explaining that in many situations a quarterly sampling baseline would unnecessarily expose the public to microbial contamination. She discussed the health risks of waterborne diseases and described a waterborne disease outbreak in Milwaukee that killed more than 100 people. She stated that continual and frequent monitoring of contamination is vital and explained that quarterly sampling likely will not sample when microbial contamination is most likely to occur. She concluded that monitoring quarterly is likely ineffective at detecting microbial contamination, which often occurs on an intermittent and sporadic basis.

In addition to the statements of the Missoula City-County Health Department, the record contains statements from the Ravalli County Sanitarian's Office, the Lolo Sewer and Water

District, the Flathead City-County Health Department, and the Great Falls City-County Board of Health. All of these statements concluded that a monthly baseline testing frequency better protected the public than a quarterly baseline. A statement from Robert A. Davidson, a licensed microbiologist, reached the same conclusion.

Jon Dilliard, Bureau Chief for the Department's Public Water Supply Bureau, provided testimony, attached as Appendix 4 to the Department's HB 521 memo, regarding the costs to the regulated community that are attributable to the proposed rule amendments. He estimated that the total cost of sampling is about $40 per sample, so systems in Montana that are required to monitor monthly will spend about $320 ($40 x 8) more per year than if they had a quarterly monitoring requirement. Non-seasonal transient non-community systems serving 1,000 or fewer people and using only ground water can qualify for quarterly monitoring after two years of monthly monitoring. Because those systems will have to collect an additional 16 samples over two years before they can qualify for quarterly monitoring, new systems will incur costs of about $640 ($40 x 16) before being eligible for quarterly monitoring. These requirements are not new, so the proposed amendments will not increase costs for these systems. Mr. Dilliard concluded that the cost attributable to the proposed amendments is reasonable, since the cost of sampling is not high, the monthly monitoring baseline already exists under Montana rules, and the monthly monitoring requirement is more protective of public health.

For these reasons, the Board finds that a monthly monitoring baseline is appropriate for non-community systems serving 1,000 or fewer people and using only ground water, with quarterly monitoring available to qualifying non-seasonal transient systems. The amended rules protect public health, can mitigate harm to the public health, and are achievable under current technology.