

## 61-58.6

# Reports, Record Retention and Public Notification

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## **A. Applicability.**

This regulation specifies the information public water supplies are required to report to the Department; the information they are required to retain; and the conditions and procedure for making public notification of a violation. This regulation shall apply to each public water system, unless the public water system meets all of the following conditions:

- (1) Consists only of distribution and storage facilities (and does not have any collection and treatment facilities);
- (2) Obtains all of its water from, but is not owned or operated by, a public water system to which such regulations apply;
- (3) Does not sell water to any person; and
- (4) Is not a carrier which conveys passengers in interstate commerce.

## **B. Reporting Requirements.**

(1) Except where a shorter reporting period is specified in this regulation, the supplier of water shall report to the Department the results of any test, measurement or analysis required to be made by the primary drinking water regulation within ten calendar days following the end of the month in which the result is received or within ten calendar days following the end of the monitoring period specified by the Department, whichever of these is shortest. Such report shall be in form established by the Department.

(2) If the result of an analysis made pursuant to the requirements of R.61-58.5, Maximum Contaminant Levels in Drinking Water, indicates that the level of any contaminant listed in said regulation exceeds the maximum contaminant level, the supplier of water shall report these findings to the Department within seven days of receiving the results.

(3) Except where a different reporting period is specified in these regulations, the supplier of water shall report to the Department within 48 hours the failure to comply with any national primary drinking water regulations (including failure to comply with monitoring requirements) as set forth in these regulations.

(4) The supplier of water is not required to report analytical results to the Department in cases where a State Laboratory performs the analysis and reports the results to the Department.

(5) Certification and notification of public notice issued

(a) The public water system, within ten (10) days of completing the public notification requirements under Section E below for the initial public notice and any repeat notices, must submit to the Department a certification that it has fully complied with the public notification regulations. For Tier 2 and 3 notices, the public water system must include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and to the media.

(b) For Tier 1 notices for a lead action level exceedance, public water systems must provide a copy of any Tier 1 notice to the Administrator and the head of the Department as soon as practicable, but not later than twenty-four (24) hours after the public water system learns of the violation or exceedance.

(6) The public water system shall submit to the Department, when requested, within the time stated in the request, copies of any records required to be maintained under R.61-58.6.D or copies of any documents

then in existence which the Department or the EPA Administrator is entitled to inspect pursuant to the authority of section 1445 of the Safe Drinking Water Act or the equivalent provisions of State law.

### **C. Reports To Be Submitted.**

All reports listed below are to be on a form or in a format (written or electronic) approved by the Department.

(1) By the tenth calendar day of each month, the supplier of water for each surface water treatment plant shall complete and submit to the Department, as a minimum, the following reports for the previous month:

- (a) Surface Water Supply Monthly Operation Report
- (b) Bacteriological Summary Analysis Report
- (c) Turbidity Summary Analysis Report

(2) By the tenth calendar day of each month, the supplier of water, who operates a groundwater treatment plant that provides water to a community water system serving at least fifteen service connections or twenty-five individuals on a continuous basis, shall complete and submit to the Department, as a minimum, the following reports for the previous month:

- (a) Ground Water Supply Monthly Operation Report

(b) Bacteriological Summary Analysis Report (if eight or more bacteriological samples are collected each month)

(3) By the tenth calendar day of each month, the supplier of water, who uses wells as a sole source of supply for a community water system serving at least fifteen service connections or twenty-five individuals on a continuous basis, and does not treat the water, shall complete and submit to the Department, as a minimum, the following reports for the previous month:

(a) Bacteriological Summary Analysis Report (if eight or more bacteriological samples are collected each month)

(b) Bacteriological Analysis Report (if seven or less bacteriological samples are collected each month)

(c) The total amount of water pumped from the wells each month and the total volume of water delivered to the customers each month, if the information is available

(4) By the tenth calendar day of each month, the supplier of water, who obtains water from another public water supply and provides it to a community water system serving at least fifteen service connections or twenty-five individuals on a continuous basis, shall complete and submit to the Department, as a minimum, the following reports for the previous month:

(a) Bacteriological Summary Analysis Report (if eight or more bacteriological samples are collected each month)

(b) Bacteriological Analysis Report (if seven or less bacteriological samples are collected each month)

(c) The total amount of water purchased each month and the total amount of water delivered to the customers each month, where required by the Department.

(5) By the tenth calendar day of each month, the supplier of water, who operates a groundwater treatment plant using treatment processes other than the addition of chlorine or corrosion inhibitor or the adjustment of pH, and which provides water to a non-community water system serving at least fifteen service connections or an average of at least twenty-five individuals daily at least sixty days out of the year, shall complete and submit to the Department, as a minimum, the following reports for the previous month:

(a) Ground Water Supply Monthly Operation Report

(b) Bacteriological Summary Analysis Report (if eight or more bacteriological samples are collected each month)

(c) Bacteriological Analysis Report (if seven or less bacteriological samples are collected each month)

(6) Based on complaints received, the results of chemical, or bacteriological testing or the findings of sanitary surveys, the Department may require the supplier of water for any community or non-community water system not described in subsections (1) through (5) above to submit any necessary reports or monitoring data at a frequency established by the Department.

(7) If a water level measuring device has been installed in a well serving a public water supply, the supplier of water shall measure and record the static and pumping water levels on a quarterly basis. The results shall be forwarded to the Department by the tenth calendar day of the following month.

(8) The supplier of water for a community water system that serves more than one hundred service connections shall monitor the operating pressure in the distribution system annually and shall record the date and location where each pressure test was made and the pressure in pounds per square inch. A copy of the results shall be made available to the Department upon request. Records of these results shall be maintained for a period not less than three years.

(9) In the event the Department finds it necessary to require a supplier of water to monitor for chemical parameters on a schedule more stringent than required for routine monitoring, the supplier of water shall submit the monitoring data by the tenth calendar day of the month following the month in which the data was received.

#### **D. Record Keeping.**

(1) Any supplier of water subject to the provisions of this regulation and R.61-58.5, Maximum Contaminant Levels in Drinking Water, shall retain on the premises at a convenient location near the premises all appropriate records, and make them available for inspection by the Department and the public upon request.

(2) These records shall include the following:

(a) Records of microbiological analyses and turbidity analyses made pursuant to the State Primary Drinking Water Regulation: R.61-58 shall be kept for not less than five (5) years. Records of chemical analyses made pursuant to the State Primary Drinking Water Regulation: R.61-58 shall be kept for not less

than ten years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the following information is included:

- (i) The date, place, and time of sampling, and the name of the person who collected the sample.
  - (ii) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or process water sample or other special purpose sample.
  - (iii) Date of analysis.
  - (iv) Laboratory and person responsible for performing analysis.
  - (v) The analytical technique or method used.
  - (vi) The results of the analysis.
- (b) Records of action taken by the supplier of water to correct violation of regulations, shall be kept for a period not less than three years after the last action with respect to the particular violation involved.
- (c) Copies of any written reports, summaries, or communications relating to sanitary surveys or operational inspections of the public water supply conducted by the supplier of water, by a private consultant, or by any local, state, or federal agency, shall be kept for a period not less than ten years after completion of the sanitary survey involved.
- (d) Records concerning a variance or exemption granted to the public water supply shall be kept for a period ending not less than five years following the expiration of such variance or exemption.
- (e) Copies of public notices issued pursuant to Section E below and certifications made to the Department pursuant to the provisions of this regulation must be kept for three (3) years after issuance.
- (f) Copies of monitoring plans developed pursuant to the State Primary Drinking Water Regulation: R.61-58 shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under paragraph (a) of this section, except as specified elsewhere in this regulation.

**E. Public Notification of Drinking Water Violations.**

- (1) General public notification requirements:

(a) Who must give public notice? Each owner or operator of a public water system (community water systems, non-transient non-community water systems, and transient non community water systems) must give notice for all violations of State Primary Drinking Water Regulations (SPDWR) and for other situations, as listed in Table 1. The term "SPDWR violations" is used in this regulation to include violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, and testing procedures in this regulation. Appendix A to this regulation identifies the tier assignment for each specific violation or situation requiring a public notice.

**TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A PUBLIC NOTICE**

- (1) SPDWR violations:

(i) Failure to comply with an applicable maximum contaminant level(MCL) or maximum residual disinfectant level (MRDL).

(ii) Failure to comply with a prescribed treatment technique (TT).

(iii) Failure to perform water quality monitoring, as required by the drinking water regulations.

(iv) Failure to comply with testing procedures as prescribed by a drinking water regulation.

(2) Variance and exemptions under R.61-58.9:

(i) Operation under a variance or an exemption.

(ii) Failure to comply with the requirements of any schedule that has been set under a variance or exemption.

(3) Special public notices:

(i) Occurrence of a waterborne disease outbreak or other waterborne emergency.

(ii) Exceedance of the nitrate MCL by non-community water systems (NCWS), where granted permission by the Department under R.61-58.5.B(3).

(iii) Exceedance of the secondary maximum contaminant level (SMCL) for fluoride.

(iv) Availability of unregulated contaminant monitoring data.

(v) Other violations and situations determined by the Department to require a public notice under this regulation, not already listed in Appendix A to this regulation.

(vi) Exceedance of the lead action level.

(b) What type of public notice is required for each violation or situation? Public notice requirements are divided into three (3) tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in Table 1 of this section are determined by the tier to which it is assigned. Table 2 of this section provides the definition of each tier. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

#### **TABLE 2: DEFINITION OF PUBLIC NOTICE TIERS**

(1) Tier 1 public notice — required for SPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

(2) Tier 2 public notice — required for all other SPDWR violations and situations with potential to have serious adverse effects on human health.

(3) Tier 3 public notice — required for all other SPDWR violations and situations not included in Tier 1 and Tier 2.

(c) *Who must be notified?*

(i) Each public water system must provide public notice to persons served by the water system, in accordance with this regulation. Public water systems that sell or otherwise provide drinking water to other public water systems (i.e., to consecutive systems) are required to give public notice to the owner or operator of the consecutive system; the consecutive system is responsible for providing public notice to the persons it serves.

(ii) If a public water system has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, the Department may allow the system to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. Permission by the Department for limiting distribution of the notice must be granted in writing.

(iii) A copy of the notice must also be sent to the Department and the Administrator (as applicable) in accordance with the requirements of R.61-58.6.B(5).

(2) Tier 1 Public Notice: Form, Manner, and Frequency of Notice

(a) **Which violations or situations require a Tier 1 public notice?** Table 1 of this section lists the violation categories and other situations requiring a Tier 1 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

**TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 1 PUBLIC NOTICE**

(1) Violation of the MCL for total coliforms when fecal coliform or E. coli are present in the water distribution system (as specified in R.61-58.5.F(2)), or when the water system fails to test for fecal coliforms or E. coli when any repeat sample tests positive for coliform (as specified in R.61-58.5.G(5)), violation of the MCL for E. coli (as specified in R.61-58.5.F);

(2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in R.61-58.5.B, or when the water system fails to take a confirmation sample within 24 hours of the system's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in R.61-58.5.C(12)(b);

(3) Exceedance of the nitrate MCL by non-community water systems, where permitted to exceed the MCL by the Department under R.61-58.5.B(3), as required under paragraph (9) of this section;

(4) Violation of the MRDL for chlorine dioxide, as defined in R.61-58.5.Q(1), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water system does not take the required samples in the distribution system, as specified in R.61-58.13.D(3)(b)(i);

(5) Violation of the turbidity MCL under R.61-58.10(C), (E), (H), or (I), where the Department determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation;

(6) Violation of the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR) or Long Term 1 Enhanced Surface Water Treatment Rule (LT1EWSTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit (as identified in Appendix A to this regulation), where the Department determines after consultation that a Tier

1 notice is required or where consultation does not take place within twenty-four (24) hours after the system learns of the violation;

(7) Occurrence of a waterborne disease outbreak, as defined in R.61-58(B)(174), or other waterborne emergency (such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination);

(8) Detection of E. coli, enterococci, or coliphage in source water samples as specified in R.61-58.16.E(1) or R.61-58.16.E(2).

(9) Other violations or situations with significant potential to have serious adverse effects on human health as a result of short-term exposure, as determined by the Department either in its regulations or on a case-by-case basis.

(10) Exceedance of the Action Level for lead as specified in R.61-58.11.B(3).

(b) *When is the Tier 1 public notice to be provided? What additional steps are required?* Public water systems must:

(i) Provide a public notice as soon as practical but no later than twenty-four (24) hours after the system learns of the violation;

(ii) Initiate consultation with the Department as soon as practical, but no later than twenty-four (24) hours after the public water system learns of the violation or situation, to determine additional public notice requirements; and

(iii) Comply with any additional public notification requirements (including any repeat notices or direction on the duration of the posted notices) that are established as a result of the consultation with the Department. Such requirements may include the timing, form, manner, frequency, and content of repeat notices (if any) and other actions designed to reach all persons served.

(c) *What is the form and manner of the public notice?* Public water systems must provide the notice within twenty-four (24) hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the public water system are to fit the specific situation, but must be designed to reach residential, transient, and non-transient users of the water system. In order to reach all persons served, water systems are to use, at a minimum, one or more of the following forms of delivery:

(i) Appropriate broadcast media (such as radio and television);

(ii) Posting of the notice in conspicuous locations throughout the area served by the water system;

(iii) Hand delivery of the notice to persons served by the water system; or

(iv) Another delivery method approved in writing by the Department.

(3) Tier 2 Public Notice: Form, Manner, and Frequency of Notice.

(a) Which violations or situations require a Tier 2 public notice? Table 1 of this section lists the violation categories and other situations requiring a Tier 2 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.



**TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 2 PUBLIC NOTICE**

(1) All violations of the MCL, MRDL, and treatment technique requirements, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 1 notice is required;

(2) Violations of the monitoring and testing procedure requirements, where the Department determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation;

(3) Failure to comply with the terms and conditions of any variance or exemption in place; and

(4) Failure to take corrective action or failure to maintain at least 4-log treatment of viruses (using inactivation, removal, or a Department approved combination of 4-log virus inactivation and removal) before or at the first customer under R.61-58.16.F(1).

(b) *When is the Tier 2 public notice to be provided?*

(i) Public water systems must provide the public notice as soon as practical, but no later than thirty (30) days after the system learns of the violation. If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than seven (7) days, even if the violation or situation is resolved. The Department may, in appropriate circumstances, allow additional time for the initial notice of up to three (3) months from the date the system learns of the violation. It is not appropriate for the Department to grant an extension to the thirty (30) day deadline for any unresolved violation or to allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice. Extensions granted by the Department must be in writing.

(ii) The public water system must repeat the notice every three (3) months as long as the violation or situation persists, unless the Department determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. It is not appropriate for the Department to allow less frequent repeat notice for an MCL or treatment technique violation under the Total Coliform Rule or the Revised Total Coliform Rule (R.61-58.17) or a treatment technique violation under the Surface Water Treatment Rule or Interim Enhanced Surface Water Treatment Rule. It is also not appropriate for the Department to allow through its rules or policies across the board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. Department determinations allowing repeat notices to be given less frequently than once every three (3) months must be in writing.

(iii) For the turbidity violations specified in this paragraph, public water systems must consult with the Department as soon as practical but no later than twenty-four (24) hours after the public water system learns of the violation, to determine whether a Tier 1 public notice under paragraph (2)(a) of this section is required to protect public health. When consultation does not take place within the twenty-four (24) hour period, the water system must distribute a Tier 1 notice of the violation within the next twenty-four (24) hours (i.e., no later than forty-eight (48) hours after the system learns of the violation), following the requirements under paragraphs (b) and (c) of this section. Consultation with the Department is required for:

(A) Violation of the turbidity MCL under R.61-58.10(C), (E), (H), or (I); or

(B) Violation of the SWTR, IESWTR or LT1ESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

(c) *What is the form and manner of the Tier 2 public notice?* Public water systems must provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(i) Unless directed otherwise by the Department in writing, community water systems must provide notice by:

(A) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system; and

(B) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in R.61-58.6.E(3)(c)(i)(A). Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the system or on the Internet; or delivery to community organizations.

(ii) Unless directed otherwise by the Department in writing, non-community water systems must provide notice by:

(A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(B) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in R.61-58.6.E(3)(c)(ii)(A). Such persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

(4) Tier 3 Public Notice: Form, Manner, and Frequency of Notice.

(a) **Which violations or situations require a Tier 3 public notice?** Table 1 of this section lists the violation categories and other situations requiring a Tier 3 public notice. Appendix A to this regulation identifies the tier assignment for each specific violation or situation.

**TABLE 1: VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A TIER 3 PUBLIC NOTICE**

(1) Monitoring violations under R.61-58.5, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 2 notice is required;

(2) Failure to comply with a testing procedure established in R.61-58.5, except where a Tier 1 notice is required under paragraph (2)(a) of this section or where the Department determines that a Tier 2 notice is required;

(3) Operation under a variance or an exemption granted under R.61-58.9;

(4) Availability of unregulated contaminant monitoring results, as required under R.61-58.6.E(7);

(5) Exceedance of the fluoride secondary maximum contaminant level (SMCL), as required under R.61-58.6.E(8); and

(6) Reporting and Recordkeeping violations under R.61-58.17.

(b) *When is the Tier 3 public notice to be provided?*

(i) Public water systems must provide the public notice not later than one (1) year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the public water system must repeat the notice annually for as long as the violation, variance, exemption, or other situation persists. If the public notice is posted, the notice must remain in place for as long as the violation, variance, exemption, or other situation persists, but in no case less than seven (7) days (even if the violation or situation is resolved).

(ii) Instead of individual Tier 3 public notices, a public water system may use an annual report detailing all violations and situations that occurred during the previous twelve months, as long as the timing requirements of paragraph (b)(i) of this section are met.

(c) *What is the form and manner of the Tier 3 public notice?* Public water systems must provide the initial notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

(i) Unless directed otherwise by the Department in writing, community water systems must provide notice by:

(A) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system; and

(B) Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by the notice required in paragraph (c)(i)(A) of this section. Such persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places or on the Internet; or delivery to community organizations.

(ii) Unless directed otherwise by the Department in writing, non-community water systems must provide notice by:

(A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection (where known); and

(B) Any other method reasonably calculated to reach other persons served by the system, if they would not normally be reached by the notice required in paragraph (c)(ii)(A) of this section. Such persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations (e.g., community centers).

(d) *In what situations may the Consumer Confidence Report be used to meet the Tier 3 public notice requirements?* For community water systems, the Consumer Confidence Report (CCR) required under R.61-58.12 of this regulation may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as:

(i) The CCR is provided to persons served no later than twelve (12) months after the system learns of the violation or situation as required under paragraph (4)(b) of this section;

(ii) The Tier 3 notice contained in the CCR follows the content requirements under paragraph (5) of this section; and

(iii) The CCR is distributed following the delivery requirements under paragraph (4)(c) of this section.

(5) Content of the Public Notice.

(a) *What elements must be included in the public notice for violations of State Primary Drinking Water Regulations (SPDWR) or other situations requiring a public notice?* When a public water system violates a SPDWR or has a situation requiring public notification, each public notice must include the following elements:

(i) A description of the violation or situation, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);

(ii) When the violation or situation occurred;

(iii) Any potential adverse health effects from the violation or situation, including the standard language under paragraphs (d)(i) or (d)(ii) of this section, whichever is applicable;

(iv) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;

(v) Whether alternative water supplies should be used;

(vi) What actions consumers should take, including when they should seek medical help, if known;

(vii) What the system is doing to correct the violation or situation;

(viii) When the water system expects to return to compliance or resolve the situation;

(ix) The name, business address, and phone number of the water system owner, operator, or designee of the public water system as a source of additional information concerning the notice; and

(x) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under paragraph (d)(iii) of this section, where applicable.

(b) *What elements must be included in the public notice for public water systems operating under a variance or exemption?*

(i) If a public water system has been granted a variance or an exemption, the public notice must contain:

(A) An explanation of the reasons for the variance or exemption;

(B) The date on which the variance or exemption was issued;

(C) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

(D) A notice of any opportunity for public input in the review of the variance or exemption.

(ii) If a public water system violates the conditions of a variance or exemption, the public notice must contain the ten elements listed in paragraph (a) of this section.

(c) *How is the public notice to be presented?*

(i) Each public notice required by this section:

(A) Must be displayed in a conspicuous way when printed or posted;

(B) Must not contain overly technical language or very small print;

(C) Must not be formatted in a way that defeats the purpose of the notice;

(D) Must not contain language which nullifies the purpose of the notice.

(ii) Each public notice required by this section must comply with multilingual requirements, as follows:

(A) For public water systems serving a large proportion of non-English speaking consumers, as determined by the Department, the public notice must contain information in the appropriate language(s) regarding the importance of the notice or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the notice or to request assistance in the appropriate language.

(B) In cases where the Department has not determined what constitutes a large proportion of non-English speaking consumers, the public water system must include in the public notice the same information as in paragraph (c)(ii)(A) of this section, where appropriate to reach a large proportion of non-English speaking persons served by the water system.

(d) *What standard language must public water systems include in their public notice?* Public water systems are required to include the following standard language in their public notice:

(i) Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption. Public water systems must include in each public notice the health effects language specified in Appendix B to this regulation corresponding to each MCL, MRDL, and treatment technique violation listed in Appendix A to this regulation, and for each violation of a condition of a variance or exemption.

(ii) Standard language for monitoring and testing procedure violations. Public water systems must include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in Appendix A to this regulation:

"We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we "did not monitor or test" or "did not complete all monitoring or testing" for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time."

(iii) Standard language to encourage the distribution of the public notice to all persons served. Public water systems must include in their notice the following language (where applicable): Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

(6) Notice to New Billing Units or New Customers.

(a) *What is the requirement for community water systems?* Community water systems must give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(b) *What is the requirement for non-community water systems?* Non-community water systems must continuously post the public notice in conspicuous locations in order to inform new consumers of any continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation persists.

(7) Special Notice of the Availability of Unregulated Contaminant Monitoring Results.

(a) *When is the special notice to be given?* The owner or operator of a community water system or non-transient, non-community water system required to monitor under R.61-58.5.T must notify persons served by the system of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

(b) *What is the form and manner of the special notice?* The form and manner of the public notice must follow the requirements for a Tier 3 public notice prescribed in paragraphs (4)(c), (d)(i), and (d)(iii) of this section. The notice must also identify a person and provide the telephone number to contact for information on the monitoring results.

(8) Special Notice for Exceedance of the SMCL for Fluoride.

(a) *When is the special notice to be given?* Community water systems that exceed the fluoride secondary maximum contaminant level (SMCL) of 2 mg/L as specified in R.61-58.5.R (determined by the last single sample taken in accordance with R.61-58.5.C, but do not exceed the maximum contaminant level (MCL) of 4 mg/L for fluoride (as specified in R.61-58.5.B), must provide the public notice in paragraph (c)

of this section to persons served. Public notice must be provided as soon as practical but no later than twelve (12) months from the day the water system learns of the exceedance. A copy of the notice must also be sent to all new billing units and new customers at the time service begins and to the State public health officer. The public water system must repeat the notice at least annually for as long as the SMCL is exceeded. If the public notice is posted, the notice must remain in place for as long as the SMCL is exceeded, but in no case less than seven (7) days (even if the exceedance is eliminated). On a case-by-case basis, the Department may require an initial notice sooner than twelve (12) months and repeat notices more frequently than annually.

(b) *What is the form and manner of the special notice?* The form and manner of the public notice (including repeat notices) must follow the requirements for a Tier 3 public notice in paragraphs (4)(c) and (d)(i) and (d)(iii) of this section.

(c) *What mandatory language must be contained in the special notice?* The notice must contain the following language, including the language necessary to fill in the blanks:

"This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). The drinking water provided by your community water system [name] has a fluoride concentration of [insert value] mg/L.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under nine should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water.

Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency's drinking water standard) can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/L of fluoride, but we're required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/L because of this cosmetic dental problem.

For more information, please call [name of water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP."

(9) Special notice for Nitrate Exceedances Above MCL by Non-Community Water Systems (NCWS), Where Granted Permission by the Department under R.61-58.5.B(3).

(a) *When is the special notice to be given?* The owner or operator of a non-community water system granted permission by the Department under R.61-58.5.B(3) to exceed the nitrate MCL must provide notice to persons served according to the requirements for a Tier 1 notice under paragraphs (2)(a) and (b) of this section.

(b) *What is the form and manner of the special notice?* Non-community water systems granted permission by the Department to exceed the nitrate MCL under R.61-58.5.B(3) must provide continuous posting of the fact that nitrate levels exceed 10 mg/L and the potential health effects of exposure, according

to the requirements for Tier 1 notice delivery under paragraph (2)(c) of this section and the content requirements under paragraph (5) of this section.

(10) Notice by Department on Behalf of the Public Water System.

(a) *May the Department give the notice on behalf of the public water system?* The Department may give the notice required by this regulation on behalf of the owner and operator of the public water system if the Department complies with the requirements of this regulation.

(b) *What is the responsibility of the public water system when notice is given by the primacy agency?* The owner or operator of the public water system remains responsible for ensuring that the requirements of this regulation are met.

(11) Special notice for repeated failure to conduct monitoring of the source water for Cryptosporidium and for failure to determine bin classification or mean Cryptosporidium level

(a) Special notice for repeated failure to monitor.

The owner or operator of a community or non-community water system that is required to monitor source water under R.61-58.10.K(2) must notify persons served by the water system that monitoring has not been completed as specified no later than 30 days after the system has failed to collect any 3 months of monitoring as specified in R.61-58.10.K(2)(c). The notice must be repeated as specified in R.61-58.6.E(3)(b).

(b) Special notice for failure to determine bin classification or mean Cryptosporidium level.

The owner or operator of a community or non-community water system that is required to determine a bin classification under R.61-58.10.K(11), or to determine mean Cryptosporidium level under R.61-58.10.K(13), must notify persons served by the water system that the determination has not been made as required, no later than 30 days after the system has failed to report the determination as specified in R.61-58.10.K(11)(e) or R.61-58.10.K(13)(a), respectively. The notice must be repeated as specified in R.61-58.6.E(3)(b). The notice is not required if the system is complying with a Department- approved schedule to address the violation.

(c) Form and manner of the special notice.

The form and manner of the public notice must follow the requirements for a Tier 2 public notice prescribed in R.61-58.6.E(3)(c). The public notice must be presented as required in R.61-58.6.E(5)(c).

(d) Mandatory language that must be contained in the special notice.

The notice must contain the following language, including the language necessary to fill in the blanks.

(i) The special notice for repeated failure to conduct monitoring must contain the following language: “We are required to monitor the source of your drinking water for Cryptosporidium. Results of the monitoring are to be used to determine whether water treatment at the (treatment plant name) is sufficient to adequately remove Cryptosporidium from your drinking water. We are required to complete this monitoring and make this determination by (required bin determination date). We (did not monitor or test) or (did not complete all monitoring or testing) on schedule and, therefore, we may not be able to determine by the required date what treatment modifications, if any, must be made to ensure adequate Cryptosporidium removal. Missing this deadline may, in turn, jeopardize our ability to have the required



treatment modifications, if any, completed by the deadline required, (date). For more information, please call (name of water system contact) of (name of water system) at (phone number)”.

(ii) The special notice for failure to determine bin classification or mean *Cryptosporidium* level must contain the following language: “We are required to monitor the source of your drinking water for *Cryptosporidium* in order to determine by (date) whether water treatment at the (treatment plant name) is sufficient to adequately remove *Cryptosporidium* from your drinking water. We have not made this determination by the required date. Our failure to do this may jeopardize our ability to have the required treatment modifications, if any, completed by the required deadline of (date). For more information, please call (name of water system contact) of (name of water system) at (phone number)”.

(3) Each special notice must also include a description of what the system is doing to correct the violation and when the system expects to return to compliance or resolve the situation.

## APPENDIX A. VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE

### APPENDIX A TO 61-58.6: VIOLATIONS AND OTHER SITUATIONS REQUIRING PUBLIC NOTICE<sup>1</sup>

CONTAMINANT	MCL/MRDL/TT/VIOLATIONS <sup>2</sup>		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED	CITATION	TIER OF PUBLIC NOTICE REQUIRED	CITATION

#### I. Violations of the State Primary Drinking Water Regulations (SPDWR):<sup>3</sup>

##### A. Microbiological Contaminants

1.a Total coliform <sup>†</sup>	2	61-58.5.F(1)	3	61-58.5.G(1) – (5)
1.b Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations) <sup>‡</sup>	2	61-58.17.K(2)(a)	3	61-58.17.K(3)(a)  61-58.17.K(4)(a)
1.c Seasonal system failure to follow Department-approved start-up plan prior to serving water to the public or failure to provide certification to the Department. <sup>‡</sup>	2	61-58.17.K(2)(b)	3	61-58.17.K(4)(c)
2.a Fecal coliform/ <i>E. coli</i> <sup>†</sup>	1	61-58.5.F(2)	4 <sup>1</sup> , 3	61-58.5.G(5)
2.b <i>E. coli</i> (MCL, monitoring, and reporting violations). <sup>‡</sup>	1	61-58.17.K(1)	3	61-58.17.K(3)(b)  61-58.17.K(4)(a) 61-58.17.K(4)(b)
2.c <i>E. coli</i> (TT violations resulting from failure to perform level 2 Assessments or corrective action) <sup>‡</sup>	2	61-58.17.K(2)(a)		
3. Turbidity MCL	2	61-58.10.E, H, & I	3	61-58.10.F
4. Turbidity MCL (average of 2 days samples great than 5 NTU)	<sup>5</sup> 2,1	61-58.10.C, E, H & I	3	61-58.10.F

CONTAMINANT	MCL/MRDL/TT/VIOLATIONS <sup>2</sup>		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED CITATION		TIER OF PUBLIC NOTICE REQUIRED CITATION	
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	<sup>6</sup> 2, 1	61-58.10.C(i)(b) 61-58.10.C.(3)(b) 61-58.10.F(2)(b), 61-58.10.E(1)(b), 61-58.10.E(2)(b), 61-58.10.E(3)(b), 61-58.10.E(4), 61-58.10.H(4)(a)( ii), 61-58.10.H(4)(b), 61-58.10.I(6)(b) 61-58.10.B - E	3	61-58.10.F 61-58.10(F)(3) 61-58.10.H 61-58.10(I)(7)(a) (i)-(iii) & (b)
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT).	2	61-58.10.B - E		61-58.10
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	<sup>7</sup> 2	61-58.10.B - E 61-58.10.I(1)-(7)	3	61-58.10.H(3), (5) 61-58.10.I(4) & (5) 61-58.10.I(7)
8. Filter Backwash Recycling Rule violations	2	61-58.10.J(3)	3	61-58.10.J(2) & (4)
9. Long Term 1 Enhanced Surface Water Treatment Rule Violations.	2	61-58.10.I(1)-(7)	3	61-58.10.I(4) & (5)
10. LT2ESWTR violations	2	61-58.10.K(11)-(21)	<sup>22</sup> 2,3	61-58.10.I(7) 61-58.10.K(2) - (6) & 61-58.10.K(9) - (10) 61-58.16.E(8)
11. Ground Water Rule Violations	2	61-58.16.G	3	61-58.16.F(4)

#### B. Inorganic Chemicals (IOCs)

1. Antimony	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
2. Arsenic	2	61-58.5.B(2)	3	<sup>9</sup> 61-58.5.C(7)
3. Asbestos (fibers>10µm)	2	61-58.5.B(2)	3	61-58.5.C(7), (8)
4. Barium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
5. Beryllium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
6. Cadmium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
7. Chromium (total)	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
8. Cyanide	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
9. Fluoride	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
10. Mercury (inorganic)	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
11. Nitrate	1	61-58.5.B(2)	<sup>10</sup> 1,3	61-58.5.C(7), (10) 61-58.5.C(12)
12. Nitrite	1	61-58.5.B(2)	<sup>10</sup> 1,3	61-58.5.C(7), (10) 61-58.5.C(12)
13. Total Nitrate and Nitrite	1	61-58.5.B(2)	3	61-58.5.C(7)
14. Selenium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)
15. Thallium	2	61-58.5.B(2)	3	61-58.5.C(7), (9)

CONTAMINANT	MCL/MRDL/TT/VIOLATIONS <sup>2</sup>		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED CITATION		TIER OF PUBLIC NOTICE REQUIRED CITATION	

C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)

1. Lead and Copper Rule (TT)	2	61-58.11.B	3	61-58.11.H - L
	1	(except 61-58.11.B(3)),		
2. Exceedance of the action Level for Lead		61-58.11.F, 61-58.11.G(1) – (3) and (8), and 61-58.11.O		
		61-58.11.B(3)		

D. Synthetic Organic Chemicals (SOCs)

1. 2,4-D	2	61-58.5.D	3	61-58.E(7)
2. 2,4,5-TP (Silvex)	2	61-58.5.D	3	61-58.5.E(7)
3. Alachlor	2	61-58.5.D	3	61-58.5.E(7)
4. Atrazine	2	61-58.5.D	3	61-58.5.E(7)
5. Benzo(a)pyrene (PAHs)	2	61-58.5.D	3	61-58.5.E(7)
6. Carbofuran	2	61-58.5.D	3	61-58.5.E(7)
7. Chlordane	2	61-58.5.D	3	61-58.5.E(7)
8. Dalapon	2	61-58.5.D	3	61-58.5.E(7)
9. Di (2-ethylhexyl) adipate	2	61-58.5.D	3	61-58.5.E(7)
10. Di (2-ethylhexyl) phthalate	2	61-58.5.D	3	61-58.5.E(7)
11. Dibromochloropropane	2	61-58.5.D	3	61-58.5.E(7)
12. Dinoseb	2	61-58.5.D	3	61-58.5.E(7)
13. Dioxin (2,3,7,8-TCDD)	2	61-58.5.D	3	61-58.5.E(7)
14. Diquat	2	61-58.5.D	3	61-58.5.E(7)
15. Endothall	2	61-58.5.D	3	61-58.5.E(7)
16. Endrin	2	61-58.5.D	3	61-58.5.E(7)
17. Ethylene dibromide	2	61-58.5.D	3	61-58.5.E(7)
18. Glyphosate	2	61-58.5.D	3	61-58.5.E(7)
19. Heptachlor	2	61-58.5.D	3	61-58.5.E(7)
20. Heptachlor epoxide	2	61-58.5.D	3	61-58.5.E(7)
21. Hexachlorobenzene	2	61-58.5.D	3	61-58.5.E(7)
22. Hexachlorocyclo-pentadiene	2	61-58.5.D	3	61-58.5.E(7)
23. Lindane	2	61-58.5.D	3	61-58.5.E(7)
24. Methoxychlor	2	61-58.5.D	3	61-58.5.E(7)
25. Oxamyl (Vydate)	2	61-58.5.D	3	61-58.5.E(7)
26. Pentachlorophenol	2	61-58.5.D	3	61-58.5.E(7)
27. Picloram	2	61-58.5.D	3	61-58.5.E(7)
28. Polychlorinated biphenyls (PCBs)	2	61-58.5.D	3	61-58.5.E(7)
29. Simazine	2	61-58.5.D	3	61-58.5.E(7)
30. Toxaphene	2	61-58.5.D	3	61-58.5.E(7)

E. Volatile Organic Chemicals (VOCs)

1. Benzene	2	61-58.5.N	3	61-58.5.O
2. Carbon tetrachloride	2	61-58.5.N	3	61-58.5.O
3. Chlorobenzene (monochlorobenzene)	2	61-58.5.N	3	61-58.5.O

CONTAMINANT	MCL/MRDL/TT/VIOLATIONS <sup>2</sup>		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED CITATION		TIER OF PUBLIC NOTICE REQUIRED CITATION	
4. o-Dichlorobenzene	2	61-58.5.N	3	61-58.5.O
5. p-Dichlorobenzene	2	61-58.5.N	3	61-58.5.O
6. 1,2-Dichloroethane	2	61-58.5.N	3	61-58.5.O
7. 1,1-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
8. cis-1,2-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
9. trans-1,2-Dichloroethylene	2	61-58.5.N	3	61-58.5.O
10. Dichloromethane	2	61-58.5.N	3	61-58.5.O
11. 1,2-Dichloropropane	2	61-58.5.N	3	61-58.5.O
12. Ethylbenzene	2	61-58.5.N	3	61-58.5.O
13. Styrene	2	61-58.5.N	3	61-58.5.O
14. Tetrachloroethylene	2	61-58.5.N	3	61-58.5.O
15. Toluene	2	61-58.5.N	3	61-58.5.O
16. 1,2,4-Trichlorobenzene	2	61-58.5.N	3	61-58.5.O
17. 1,1,1-Trichloroethane	2	61-58.5.N	3	61-58.5.O
18. 1,1,2-Trichloroethane	2	61-58.5.N	3	61-58.5.O
19. Trichloroethylene	2	61-58.5.N	3	61-58.5.O
20. Vinyl chloride	2	61-58.5.N	3	61-58.5.O
21. Xylenes (total)	2	61-58.5.N	3	61-58.5.O

#### F. Radioactive Contaminants

1. Beta/photon emitters	2	61-58.5.H(4)	3	61-58.5.K(1), 61-58.5.I.(3)
2. Alpha emitters	2	61-58.5.H(3)	3	61-58.5.K(1), 61-58.5.I(2)
3. Combined radium (226 & 228)	2	61-58.5.H(2)	3	61-58.5.K(1), 61-58.5.I(2)
4. Uranium	<sup>11</sup> 2	61-58.5.H(5)	<sup>12</sup> 3	61-58.5.K(1), 61-58.5.I(2)

G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).<sup>13</sup>

1. Total trihalomethanes (TTHMs)	2	<sup>14</sup> 61-58.5.L, 61-58.5.P	3	<sup>14</sup> 61-58.5.M 61-58.13.C(1), (2) 61-58.14, 61-58.15
2. Haloacetic Acids (HAA5)	2	61-58.5.P	3	61-58.13.C(1), (2) 61-58.14, 61-58.15
3. Bromate	2	61-58.5.P	3	61-58.13.C(1), (2)
4. Chlorite	2	61-58.5.P	3	61-58.13.C(1), (2)
5. Chlorine (MRDL)	2	61-58.5.Q	3	61-58.13.C(1), (3)
6. Chloramine (MRDL)	2	61-58.5.Q	3	61-58.13.C(1), (3)
7. Chlorine dioxide (MRDL) where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	61-58.5.Q, 61-58.13.D	<sup>215</sup> , 3	61-58.13.C(1), (3), 61-58.13.C(3)(b)
8. Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	<sup>16</sup> 1	61-58.5.Q, 61-58.13.D(3)	1	61-58.13.C(1), (3), 61-58.13.D(3)(b)
9. Control of DBP precursors—TOC (TT)	2	61-58.13.F(1), (2)	3	61-58.13.C(1), (4)

CONTAMINANT	MCL/MRD/TT/VIOLATIONS <sup>2</sup>		MONITORING & TESTING PROCEDURE VIOLATIONS	
	TIER OF PUBLIC NOTICE REQUIRED CITATION		TIER OF PUBLIC NOTICE REQUIRED CITATION	
10. Bench marking and disinfection profiling.	N/A	N/A	3	61-58.10.G(3) 61-58.10.H(3) 61-58.10.I(4) & (5) 61-58.13.C(6)
11. Development of monitoring plan	N/A	N/A	3	
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	61-58.5.AA	N/A	N/A
2. Epichlorohydrin (TT)	2	61-58.5.AA	N/A	N/A
II. Unregulated Contaminant Monitoring: <sup>17</sup>				
A. Unregulated contaminants	N/A	N/A	3	61-58.5.T
B. Nickel	N/A	N/A	3	61-58.5.C(9), (17)
III. Public Notification for Variances and Exemptions:				
A. Operation under a variance or exemption	3	1861-58.9	N/A	N/A
B. Violation of conditions of a variance or exemption	2	1961-58.9	N/A	N/A
IV. Other Situations Requiring Public Notification:				
A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	61-58.5.R	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by Department	1	61-58.5.B(3)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	61-58.5.T	N/A	N/A
D. Waterborne disease outbreak	1	61-58.B(156) 61-58.10.C(3)(b)(ii)	N/A	N/A
E. Other waterborne emergency <sup>20</sup>	1	N/A	N/A	N/A
F. Source water sample positive for Ground Water Rule fecal indicators: E. coli, enterococci, or coliphage	1	61-58.16.E(7)	N/A	N/A
G. Other situations as determined by the Department	<sup>21</sup> 1, 2, 3	N/A	N/A	N/A

Appendix A to R.61-58.6 - Endnotes

† Until March 31, 2016

‡ Beginning April 1, 2016

<sup>1</sup> Violations and other situations not listed in this table (e.g., failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the Department. The Department may, at its option, also require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under R.61-58.6.E(2)(a) and (3)(a).

<sup>2</sup> MCL—Maximum contaminant level, MRDL—Maximum residual disinfectant level, TT—Treatment technique

<sup>3</sup> The term Violations of State Primary Drinking Water Regulations (SPDWR) is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.

<sup>4</sup> Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are Tier 3.

<sup>5</sup> Systems that violate the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.

<sup>6</sup> Systems with treatment technique violations involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR) Interim Enhanced Surface Water Treatment Rule (IESWTR), or the Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) are required to consult with the Department within 24 hours after learning of the violation. Based on this consultation, the Department may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the Department in the 24-hour period, the violation is automatically elevated to Tier 1.

<sup>7</sup> Most of the requirements of the Interim Enhanced Surface Water Treatment Rule, R.61-58.10.B - C become effective January 1, 2002 for surface water systems and ground water systems under the direct influence of surface water serving at least 10,000 persons. However, R.61-58.10.H(3) has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule remains in effect for systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supersede the SWTR.

<sup>8</sup> The arsenic MCL citations are effective January 23, 2006. Until then the citations are R.61-58.5(B)(2).

<sup>9</sup> The arsenic Tier 3 violations MCL citations are effective January 23, 2006. Until then, the citations are R.61-58.C(7).

<sup>10</sup> Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are Tier 3.

<sup>11</sup> The uranium MCL, Tier 2 violation citations are effective December 8, 2003 for all community water systems.

<sup>12</sup> The uranium Tier 3 violation citations are effective December 8, 2000 for all community water systems.

<sup>13</sup> Community and non-transient non-community surface water systems and ground water systems under the direct influence of surface water serving 10,000 must comply with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements beginning January 1, 2002. All other community and non-transient non-community systems must meet the MCLs and MRDLs beginning January 1, 2004. Transient non-community surface water systems and ground water systems under the direct influence of surface water serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. Transient non-community surface water systems and ground water systems under the direct influence of surface water serving fewer than 10,000 persons and using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

<sup>14</sup> R.61-58.5.L, and R.61-58.13.C(1) - (2) apply until R.61-58.14 and R.61-58.15 take effect under the schedule in R.61-58.14.

<sup>15</sup> Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.

<sup>16</sup> If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.

<sup>17</sup> Some water systems must monitor for certain unregulated contaminants listed in R.61-58.5.T

<sup>18</sup> This citation refers to the requirements of R.61-58.9 that “a schedule prescribed ...for a public water system granted a variance [or exemption] shall require compliance by the system ...”

<sup>19</sup> In addition to R.61-58.9 specifies the items and schedule milestones that must be included in a variance for small systems.

<sup>20</sup> Other waterborne emergencies require a Tier 1 public notice under R.61-58.6.E(2)(a) for situations that do not meet the definition of a waterborne disease outbreak given in R.61-58.B(174) but that still have the potential to have serious adverse effects on health as a result of short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or distribution system, chemical spills, or unexpected loading of possible pathogens into the source water.

<sup>21</sup> The Department may place other situations in any tier they believe appropriate, based on threat to public health.

<sup>22</sup> Failure to collect three or more samples for Cryptosporidium analysis is a Tier 2 violation requiring special notice as specified in R.61-58.6.E(11). All other monitoring and testing procedure violations are Tier 3.

## APPENDIX B. STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

### APPENDIX B TO R.61-58.6: STANDARD HEALTH EFFECTS LANGUAGE FOR PUBLIC NOTIFICATION

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
State Primary Drinking Water Regulations (SPDWR):			
A. Microbiological Contaminants:			
1a. Total coliform†	Zero	See footnote <sup>3</sup>	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
1b. Fecal coliform/E. coli‡	Zero	Zero	Fecal coliforms and E. coli are bacteria whose presence

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
1c. Fecal Indicators (Ground Water Rule)			Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
i. E. coli	Zero	TT	
ii. enterococci	None	TT	
iii. coliphage	None	TT	
1d. Ground Water Rule TT violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
1e. Revised Total Coliform Rule (R.61-58.17) Coliform Assessment and/or Corrective Action Violations‡	N/A	TT	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for



Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			<p>potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.]</p> <p>We failed to conduct the required assessment.</p> <p>We failed to correct all identified sanitary defects that were found during the assessment(s).</p>
<p>1f. Revised Total Coliform Rule (R.61-58.17) E. coli Assessment and/or Corrective Action Violations‡</p>	<p>N/A</p>		<p>E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these waters can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. [THE SYSTEM MUST USE THE FOLLOWING APPLICABLE SENTENCES.]</p> <p>We failed to conduct the required assessment.</p>

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			We failed to correct all identified sanitary defects that were found during the assessment that we conducted.
1g. E. coli‡	Zero	In compliance unless one of the following conditions occurs: (1) The system has an E. coli-positive repeat sample following a total coliform-positive routine sample. (2) The system has a total coliform-positive repeat sample following an E. coli-positive routine sample. (3) The system fails to take all required repeat samples following an E. coli-positive routine sample. (4) The system fails to test for E. coli when any repeat sample tests positive for total coliform.	E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.
1h. Revised Total Coliform Rule (R.61-58.17) Seasonal System TT Violations‡	N/A	TT	When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at R.61-58.6.E(5)(d)(ii) must be used. When this violation includes failure to complete other actions, the appropriate elements found in

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			R.61-58.6.E(5)(a) to describe the violation must be used.
2a. Turbidity (MCL) <sup>4</sup>	None	1 NTU <sup>5</sup> /5 NTU	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2b. Turbidity (SWTR TT) <sup>6</sup>	None	TT <sup>7</sup>	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2c. Turbidity (IESWTR TT) <sup>8</sup>	None	TT	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) and Filter Backwash Recycling Rule (FBRR) violations:			
3. <i>Giardia lamblia</i>	Zero	TT <sup>10</sup>	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
4. Viruses (SWTR/IESWTR/LT1ESWTR).			
5. Heterotrophic plate count (HPC) bacteria <sup>9</sup> (SWTR/IESWTR/LT1ESWTR).			
6. <i>Legionella</i> (SWTR/IESWTR/LT1ESWTR).			
7. <i>Cryptosporidium</i> (SWTR/IESWTR/LT1ESWTR).			
C. Inorganic Chemicals (IOCs):			
8. Antimony	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
9. Arsenic <sup>11</sup>	Zero	0.010	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
10. Asbestos (10 µm)	7 MFL <sup>12</sup>	7 MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
<b>D. Lead and Copper Rule:</b>			
23. Lead	Zero	TT <sup>13</sup>	Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.
24. Copper	1.3	TT <sup>14</sup>	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
E. Synthetic Organic Chemicals (SOCs):			
25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with kidneys, liver, or adrenal glands.
26. 2,4,5-TP (Silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs)	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
33. Di (2-ethylhexyl) adipate	0.4	0.4	Some people who drink water containing di(2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.
33. Di (2-ethylhexyl) phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.



Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
35. Dibromochloropropane (DBCP)	Zero	0.0002	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
37. Dioxin (2,3,7,8-TCDD)	Zero	$3 \times 10^{-8}$	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
46. Hexachlorocyclo pentadiene	0.05	0.05	Some people who drink water containing Hexachlorocyclo-pentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
52. Polychlorinated biphenyls (PCBs)	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCs):			
55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
56. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
63. trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
64. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
66. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
67. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
68. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
70. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
71. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
72. 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
73. Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
74. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
75. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
<b>G. Radioactive Contaminants:</b>			
76. Beta/photon emitters	Zero	4 mrem/yr <sup>15</sup>	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			increased risk of getting cancer.
77. Alpha emitters	Zero	15 pCi/L <sup>16</sup>	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Combined radium (226 & 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
79. Uranium17	Zero	30µg/L	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
<p>H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs):<sup>18</sup></p>			
80. Total trihalomethanes (TTHMs)	N/A	0.08017 <sup>19,20</sup>	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
81. Haloacetic Acids (HAA)	N/A	0.060 <sup>21</sup>	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
82. Bromate	Zero	0.010	Some people who drink water containing bromate in excess of the MCL over many years

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			may have an increased risk of getting cancer.
83. Chlorite	0.08	1.0	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
84. Chlorine	4 (MRDLG) <sup>22</sup>	4.0 (MRDL) <sup>23</sup>	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
85. Chloramines	4 (MRDLG)	4.0 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
86a. Chlorine dioxide, where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. <i>Add for public notification only: The chlorine dioxide</i>



Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			violations reported today are the result of exceedances at the treatment facility only not within the distribution system which delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.
86b. Chlorine dioxide, where one or more water distribution systems are above the MRDL	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. <i>Add for public notification only:</i> The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.
87. Control of DBP precursors (DBP)	None	TT	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection by-products. These byproducts include trihalomethanes (THMs) and

Contaminant	MCLG <sup>1</sup> mg/L	MCL <sup>2</sup> mg/L	Standard health effects language for public notification
			haloacetic acids (HAAs). Drinking water containing these by-products in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
I. Other Treatment Techniques:			
88. Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
89. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Appendix B to R.61-58.6 - endnotes

<sup>†</sup>Until March 31, 2016

<sup>‡</sup>Beginning April 1, 2016

<sup>1</sup>MCLG - Maximum contaminant level goal

<sup>2</sup>MCL - Maximum contaminant level

<sup>3</sup>For water systems analyzing at least 40 samples per month, no more than 5.0 percent of the monthly samples may be positive for total coliforms. For systems analyzing fewer than 40 samples per month, no more than one sample per month may be positive for total coliforms.

<sup>4</sup>There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule, the 1998 Interim Enhanced Surface Water Treatment Rule, and the 2002 Long Term 1 Enhanced Surface Water Treatment Rule. The MCL for the monthly turbidity average is 1 NTU; the MCL for the 2-day average is 5 NTU for systems that are required to filter but have not yet installed filtration.

<sup>5</sup>NTU - Nephelometric turbidity unit

<sup>6</sup>There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR), and the 2001 Long Term 1 Enhanced Surface Water Treatment Rule. Systems subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must not exceed 0.5 NTU in systems using conventional or

direct filtration and must not exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Department.

<sup>7</sup>TT - Treatment technique

<sup>8</sup>There are various regulations that set turbidity standards for different types of systems, including the 1989 Surface Water Treatment Rule (SWTR), the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR), and the 2002 Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR). For systems subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, after January 1, 2002, the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. Systems subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Department. For systems subject to the LT1ESWTR (systems serving fewer than 10,000 people, using surface water or ground water under the direct influence of surface water) that use conventional filtration or direct filtration, after January 1, 2005 the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. Systems subject to the LT1ESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the Department.

<sup>9</sup>The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful. HPC is simply an alternative method of determining disinfectant residual levels. The number of such bacteria is an indicator of whether there is enough disinfectant in the distribution system.

<sup>10</sup>SWTR, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

<sup>11</sup>These arsenic values are effective January 23, 2006. Until then, the MCL is 0.05 mg/L and there is no MCLG.

<sup>12</sup>Millions fibers per liter.

<sup>13</sup>Action Level = 0.015 mg/L

<sup>14</sup>Action Level = 1.3 mg/L

<sup>15</sup>Millirems per year

<sup>16</sup>Picocuries per liter

<sup>17</sup>The uranium MCL is effective December 8, 2003 for all community water systems.

<sup>18</sup>Surface water systems and ground water systems under the direct influence of surface water are regulated under R.61-58.10. Community and non-transient non-community systems serving greater than, or equal to 10,000 must comply with R.61-58.13 DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient non-community systems must comply with R.61-58.13 DBP MCLs and MRDLs beginning January 1, 2004. Transient non-community surface water systems and ground water systems under the direct influence of surface water serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning on January 1, 2004.

<sup>19</sup>Community and non-transient non-community systems that must comply with R.61-58.14 TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance calculated as a locational running annual average) on the schedule in R.61-58.15.

<sup>20</sup>The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

<sup>21</sup>The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

<sup>22</sup>MRDLG—Maximum residual disinfectant level goal.

<sup>23</sup>MRDL—Maximum residual disinfectant level.

## **APPENDIX C. LIST OF ACRONYMS USED IN PUBLIC NOTIFICATION REGULATION**

CCR Consumer Confidence Report

CWS Community Water System

DBP Disinfection Byproduct

EPA Environmental Protection Agency

FBR Filter Backwash Recycle Rule

GWR Ground Water Rule

HPC Heterotrophic Plate Count

IESWTR Interim Enhanced Surface Water Treatment Rule

IOC Inorganic Chemical

LCR Lead and Copper Rule

LT1ESWTR Long Term 1 Enhanced Surface Water Treatment Rule

MCL Maximum Contaminant Level

MCLG Maximum Contaminant Level Goal

MRDL Maximum Residual Disinfectant Level

MRDLG Maximum Residual Disinfectant Level Goal

NCWS Non-Community Water System

NPDWR National Primary Drinking Water Regulation

NTNCWS Non-Transient Non-Community Water System

NTU Nephelometric Turbidity Unit

OGWDW Office of Ground Water and Drinking Water

OW Office of Water

PN Public Notification

PWS Public Water System

SDWA Safe Drinking Water Act

SMCL Secondary Maximum Contaminant Level

SOC Synthetic Organic Chemical

SPDWR State Primary Drinking Water Regulations

SWTR Surface Water Treatment Rule

TCR Total Coliform Rule

TT Treatment Technique

TWS Transient Non-Community Water System

VOC Volatile Organic Chemical