

Rules of
Department of Natural Resources
Division 60—Public Drinking Water Program
Chapter 7—Reporting

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**Title 10—DEPARTMENT OF
NATURAL RESOURCES
Division 60—Public Drinking Water
Program
Chapter 7—Reporting**

10 CSR 60-7.010 Reporting Requirements

PURPOSE: This rule establishes requirements for reports of water sample analyses and monitoring.

(1) General Information. Except where a shorter period is specified in this rule, the supplier of water shall report to the department the results of any test measurement or analysis, except operational analyses required by 10 CSR 60-4.080(3) other than those specified in sections (4) and (5) of this rule, within the first ten (10) days following the month in which the result is received or the first ten (10) days following the end of the required monitoring period as stipulated by the department, whichever of these is shortest.

(2) Within forty-eight (48) hours a supplier of water must report to the department any failure to comply with any drinking water regulation, including failure to comply with monitoring requirements, except where a shorter period is specified by the department.

(3) A supplier of water is not required to report analytical results to the department when a state laboratory performs the analysis and reports the results to the department.

(4) Turbidity measurements as required by 10 CSR 60-4.080(3) must be reported within ten (10) days after the end of each month the system serves water to the public. Information that must be reported includes:

(A) The total number of filtered water turbidity measurements taken during the month;

(B) The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in 10 CSR 60-4.050; and

(C) The date and value of any turbidity measurements taken during the month which exceed five (5) nephelometric turbidity units (NTU).

(5) Disinfection information must be reported within ten (10) days after the end of each month the system serves water to the public.

(A) Information that must be reported includes:

1. For each day, the lowest measurement of residual disinfectant concentration in mil-

ligrams per liter (mg/l) in water entering the distribution system;

2. The date and duration of each period when the residual disinfectant concentration in water entering the distribution system fell below 0.5 mg/l free chlorine or one (1) mg/l chloramines and when the department was notified of the occurrence; and

3. The following information on the samples taken in the distribution system:

A. Number of instances where the residual disinfectant concentration is measured;

B. Number of instances where the residual disinfectant concentration is not measured but the heterotrophic bacteria plate count (HPC) is measured;

C. Number of instances where the residual disinfectant concentration is measured but is less than 0.2 mg/l and no HPC is measured;

D. Number of instances where residual disinfectant concentration is less than 0.2 mg/l and where the HPC is greater than five hundred per milliliter (HPC > 500/ml);

E. Number of instances where the residual disinfectant concentration is not measured and the HPC is greater than five hundred per milliliter (HPC > 500/ml); and

F. For the current and previous month the system serves water to the public, the value of V in the following formula:

$$V = \frac{(c + d + e) \times 100}{a + b}$$

where:

V = the percentage of time that the disinfectant residual is less than the required residual;

a = the value in subparagraph (5)(A)3.A. of this rule;

b = the value in subparagraph (5)(A)3.B. of this rule;

c = the value in subparagraph (5)(A)3.C. of this rule;

d = the value in subparagraph (5)(A)3.D. of this rule; and

e = the value in subparagraph (5)(A)3.E. of this rule.

(B) If the department determines, based upon site-specific considerations, that a system has no means for having a sample transported and analyzed for HPC by a certified laboratory within the requisite time and temperature conditions specified in 10 CSR 60-5 and that the system is providing adequate disinfection in the distribution system, the requirements of paragraph (5)(A)3. do not apply.

(C) A system need not report the data listed in subsection (5)(A) of this rule if all of that data remains on file at the system and the

department determines that the system has submitted all the information required by subsection (5)(A) of this rule for at least twelve (12) months.

(6) Reporting and Record Keeping Requirements for Disinfection By-products and Enhanced Surface Water Treatment.

(A) Compliance Dates.

1. CWS and NTNCWS serving ten thousand (10,000) or more persons and using surface water or ground water under the direct influence of surface water must comply with these requirements beginning December 16, 2001.

2. CWS and NTNCWS serving fewer than ten thousand (10,000) persons and using surface water or ground water under the direct influence of surface water, and systems using only ground water not under the direct influence of surface water, must comply with these requirements beginning December 16, 2003.

3. Transient NCWSs serving ten thousand (10,000) or more persons and using surface water or ground water under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with any requirements for chlorine dioxide and chlorite in this rule beginning December 16, 2001.

4. Transient NCWSs serving fewer than ten thousand (10,000) persons, using surface water or ground water under the direct influence of surface water, and using chlorine dioxide as a disinfectant or oxidant, and systems using only ground water and using chlorine dioxide as a disinfectant or oxidant, must comply with any requirements in this rule for chlorine dioxide and chlorite in this rule beginning December 16, 2003.

(B) Disinfection By-Products. Systems must report the information specified in the following table:

If you are...	You must report... ¹
System monitoring for TTHM and HAA5 under the requirements of 10 CSR 60-4.090(3)(B) on a quarterly or more frequent basis.	(1) The number of samples taken during the last quarter. (2) The location, date, and result of each sample taken during the last quarter. (3) The arithmetic average of samples taken in the last quarter. (4) The annual arithmetic average of the quarterly arithmetic averages of this section for the last four quarters. (5) Whether the MCL was exceeded.
System monitoring for TTHMs and HAA5 under the requirements of 10 CSR 60-4.090(3)(B) less frequently than quarterly (but at least annually).	(1) The number of samples taken during the last quarter. (2) The location, date, and result of each sample taken during the last monitoring period. (3) The arithmetic average of all samples taken over the last year. (4) Whether the MCL was exceeded.
System monitoring for TTHMs and HAA5 under the requirements of 10 CSR 60-4.090(3)(B) less frequently than annually.	(1) The location, date, and result of the last sample taken. (2) Whether the MCL was exceeded.
System monitoring for chlorite under the requirements of 10 CSR 60-4.090(3)(B).	(1) The number of samples taken each month for the last 3 months. (2) The location, date, and result of each sample taken during the last quarter. (3) For each month in the reporting period, the arithmetic average of all samples taken in the month. (4) Whether the MCL was exceeded, and in which month it was exceeded.
System monitoring for bromate under the requirements of 10 CSR 60-4.090(3)(B).	(1) The number of samples taken during the last quarter. (2) The location, date, and result of each sample taken during the last quarter. (3) The arithmetic average of the monthly arithmetic averages of all samples taken in the last year. (4) Whether the MCL was exceeded.

¹ The department may choose to perform calculations and determine whether the MCL was exceeded, in lieu of having the system report that information.

(C) Disinfectant Residuals. Systems must report the information specified in the following table:

If you are...	You must report... ¹
System monitoring for chlorine or chloramines under the requirements of 10 CSR 60-4.090(3)(C).	(1) The number of samples taken during each month of the last quarter. (2) The monthly arithmetic average of all samples taken in each month for the last 12 months. (3) The arithmetic average of all monthly averages for the last 12 months. (4) Whether the MRDL was exceeded.
System monitoring for chlorine dioxide under the requirements of 10 CSR 60-4.090(3)(C).	(1) The dates, results, and locations of samples taken during the last quarter. (2) Whether the MRDL was exceeded. (3) Whether the MRDL was exceeded in any two consecutive daily samples and whether the resulting violation was acute or nonacute.

¹The department may choose to perform calculations and determine whether the MRDL was exceeded, in lieu of having the system report that information.

(D) Disinfection By-Product Precursors and Enhanced Coagulation or Enhanced Softening. Systems must report the information specified in the following table:

If you are...	You must report... ¹
System monitoring monthly or quarterly for TOC under the requirements of 10 CSR 60-4.090(4)(D) and required to meet the enhanced coagulation or enhanced softening requirements in 10 CSR 60-4.090(4)(D)3.	<ol style="list-style-type: none"> (1) The number of paired (source water and treated water, prior to continuous disinfection) samples taken during the last quarter. (2) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter. (3) For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of TOC for each paired sample and the required TOC percent removal. (4) Calculations for determining compliance with the TOC percent removal requirements. (5) Whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements for the last four (4) quarters.
System monitoring monthly or quarterly for TOC under the requirements of 10 CSR 60-4.090(4)(D) and meeting one or more of the alternative compliance criteria in 10 CSR 60-4.090(4)(D)1. or 2.	<ol style="list-style-type: none"> (1) The alternative compliance criterion that the system is using. (2) The number of paired samples taken during the last quarter. (3) The location, date, and result of each paired sample and associated alkalinity taken during the last quarter. (4) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water TOC for systems meeting a criterion in 10 CSR 60-4.090(4)(D)1.A. or C. or of treated water TOC for systems meeting the criterion in 10 CSR 60-4.090(4)(D)1.B. (5) The running annual arithmetic average based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in 10 CSR 60-4.090(4)(D)1.E. or of treated water SUVA for systems meeting the criterion in 10 CSR 60-4.090(4)(D)1.F. (6) The running annual average of source water alkalinity for systems meeting the criterion in 10 CSR 60-4.090(4)(D)1.C. and of treated water alkalinity for systems meeting the criterion in 10 CSR 60-4.090(4)(D)2. (7) The running annual average for both TTHM and HAA5 for systems meeting the criterion in 10 CSR 60-4.090(4)(D)1.C. or D. (8) The running annual average of the amount of magnesium hardness removal (as CaCO₃, in mg/l) for systems meeting the criterion in 10 CSR 60-4.090(4)(D)2.B. (9) Whether the system is in compliance with the particular alternative compliance criterion in 10 CSR 60-4.090(4)(D)1. or 2.

¹The department may choose to perform calculations and determine whether the treatment technique was met, in lieu of having the system report that information.

(7) Enhanced Filtration and Disinfection Reporting and Record Keeping Requirements. In addition to the reporting and record keeping requirements in sections (5) and (8) of this rule, a public water system subject to the requirements of 10 CSR 60-4.055(6) that provides conventional filtration treatment must report monthly to the department the information specified in subsections (7)(A) and (7)(B) of this rule beginning January 1, 2002. In addition to the reporting and record-keeping requirements in sections (5) and (8) of this rule, a public water system subject to the requirements of 10 CSR 60-4.055(6) that provides filtration approved under 10 CSR 60-4.050(3)(G) must report monthly to the department the information specified in subsection (7)(A) of this rule beginning January 1, 2002. The reporting in subsection (7)(A) of this rule takes the place of the reporting specified in section (4) of this rule.

(A) Turbidity measurements as required by 10 CSR 60-4.050(3)(B) must be reported within ten (10) days after the end of each month the system serves water to the public. Information that must be reported includes:

1. The total number of filtered water turbidity measurements taken during the month;
2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits specified in 10 CSR 60-4.050(3)(B)1. or 2.; and
3. The date and value of any turbidity measurements taken during the month which exceed 1 NTU for systems using conventional filtration treatment, or which exceed the applicable maximum level.

(B) Systems must maintain the results of individual filter monitoring taken under 10 CSR 60-4.050(3)(E) for at least three (3) years. Systems must report that they have conducted individual filter turbidity monitoring under 10 CSR 60-4.050(3)(E) within ten (10) days after the end of each month the system serves water to the public. Systems must report the individual filter turbidity measurement results within ten (10) days after the end of each month the system serves water to the public only if measurements demonstrate one (1) or more of the conditions in paragraphs (7)(B)1.-4. of this rule. Systems that use lime softening may apply to the department for alternative exceedance levels for the levels specified in this subsection (7)(B) if they can demonstrate that higher turbidity levels in individual filters are due to lime carryover only and not due to degraded filter performance.

1. For any individual filter that has a measured turbidity level of greater than 1.0

NTU in two (2) consecutive measurements taken fifteen (15) minutes apart, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must either produce a filter profile for the filter within seven (7) days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

2. For any individual filter that has a measured turbidity level of greater than 0.5 NTU in two (2) consecutive measurements taken fifteen (15) minutes apart at the end of the first four (4) hours of continuous filter operation after the filter has been backwashed or otherwise taken offline, the system must report the filter number, the turbidity, and the date(s) on which the exceedance occurred. In addition, the system must either produce a filter profile for the filter within seven (7) days of the exceedance (if the system is not able to identify an obvious reason for the abnormal filter performance) and report that the profile has been produced or report the obvious reason for the exceedance.

3. For any individual filter that has a measured turbidity level of greater than 1.0 NTU in two (2) consecutive measurements taken fifteen (15) minutes apart at any time in each of three (3) consecutive months, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must conduct a self-assessment of the filter within fourteen (14) days of the exceedance and report that the self-assessment was conducted. The self-assessment must consist of at least the following components: assessment of filter performance; development of a filter profile; identification and prioritization of factors limiting filter performance; assessment of the applicability of corrections; and preparation of a filter self-assessment report.

4. For any individual filter that has a measured turbidity level of greater than 2.0 NTU in two (2) consecutive measurements taken fifteen (15) minutes apart at any time in each of two (2) consecutive months, the system must report the filter number, the turbidity measurement, and the date(s) on which the exceedance occurred. In addition, the system must arrange for the conduct of a Comprehensive Performance Evaluation by the department or a third party approved by the department no later than thirty (30) days following the exceedance and have the evaluation completed and submitted to the depart-

ment no later than ninety (90) days following the exceedance.

A. The Comprehensive Performance Evaluation is a thorough review and analysis of a plant's performance-based capabilities and associated administrative, operation and maintenance practices. It is conducted to identify factors that may be adversely impacting a plant's capability to achieve compliance and emphasizes approaches that can be implemented without significant capital improvements. The comprehensive performance evaluation must consist of at least the following components: Assessment of plant performance; evaluation of major unit processes; identification and prioritization of performance limiting factors; assessment of the applicability of comprehensive technical assistance; and preparation of a Comprehensive Performance Evaluation report.

B. If the Comprehensive Performance Evaluation results indicate improved performance potential, the system shall implement Comprehensive Technical Assistance. The system must identify and systematically address plant-specific factors. The Comprehensive Technical Assistance is a combination of utilizing Comprehensive Performance Evaluation results as a basis for followup, implementing process control priority-setting techniques, and maintaining long-term involvement to systematically train staff and administrators.

(8) Each system, upon discovering that a waterborne disease outbreak potentially attributable to that water system has occurred, must report that occurrence to the department as soon as possible but no later than by the end of the next business day. If the system is notified by the department or the Department of Health of an outbreak, the reporting requirement of this section is waived.

(9) A supplier of water is required to submit proof to the department that public notification has been made within ten (10) days of the date that the notice was to have been made. Proof of public notification may include, but is not limited to, a copy of the affidavit of publication, a copy of the public notice, a copy of the mailing list of people sent the public notice or a picture of the posted notices.

AUTHORITY: section 640.100, RSMo Supp. 1999. Original rule filed May 4, 1979, effective Sept. 14, 1979. Amended: Filed April 14, 1981, effective Oct. II, 1981. Amended: Filed July 12, 1991, effective Feb.*

6, 1992. Amended: Filed Dec. 15, 1999, effective Sept. 1, 2000.

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993, 1995, 1996, 1998, 1999.*

10 CSR 60-7.020 Reporting Requirements for Lead and Copper Monitoring

PURPOSE: This rule establishes requirements for reports of water sample analyses and monitoring for lead and copper.

(1) Reporting requirements for lead and copper tap water monitoring and for water quality parameter monitoring.

(A) A water system shall report to the department the following information for all tap water samples within the first ten (10) days following the end of each applicable monitoring period specified in 10 CSR 60-15.070, 10 CSR 60-15.080 and 10 CSR 60-15.090 (such as, every six (6) months, annually or every three (3) years):

1. The results of all tap samples for lead and copper including the location of each site and the criteria under 10 CSR 60-15.070(1) under which the site was selected for the system's sampling pool;

2. A certification that each first draw sample collected by the water system is one liter (1 l) in volume and, to the best of their knowledge, has stood motionless in the service line or in the interior plumbing of a sampling site for at least six (6) hours;

3. Where residents collected samples, a certification that each tap sample collected by the residents was taken after the water system informed them of proper sampling procedures specified in 10 CSR 60-15.070(2)(B);

4. The ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with 10 CSR 60-15.010(3)(C));

5. With the exception of initial tap sampling conducted pursuant to 10 CSR 60-15.070(4)(A), the system shall specify any site which was not sampled during previous monitoring periods and include an explanation of why sampling sites have changed;

6. The results of all tap samples for pH and, where applicable, alkalinity, calcium, conductivity, temperature and orthophosphate or silica collected under 10 CSR 60-15.080(2)–(5); and

7. The results of all samples collected at the entry point(s) to the distribution system for applicable water quality parameters under 10 CSR 60-15.080(2)–(5).

(B) By the applicable date in 10 CSR 60-15.070(4)(A) for commencement of monitoring, each community water system which does not complete its targeted sampling pool with tier 1 sampling sites meeting the criteria in 10 CSR 60-15.070(1)(C) shall send a letter to the department justifying its selection of tier 2 or tier 3, or both, sampling sites under 10 CSR 60-15.070(1)(D) or (E), or both.

(C) By the applicable date in 10 CSR 60-15.070(4)(A) for commencement of monitoring, each nontransient noncommunity water system which does not complete its sampling pool with tier 1 sampling sites meeting the criteria in 10 CSR 60-15.070(1)(F) shall send a letter to the department justifying its selection of sampling sites under 10 CSR 60-15.070(1)(G).

(D) By the applicable date in 10 CSR 60-15.070(4)(A) for commencement of monitoring, each water system with lead service lines that is not able to locate the number of sites served by those lines required under 10 CSR 60-15.070(1)(I) shall send a letter to the department demonstrating why it was unable to locate a sufficient number of these sites based upon the information listed in 10 CSR 60-15.070(1)(B).

(E) Each water system that requests that the department reduce the number and frequency of sampling shall provide the information required under 10 CSR 60-15.070(4)(D).

(2) Source Water Monitoring Reporting Requirements.

(A) A water system shall report the sampling results for all source water samples collected in accordance with 10 CSR 60-15.090 within the first ten (10) days following the end of each source water monitoring period (that is, annually, per compliance period, per compliance cycle) specified in 10 CSR 60-15.090.

(B) With the exception of the first round of source water sampling conducted pursuant to 10 CSR 60-15.090(2), the system shall specify any site which was not sampled during previous monitoring periods and include an explanation of why the sampling point has changed.

(3) Corrosion Control Treatment Reporting Requirements. By the applicable dates under 10 CSR 60-15.020, systems shall report the following information:

(A) For systems demonstrating that they have already optimized corrosion control, information required in 10 CSR 60-15.020(1)(B) or (2)(B);

(B) For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment under 10 CSR 60-15.030(1);

(C) For systems required to evaluate the effectiveness of corrosion control treatments under 10 CSR 60-15.030(3), the information required by that section; and

(D) For systems required to install optimal corrosion control designated by the department under 10 CSR 60-15.030(4), a letter certifying that the system has completed installation of that treatment.

(4) Source Water Treatment Reporting Requirements. By the applicable dates in 10 CSR 60-15.040, systems shall provide the following information to the department:

(A) If required under 10 CSR 60-15.040(2), their recommendation regarding source water treatment; and

(B) For systems required to install source water treatment under 10 CSR 60-15.040(2)(A), a letter certifying that the system has completed installation of the treatment designated by the department within twenty-four (24) months after the department designated the treatment.

(5) Lead Service Line Replacement Reporting Requirements. Systems shall report the following information to the department to demonstrate compliance with the requirements of 10 CSR 60-15.050:

(A) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in 10 CSR 60-15.050(1), the system shall demonstrate in writing to the department that it has conducted a materials evaluation, including the evaluation in 10 CSR 60-15.070(1), to identify the initial number of lead service lines in its distribution system and shall provide the department with the system's schedule for replacing annually at least seven percent (7%) of the initial number of lead service lines in its distribution system;

(B) Within twelve (12) months after a system exceeds the lead action level in sampling referred to in 10 CSR 60-15.050(1), and every twelve (12) months after that, the system shall demonstrate to the department in writing that the system has either—

1. Replaced in the previous twelve (12) months at least seven percent (7%) of the initial lead service lines (or a greater number of lines specified by the department under 10 CSR 60-15.050(6)) in its distribution system; or

2. Conducted sampling which demonstrates that the lead concentration in all service line samples from an individual line(s),

taken pursuant to 10 CSR 60-15.070(2)(C), is less than or equal to 0.015 milligrams per liter (mg/l). In those cases, the total number of lines replaced or which meet the criteria in 10 CSR 60-15.050(2), or both, shall equal at least seven percent (7%) of the initial number of lead lines identified under subsection (5)(A) of this rule (or the percentage specified by the department under 10 CSR 60-15.050(6));

(C) The annual letter submitted to the department under subsection (5)(B) of this rule shall contain the following information:

1. The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule;
2. The number and location of each lead service line replaced during the previous year of the system's replacement schedule; and
3. If measured, the water lead concentration and location of each lead service line sampled, the sampling method and the date of sampling; and

(D) As soon as practicable, but in no case later than three (3) months after a system exceeds the lead action level in sampling referred to in 10 CSR 60-15.050(1), any system seeking to rebut the presumption that it has control over the entire lead service line pursuant to 10 CSR 60-15.050(4) shall submit a letter to the department describing the legal authority (for example, state statutes, municipal ordinances, public service contracts or other applicable legal authority) which limits the system's control over the service lines and the extent of the system's control.

(6) Public Education Program Reporting Requirements. By December 31 of each year, any water system that is subject to the public education requirements in 10 CSR 60-15.060 shall submit a letter to the department demonstrating that the system has delivered the public education materials that meet the content requirements in 10 CSR 60-15.060(1) and (2) and the delivery requirements in 10 CSR 60-15.060(3). This information shall include a list of all the newspapers, radio stations, television stations, facilities and organizations to which the system delivered public education materials during the previous year. The water system shall submit the letter required by this section annually for as long as it exceeds the lead action level.

(7) Reporting of Additional Monitoring Data. Any system which collects sampling data in addition to that required by this rule shall report the results to the department by the end of the applicable monitoring period under 10 CSR 60-15.070, 10 CSR 60-15.080

and 10 CSR 60-15.090 during which the samples are collected.

*AUTHORITY: section 640.100, RSMo 1994. * Original rule Aug. 4, 1992, effective May 6, 1993. Amended: Filed Feb. 1, 1996, effective Oct. 30, 1996.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993, 1995.*