

CHAPTER 42  
PUBLIC NOTICE, PUBLIC EDUCATION, CONSUMER CONFIDENCE REPORTS, REPORTING, AND  
RECORD MAINTENANCE

**567—42.1(455B) Public notice (PN).**

**42.1(1) Applicability.** Each owner or operator of a public water supply system (PWS) must give notice for all violations of public drinking water rules and for other situations, as listed in this subrule. The term “violations” includes violations of, or failure to comply with, the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, and testing procedures in **567—Chapters 40 through 43**. The term “other situations” includes all situations determined by the department to require a PN, including the violations and situations listed in **42.1(2), (3), and (4)**, and any other situation where the department determines PN is needed. PN is not required for ammonia monitoring conducted pursuant to **567—subrule 41.11(2)**.

*a. PN tiers.* PN requirements are divided into three tiers, to account for the seriousness of a violation or situation and of any potential adverse health effects that may be involved. The PN requirements for each violation or situation are determined by the tier to which it is assigned.

(1) Tier 1 PN is required for all drinking water violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

(2) Tier 2 PN is required for all other drinking water violations and situations with potential to have serious adverse effects on human health.

(3) Tier 3 PN is required for all other drinking water violations and situations not included in Tier 1 or Tier 2.

*b. General PN requirements.* Each PWS must provide PN to persons served by the system, in accordance with this rule. A copy of the notice must also be sent to the department, in accordance with **42.4(1) “c.”**

(1) Consecutive systems. PWSs that sell or otherwise provide drinking water to other PWS (i.e., to consecutive systems) are required to provide PN to the owner or operator of the consecutive system. The consecutive system is responsible for providing PN to the persons it serves, and must meet the appropriate Tier requirements for the violation.

(2) Physically or hydraulically isolated distribution systems. If a PWS 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 PN only to persons served by that portion of the system which is out of compliance. Department permission to limit distribution of the notice must be granted in writing.

**42.1(2) Tier 1 PN requirements.**

*a. Tier 1 PN - when required.* The following violations or situations require Tier 1 PN:

(1) Violation of the *E. coli* MCL, as specified in **567—paragraph 41.2(1) “a.”**

(2) Violation of either the nitrate or nitrite MCL, as defined in **567—subparagraph 41.3(1) “b”(1)**.

(3) Failure by the system to collect a confirmation sample within 24 hours of the system’s receipt of the first sample result showing a nitrate or nitrite MCL exceedance, when directed by the department, as specified in **567—paragraph 41.3(1) “c”(7) “2.”**

(4) Exceedance of the nitrate MCL by NCWSs, where permitted to exceed the MCL by the department under **567—paragraph 41.3(1) “a,”** as required under **42.1(7) “c.”**

(5) Violation of the chlorine dioxide MRDL when one or more samples, taken in the distribution system on the day following an MRDL exceedance in the sample collected at the entrance to the distribution system, exceeds the MRDL, as defined in **567—paragraph 43.6(1) “b.”**

(6) Failure by the system to collect the required chlorine dioxide samples in the distribution system on the day following an MRDL exceedance in the sample collected at the entrance to the distribution system.

(7) Violation of the TT requirement by a surface water (SW) or influenced groundwater (IGW) PWS resulting from a single exceedance of the maximum allowable turbidity limit, as specified in **567—Chapter 43**, where the department determines, after consultation with the system, that a Tier 1 PN is required, or where the department consultation does not take place within 24 hours after the system learns of the violation.

(8) Occurrence of a waterborne disease outbreak 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 contamination.

(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 rules or on a case-by-case basis.

(10) Detection of *E. coli*, enterococci, or coliphage in source water samples, as specified in 567—paragraphs 41.7(3) “a” and “b.”

*b. Tier 1 PN - timing.* PWSs must:

(1) Provide a PN as soon as practical but no later than 24 hours after learning of the violation;

(2) Initiate consultation with the department as soon as practical, but no later than 24 hours after learning of the violation or situation, to determine additional PN requirements. For consultation after normal business hours, use the department’s Environmental Emergency Reporting Hotline, (515)725-8694; and

(3) Comply with any additional PN requirements established as a result of department consultation. Additional requirements may include the timing, form, manner, frequency, and content of repeat PNs (if any), and other actions designed to reach all persons served.

(4) All NTNCs must notify the parent or legal guardian of each child under 18 years of age and any nursing home resident of the Tier 1 violation as soon as possible and within 72 hours, including the PN content under 42.1(5).

*c. Tier 1 PN - form and manner.* PWSs must provide the notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used must fit the specific situation, and must be designed to reach residential, transient, and nontransient users of the system. In order to reach all persons served, systems are to use one or more of the following forms of delivery. The department may require multiple forms of delivery in a specific situation.

(1) Appropriate broadcast media, such as radio or television;

(2) Posting of the PN in conspicuous locations throughout the area served;

(3) Hand delivery of the PN to persons served; or

(4) Another delivery method approved in writing by the department.

**42.1(3) Tier 2 PN requirements.**

*a. Tier 2 PN - when required.* The following violations or situations require Tier 2 PN:

(1) All violations of the MCL, MRDL, and TT requirements, except where a Tier 1 PN is required under 42.1(2);

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

(3) Failure to comply with the requirements of any compliance schedule in an operation permit, administrative order, or court order pursuant to 567—subrule 43.2(5);

(4) Failure to comply with an HA as determined by the department; and

(5) Failure to take corrective action or failure to maintain at least 4-log virus treatment (using inactivation, removal, or a department-approved combination of 4-log virus inactivation and removal) before or at the first customer under 567—paragraph 41.7(4) “a.”

*b. Tier 2 PN - timing.* PWSs must:

(1) Provide the initial PN as soon as practical, but no later than 30 days after learning of a violation. If the PN is posted, it must remain in place for as long as the violation or situation persists, but in no case for less than 7 days, even if the violation or situation is resolved. The department may allow additional time for the initial notice of up to three months from the date the system learns of the violation; however, such an extension must be made in writing on a case-by-case basis.

(2) Repeat the PN every three months as long as the violation or situation persists, unless the department determines that circumstances warrant a different repeat frequency. A determination that a repeat PN frequency of longer than every three months is allowed must be made in writing on a case-by-case basis. The repeat PN frequency may not be less than once per year. Repeat PNs for an *E. coli* MCL violation, a TT violation under

567—paragraphs 41.2(1)“a” or “l,” or a turbidity TT violation under rules 567—43.9(455B) or 567—43.10(455B) must be made every three months or more frequently.

(3) A PWS using SW or IGW with a TT violation resulting from a single exceedance of the maximum allowable turbidity limit pursuant to rules 567—43.9(455B) or 567—43.10(455B) must consult with the department as soon as practical, but no later than 24 hours after learning of the violation, to determine whether a Tier 1 or Tier 2 PN is required to protect public health. For consultation after normal business hours, use the department’s Environmental Emergency Reporting Hotline, (515)725-8694. If the consultation does not occur within the 24-hour period, the PWS must distribute a Tier 1 PN within the next 24 hours, or no later than 48 hours after learning of the violation, following the requirements of 42.1(2)“b” and “c.”

*c. Tier 2 PN - form and manner.* PWSs must provide the initial PN and any repeat PNs in a form and manner that is reasonably calculated to reach persons served in the required time period. The PN form and manner may vary based on the specific situation and type of PWS, but the PN must meet the requirements of this paragraph, unless directed otherwise in writing by the department.

(1) CWSs must provide PN by the following methods:

1. Mail or other direct delivery to each customer receiving a bill and to other service connections receiving water from the PWS; and

2. Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by mail or direct delivery. Such persons may include those who do not pay water bills or do not have service connection addresses, such as renters, students, nursing home residents, or prison inmates. Other methods may include:

- Publication in a local newspaper;
- Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers;
- Posting in public places served by the system or on the internet; or
- Delivery to community organizations.

(2) NCWS (TNC or NTNC) must provide PN by the following methods:

1. Posting the PN 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

2. Any other method reasonably calculated to reach other persons served who would not normally be reached by posting, mail, or direct delivery. Such persons may include those who may not see a posted PN because it is not in a location they routinely visit. Other methods may include:

- Publication in a local newspaper or newsletter distribution to customers;
- Use of email to notify employees or students; or
- Delivery of multiple copies in central locations, such as community centers.

3. In addition to the previous requirements, NTNCs that serve children under 18 years of age (such as child care facilities, schools, and hospitals) or nursing home residents (including elder care facilities), must provide the PN in writing to the parent or legal guardian of each person within the department-specified time period. The PN content must meet the requirements of 42.1(5).

**42.1(4) Tier 3 PN requirements.**

*a. Tier 3 PN - when required.* The following violations or situations require Tier 3 PN:

(1) Monitoring violations or a failure to comply with a testing procedure, as required by 567—Chapters 41, 42, and 43, except where a Tier 1 PN is required under this rule, or where the department determines that a Tier 2 PN is required;

(2) Availability of unregulated contaminant monitoring results, as required of certain PWSs by 40 CFR § 141.40, in accordance with 42.1(7)“a”;

(3) Exceedance of the fluoride level of 2.0 mg/L and not exceeding the MCL of 4.0 mg/L, in accordance with 42.1(7)“b”;

(4) Failure to report data or analytical results required under 567—Chapters 41, 42, and 43 to the department;

(5) Failure to meet the requirements of this chapter for PN, PE, or the development and distribution of the Consumer Confidence Report (CCR);

(6) Failure to retain a certified operator in accordance with 567—subrule 43.1(5), where the department determines that PN is required;

(7) Failure to maintain records required under 567—Chapters 41, 42, and 43; and

(8) Any other situation where the department determines PN is needed.

*b. Tier 3 PN - timing.*

(1) Initial PN.

1. For violations or situations listed in 42.1(4)“a”(1), (4), or (5), PWSs must provide the initial PN within 12 months after learning of the violation or situation. If the violation pertains to a contaminant that could have acute health effects as determined by the department, such as coliform bacteria, nitrate, nitrite, or turbidity, the initial notice must be provided within three months. If the PN is posted, it must remain in place for as long as the violation or other situation persists, but in no case less than seven days, even if the violation or situation is resolved.

2. For availability of unregulated contaminant monitoring results pursuant to 42.1(4)“a”(2), the system must provide the initial PN within 12 months of receiving the results.

3. For 42.1(4)“a”(3) or, (6), or (7), the initial PN timing is at the department’s discretion, but the notice must be made within 12 months of the violation or situation.

(2) Repeat PN.

1. For violations or situations listed in 42.1(4)“a”(1), (3), (4), or (5), PWSs must repeat the PN every 12 months in which the violation or situation persists. If the violation pertains to a contaminant that could have acute health effects, such as coliform bacteria, nitrate, nitrite, or turbidity, the system must repeat the PN every three months in which the violation or situation persists. If the PN is posted, it must remain in place for as long as the violation or other situation persists, but in no case less than seven days, even if the violation or situation is resolved.

2. For availability of unregulated contaminant monitoring results pursuant to 42.1(4)“a”(2), the system is not required to repeat the PN, once the initial PN requirement has been met.

3. For 42.1(4)“a”(3), (6), or (7), the requirement for and timing of the repeat PN is at the department’s discretion. If required, the repeat PN must be made within 12 months of the initial PN.

*c. Tier 3 PN - form and manner.* PWSs must provide the initial PN and any repeat PNs in a form and manner that is reasonably calculated to reach persons served in the required time period. The PN form and manner may vary based on the specific situation and type of system, but it must meet the requirements of this paragraph, unless directed otherwise in writing by the department.

(1) CWSs. CWSs must provide PN by:

1. Mail or other direct delivery to each customer receiving a bill and to other service connections receiving water from the PWS; and

2. Any other method reasonably calculated to reach other persons regularly served by the system, if they would not normally be reached by mail or direct delivery. Such persons may include those who do not pay water bills or do not have service connection addresses, such as renters, students, nursing home residents, or prison inmates. Other methods may include:

- Publication in a local newspaper;
- Delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers;
- Posting in public places or on the internet; or
- Delivery to community organizations.

3. Use of the consumer confidence report (CCR) for initial and repeat PNs. For CWSs, the CCR required under 567—42.3(455B) may be used as a vehicle for initial and repeat Tier 3 PNs, as long as:

- The CCR is provided to persons served within the time frames under 42.1(4)“b”;
- The Tier 3 PN in the CCR follows the content requirements under 42.1(5); and
- The CCR is distributed following the delivery requirements under 42.1(4)“c”(1) and (2).

(2) TNC and NTNC. TNCs and NTNCs must provide PN by:

1. Posting the PN 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

2. Any other method reasonably calculated to reach other persons served, if they would not normally be reached by the posted, mailed, or delivered notice. Such persons may include those who may not see a posted PN because it's not in a location they routinely visit. Other methods may include:

- Publication in a local newspaper or newsletter distributed to employees;
- Use of email to notify employees or students; or
- Delivery of multiple copies in central locations, such as community centers.

**42.1(5) PN content.**

*a. Required elements.* Each PN must contain the following:

- (1) A description of the violation or situation, including the contaminant(s) of concern and, as applicable, the contaminant level(s);
- (2) When the violation or situation occurred;
- (3) Any potential adverse health effects from the violation or situation, including the standard language in 42.1(5) "c"(1) or (2), where applicable;
- (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in their drinking water;
- (5) Whether alternative water supplies or bottled water should be used, or require a boil-water order;
- (6) What actions consumers should take, including when they should seek medical help, if known;
- (7) What the system is doing to correct the violation or situation;
- (8) When the system expects to return to compliance or resolve the situation;
- (9) The name, business address, and telephone number of the PWS owner, operator, or designee as a source of additional information concerning the PN; and
- (10) A statement to encourage the PN recipient to distribute the notice to other persons served, using the standard language in 42.1(5) "c"(3), where applicable.

*b. Appearance and presentation.*

- (1) Each PN must:
  1. Be displayed in a conspicuous way when printed or posted;
  2. Not contain overly technical language or very small print;
  3. Not be formatted in a way that defeats the purpose of the notice; and
  4. Not contain language that nullifies the purpose of the notice.
- (2) Each PN must comply with multilingual requirements, as follows:
  1. For PWSs serving a large proportion of non-English speaking consumers, as determined by the department, a PN must contain information about its importance in the appropriate language(s), or contain a telephone number or address where persons served may contact the system to obtain a translated copy of the notice or to request assistance in the appropriate language.
  2. In cases where the department has not determined what constitutes a large proportion of non-English speaking consumers for a PWS, a PN must contain the same information as in 42.1(5) "b"(2)"1" above, where appropriate, to reach a large proportion of non-English speaking persons served by the system.

*c. Standard language.* PWSs must include the following statements in PNs:

- (1) Health effects for MCL, MRDL, or TT violations. Each PN must include the health effects language in Appendix B to Subpart Q of 40 CFR Part 141 for the specific contaminant, disinfectant residual, or TT that incurred the violation.
- (2) Monitoring and testing procedure violations. Each PN must include the following statement, including the bracketed language necessary to complete the notice, for all monitoring and testing procedure violations:
 

"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 [use either the phrase "did not monitor or test" or "did not complete all monitoring or testing," whichever is more applicable] for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time."
- (3) Language to encourage PN distribution to all persons served. Each PN must include the following statement, 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, such as 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.”

**42.1(6) PN for new billing units or new customers.**

*a. Community water systems (CWSs).* CWSs must give a copy of the most recent PN for any continuing violation or other ongoing situations requiring PN to all new billing units or new customers prior to or at the time service begins.

*b. Noncommunity water systems (NCWSs).* NCWSs (TNCs and NTNCs) must continuously post the PN in conspicuous locations in order to inform new consumers of any continuing violation or other situation requiring a PN for as long as the violation or other situation persists.

**42.1(7) Special PNs.**

*a. Availability of unregulated contaminant monitoring results.*

(1) Applicability. The owner or operator of a CWS or NTNC required to monitor under the federal unregulated contaminant monitoring rule must notify persons served by the system of the availability of such sample results no later than 12 months after the monitoring results are known.

(2) Form and manner. The special PN must follow the Tier 3 PN requirements in 42.1(4)“c,” and must identify a person and provide the telephone number to contact for information on the monitoring results.

*b. Fluoride level between 2.0 and 4.0 mg/L at CWSs or NTNCs.*

(1) Applicability. CWSs and NTNCs that exceed the fluoride level of 2.0 mg/L as determined by the last single sample taken in accordance with 567—paragraph 41.3(1)“c” but do not exceed the MCL of 4.0 mg/L, must provide the special PN in accordance with this paragraph to persons served. If the NTNC is a school or child care facility serving children under nine years of age, the system shall provide the PN in writing to the legal guardians of each child within the department-specified time period.

(2) Initial PN. A fluoride PN must be provided as soon as practical but no later than three months from the day the 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 Public Health Dental Director, Iowa Department of Health and Human Services, Lucas State Office Building, Des Moines, Iowa 50319-0075.

(3) Repeat PN. The PWS must repeat the fluoride PN at least every three months for as long as the fluoride level exceeds 2.0 mg/L. If the PN is posted, it must remain in place for as long as the fluoride level exceeds 2.0 mg/L, but in no case less than seven days (even if the exceedance is eliminated). The department may require the repeat PN to be conducted more frequently.

(4) Form and manner. The form and manner of the fluoride PN, including repeat PNs, must follow the Tier 3 PN requirements in 42.1(4)“c.”

(5) Mandatory language. A fluoride PN must contain the following language, including the bracketed language necessary to complete the notice:

“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, called dental fluorosis. The drinking water provided by your public water system [PWS name] has a fluoride concentration of [analytical result] mg/L.

Dental fluorosis, in its moderate or severe forms, may result in a brown staining and 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 4.0 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 4.0 mg/L of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2.0 mg/L because of this cosmetic dental problem.

For more information, please call [PWS contact person] of [PWS name] at [telephone number]. Some home water treatment units are also available to remove fluoride from drinking water. In Iowa, home water treatment

units are regulated under 641—Chapter 14, and the water treatment unit registration program is administered by the Health & Safety Division of the Iowa Department of Inspections, Appeals, and Licensing. In addition, you may call the National Sanitation Foundation (NSF) International at 1-877-867-3435.”

*c. Nitrate level between 10 and 20 mg/L for NCWSs, where allowed by the department.* NCWSs granted permission by the department under 567—paragraph 41.3(1)“a” to exceed the nitrate MCL must:

(1) Provide PN to persons served according to the Tier 1 PN requirements in 42.1(2)“a” and “b.”

(2) Provide continuous posting of the fact that nitrate levels exceed 10 mg/L and the potential health effects of exposure, according to the Tier 1 PN delivery requirements in 42.1(2)“c” and the content requirements in 42.1(5).

*d. Repeated failure to conduct source water monitoring for Cryptosporidium.*

(1) Applicability. The owner or operator of any PWS that is required to monitor source water under rule 567—43.11(455B) must notify persons served by the system that required monitoring has not been completed no later than 30 days after the system has failed to collect samples in any three months of monitoring, as specified in 567—paragraph 43.11(3)“a.” This special PN must be repeated as specified in 42.1(3).

(2) Form and manner. This special PN must follow the Tier 2 PN requirements in 42.1(3) and be presented as required in 42.1(5)“b.”

(3) Mandatory language. This special PN must contain the following language, including the language necessary to fill in the brackets.

“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 required deadline of [date]. For more information, please call [PWS contact person] of [PWS name] at [telephone number].”

(4) Each special PN must 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.

*e. Failure to determine bin classification or mean Cryptosporidium level.*

(1) Applicability. The owner or operator of a PWS that is required to determine a bin classification under 567—subrule 43.11(5) must notify persons served by the system that the required determination has not been made no later than 30 days after the system has failed to report the determination, as specified in 567—paragraph 43.11(5)“c.” This special PN must be repeated as specified in 42.1(3). This PN is not required if the system is in compliance with a department-approved schedule to address the violation.

(2) Form and manner. This special PN must follow the Tier 2 PN requirements in 42.1(3) and be presented as required in 42.1(5)“b.”

(3) Mandatory language. This special PN must contain the following language, including the language necessary to fill in the brackets.

“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 [PWS contact person] of [PWS name] at [telephone number].”

(4) Each special PN must 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.

**42.1(8) PN by department on behalf of a PWS.** The department may provide PN on behalf of a PWS owner or operator, in compliance with this rule. However, the PWS owner or operator remains responsible for ensuring the PN requirements of this rule are met.

**42.1(9) Operation permit compliance schedule PN requirements.** When the department determines that a PWS cannot promptly comply with one or more MCLs pursuant to 567—Chapter 41, and that there is no

immediate, unreasonable health risk to persons served by the system, an operation permit will be drafted with interim contaminant levels or a compliance schedule. The department may require the applicant to present the reasons the system cannot come into immediate compliance. Prior to issuance of a final permit with a compliance schedule, notice and opportunity for public participation must be given in accordance with this subrule. The PN shall be circulated in a manner designed to inform interested and potentially interested persons of any proposed interim contaminant level or compliance schedule.

*a. PN preparation.* A PN shall be prepared by the department and circulated by the applicant within its geographical area through publication in a local newspaper with general circulation or through mail or direct delivery to the system's customers. The PN shall be mailed by the department to any person upon request.

*b. Public comment period.* The department shall provide a period of at least 30 days following the PN date during which time interested persons may submit their written views on the tentative determinations with respect to the operation permit. All written comments submitted during the 30-day comment period shall be retained by the department and considered in the formulation of the department's final determination with respect to the operation permit. The department may extend the comment period.

*c. PN content.* A PN of a proposed operation permit shall contain at least the following:

- (1) The name, address, website, and telephone number of the department.
- (2) The name and address of the applicant.
- (3) A statement of the department's tentative determination to issue the operation permit.
- (4) A brief description of each applicant's operations which necessitate the proposed permit conditions.
- (5) A brief description of the procedures for the formulation of final determinations, including the 30-day comment period required by 42.1(9) "b."

(6) The right to request a public hearing pursuant to 42.1(9) "d" and any other means by which interested persons may influence or comment upon those determinations.

(7) The website location where interested persons may obtain further information, request a copy of the proposed operation permit prepared pursuant to this subrule, and inspect and copy the application forms and related documents.

*d. Public hearings.* The applicant or any interested agency, person or group of persons may request or petition for a public hearing with respect to a proposed operation permit.

(1) Any such request or petition shall:

1. Clearly state the issues to be addressed at a hearing;
2. Be filed with the department within the 30-day period prescribed in 42.1(9) "b," and
3. Indicate the interest of the party filing the petition or request and the reasons why a hearing is warranted.

(2) The department shall hold an informal and noncontested case hearing if there is a significant public interest in holding a hearing, including the filing of requests or petitions for a hearing. Frivolous or insubstantial hearing requests may be denied by the department. Instances of doubt should be resolved in favor of holding a hearing.

(3) Any hearing held pursuant to this subrule shall be held in the geographical area of the system, or other appropriate area, at the department's discretion.

(4) The department may, as appropriate, consider related groups of permit applications at a hearing.

*e. PN for public hearings.*

(1) PN of any hearing held pursuant to this subrule shall be circulated at least as widely as the notice under 42.1(9) "a" at least 30 days in advance of the hearing.

(2) The PN for any hearing held pursuant to this subrule shall contain at least the following:

1. The name, address, website, and telephone number of the department;
2. The name and address of each applicant whose application will be considered at the hearing;
3. A brief reference to the previously issued PN, including identification number and date of issuance;
4. The time and location for the hearing;
5. The purpose of the hearing;
6. A concise statement of the issues raised by the person requesting the hearing;
7. The website location where interested persons may obtain further information, request a copy of the draft operation permit or modification prepared pursuant to this subrule, and inspect and copy the application



forms and related documents; and

8. A brief description of the nature of the hearing, including the rules and procedures to be followed.

*f. Department decision.* The department shall issue or deny an operation permit within 30 days after a public hearing held pursuant to **this subrule**, or, if no public hearing is held, within 30 days after the end of the period for requesting a hearing.

**567—42.2(455B) Lead consumer notice and public education (PE) for lead action level exceedance (ALE).**

**42.2(1) Lead consumer notice.**

*a. Reporting requirement.* All CWSs and NTNCs must provide a consumer notice of the individual lead tap water monitoring results required by **567—paragraph 41.4(1)“c”** to the persons served at the tested sites (taps). Any system with a lead ALE shall also implement the PE requirements of **42.2(2)**.

*b. Consumer notice timing.* Systems must provide the notice as soon as practical, but no later than 30 days after the system learns of the tap monitoring results.

*c. Consumer notice content.* A consumer notice must contain the following:

- (1) Results of the lead tap water monitoring for the tested tap,
- (2) An explanation of the health effects of lead,
- (3) A list of steps consumers can take to reduce exposure to lead in drinking water,
- (4) PWS contact information, and
- (5) The lead MCLG of 0 mg/L, the 90th percentile lead AL of 0.015 mg/L, and the definitions for these two terms from rule **567—40.2(455B)**.

*d. Consumer notice delivery.* The notice must be provided to persons served at the tested tap, either by mail or by another department-approved method. For example, upon department approval, an NTNC could post results on a bulletin board in the facility. Systems must provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

*e. Inclusion of copper results.* Systems may also include copper testing results in the consumer notice, along with the 90th percentile copper ALE of 1.3 mg/L, copper MCLG of 1.3 mg/L, and copper health effects language.

**42.2(2) Lead PE for lead ALE.** A system with a lead ALE based on tap water samples collected in accordance with **567—paragraph 41.4(1)“c”** shall deliver the PE materials in **42.2(2)“a”** in accordance with **42.2(2)“b.”** Systems with a lead ALE must sample the tap water of any customer who requests it in accordance with **42.2(2)“c.”**

*a. Content of materials.* Systems must include the following statements in written PE materials in the same order as listed in this paragraph. Language in **42.2(2)“a”(1), (2), and (6)** must be included exactly as written, except for the bracketed text for which the system must substitute system-specific information. Any additional information presented by a system must be consistent with **this paragraph** and be in plain language that can be understood by the general public. Systems must submit all PE materials to the department prior to delivery. The department may require a system to obtain approval of the content of PE materials prior to delivery.

(1) The following statements must be included exactly as written.

“IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. [*Insert system name*] found elevated levels of lead in drinking water in some homes/buildings. Lead can cause serious health problems, especially for pregnant women and young children. Please read this information closely to see what you can do to reduce lead in your drinking water.”

“Health effects of lead. Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones, and it can be released later in life. During pregnancy, the child receives lead from the mother’s bones, which may affect brain development.”

(2) Sources of lead. The PE materials must:

1. Explain what lead is.

2. Explain possible sources of lead in drinking water, how lead enters drinking water, and include information on home/building plumbing materials and service lines that may contain lead.
3. Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).
- (3) Discuss the steps the consumers can take to reduce their exposure to lead in drinking water as follows:
  1. Encourage running the water to flush out the lead.
  2. Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.
  3. Explain that boiling the water does not reduce lead levels.
  4. Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water.
  5. Suggest that parents have their child's blood tested for lead.
- (4) The PE materials must explain why there are elevated levels of lead in the system's drinking water (if known) and what the system is doing to reduce the lead levels in homes/buildings in this area.
- (5) The following statement must be included exactly as written.  
 "For more information, call us at [insert your telephone number] or visit our website at [insert your website link here]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at [www.epa.gov/lead](http://www.epa.gov/lead) or contact your health care provider."
- (6) CWSs must also include the following in PE materials:
  1. Tell consumers how to get their water tested.
  2. Discuss lead in plumbing components and the difference between low lead and lead free.
  - b. *Delivery of PE materials.*
    - (1) Outreach to non-English speaking consumers. For PWSs serving a large proportion of non-English speaking consumers, as determined by the department, the PE materials must contain information about its importance in the appropriate language(s), or contain a telephone number or address where persons served may contact the system to obtain a translated copy of the PE materials or to request assistance in the appropriate language.
    - (2) Delivery of PE materials by CWS. A CWS that exceeds the lead ALE on the basis of tap water samples collected in accordance with 567—paragraph 41.4(1) "c" must conduct the following PE tasks within 60 days of the date of notification of the ALE. All delivered PE materials must meet the content requirements of paragraph "a" of this subrule.
      1. Deliver PE materials to all bill-paying customers.
      2. Contact customers who are most at risk by delivering PE materials to local public health agencies, even if they are not located within the system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or the CWSs users. Systems must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community-based organizations serving target populations, which may include organizations outside the system's service area. If such lists are provided, systems must deliver PE materials to all organizations on the provided lists.
      3. Contact customers who are most at risk by delivering PE materials to the following organizations that are located within the system's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or the CWSs users:
        - Public and private schools or school boards;
        - Women, Infants, and Children (WIC) and Head Start programs;
        - Public and private hospitals and medical clinics;
        - Pediatricians;
        - Family planning clinics; and
        - Local welfare agencies.
      4. Make a good-faith effort to locate the following organizations within the service area and deliver PE materials, along with an informational notice that encourages distribution to all potentially affected customers or users. The good-faith effort to contact at-risk customers may include requesting a contact list of these organizations from the local public health agencies, even if the agencies are not located within the system's

service area:

- Licensed child care centers;
- Public and private preschools;
- Obstetricians, gynecologists, doulas, and midwives.

5. No less often than quarterly, provide information on or in each water bill as long as the system exceeds the lead AL. The water bill must include the following statement exactly as written, except for the text in brackets for which the system must substitute system-specific information:

“*[insert system name]* found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information, please call *[insert system telephone number]* or visit *[insert system website link here]*.”

The message or delivery mechanisms can be modified in consultation with the department; specifically, the department may allow a separate mailing of PE materials to customers if the system cannot place the information on water bills.

6. Post PE material on the system’s website, if the system serves a population greater than 100,000.

7. Submit a press release to newspaper, television, and radio stations.

8. In addition to those items previously listed, systems must implement at least three activities from one or more of the following categories. The educational content and appropriate activities must be determined in consultation with the department.

- Public service announcement;
- Paid advertisement;
- Public area information displays;
- Emails to customers;
- Public meetings;
- Household deliveries;
- Targeted individual customer contact;
- Direct material distribution to all multifamily homes and institutions; and
- Other department-approved methods.

(3) Continuing PE by a CWS. As long as a CWS exceeds the AL, it must repeat the activities pursuant to 42.2(2) “b”(2) as follows:

1. Repeat the tasks in 42.2(2) “b”(2) “1,” “2,” and “8” every 12 months.

2. Repeat the tasks in 42.2(2) “b”(2) “5” with each billing cycle.

3. A CWS serving a population greater than 100,000 shall post and retain PE materials on a publicly accessible website pursuant to 42.2(2) “b”(2) “6.”

4. Repeat the task in 42.2(2) “b”(2) “7” twice every 12 months on a schedule agreed upon with the department. The department can allow activities in 42.2(2) “b”(2) to extend beyond the 60-day requirement on a case-by-case basis; however, this extension must be approved in writing by the department in advance of the 60-day deadline, and the system must already have initiated PE activities prior to the end of the 60-day deadline.

(4) Delivery of PE by an NTNC. Within 60 days of the date of notification of the ALE, an NTNC shall deliver the specified PE materials as follows:

1. Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the system; and

2. Distribute informational pamphlets or brochures on lead in drinking water to each person served by the NTNC. The department may allow the system to utilize electronic transmission in lieu of or combined with printed materials as long as at least the same coverage is achieved. If the system serves children 18 years of age and under, such as a school or child care facility, the PE materials must be provided to the parents or legal guardians of the children.

(5) Continuing PE by an NTNC. An NTNC shall repeat the tasks in 42.2(2) “b”(4) at least once during each calendar year in which the system exceeds the lead AL. The department can allow activities in 42.2(2) “b”(4) to extend beyond the 60-day requirement on a case-by-case basis; however, this extension must be approved in writing by the department in advance of the 60-day deadline, and the system must already have initiated PE activities prior to the end of the 60-day deadline.

(6) Discontinuation of PE activities. A CWS or NTNC may discontinue delivery of PE materials if it has met the lead AL during the most recent six-month monitoring period conducted pursuant to 567—paragraph 41.4(1) “c.” Such system shall recommence PE in accordance with this subrule if it subsequently exceeds the lead AL during any monitoring period.

(7) Special population CWS allowance. A CWS that meets the following criteria may apply to the department in writing for reduced PE and community notice requirements:

1. The CWS is a facility, such as a prison or hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing POU treatment devices; and
2. The CWS provides water as part of the cost of services provided and does not separately charge for water consumption.

If the department approves the request in writing, the CWS is not required to include the language in 42.2(2) “a”(7) and must deliver the PE materials in accordance with 42.2(2) “b”(4) and (5), in lieu of 42.2(2) “b”(2) and (3).

(8) CWSs serving 3,300 or fewer people. A CWS serving 3,300 or fewer people may limit certain aspects of its PE programs as follows:

1. The system must implement at least one of the activities in 42.2(2) “b”(2) “8.”
2. The system may limit the distribution of the PE materials in 42.2(2) “b”(2) “2” and “3” to facilities and organizations served by the system that are most likely to be visited regularly by pregnant women and children.
3. The department may waive the requirements of 42.2(2) “b”(2) “7” for the system provided it distributes notices to every household served.

*c. Supplemental monitoring and notification of results.* A system that fails to meet the lead AL on the basis of tap samples collected in accordance with 567—paragraph 41.4(1) “c” shall offer to sample the tap water of any customer who requests it. The system is not required to pay for collecting or analyzing the sample, nor is the system itself required to collect and analyze the sample.

### 567—42.3(455B) Consumer confidence reports (CCRs).

**42.3(1) Applicability and purpose.** This rule applies to all CWSs and establishes the requirements for the content of annual consumer confidence reports (CCRs) that CWSs must deliver to their customers. These CCRs must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants in the drinking water in an accurate and understandable manner. The department may assign PN requirements and assess administrative penalties to any CWS which fails to fulfill the requirements of this rule.

#### **42.3(2) CCR delivery frequency.**

- a. Existing CWS.* Existing CWSs must deliver CCRs annually by July 1.
- b. New CWSs.* New CWSs must deliver their first CCR by July 1 of the year after their first full calendar year in operation, and annually thereafter.
- c. A CWS which sells water to another CWS.* A CWS that sells water to another CWS must deliver the applicable information in 42.3(3) to the buyer (or consecutive) system:

- (1) Annually by April 1, or
- (2) On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

When a consecutive system sells water to another CWS, the seller must provide all applicable information in 42.3(3) to the CWS buying the water from them.

#### **42.3(3) CCR content.** Each annual CCR must contain the following information.

*a. Source water identification.* A CCR must identify the source(s) of water delivered by the CWS, including:

- (1) Type of water (e.g., SW, groundwater (GW), GW purchased from another PWS).
- (2) Commonly used name of the aquifer, reservoir, or river (if any) and location of the body (or bodies) of water.

(3) The availability of a source water assessment and the means to obtain it, if an assessment has been completed. Systems are encouraged to highlight significant sources of contamination in the source water area if

information is available. Where a system has received a source water assessment from the department, the CCR must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the department or its designee, or written by the owner or operator.

*b. Definitions.* Each CCR using any of the following terms must include the applicable definitions of MCL, MCLG, MRDL, and MRDLG from 40 CFR § 141.153. A CCR which contains data on a contaminant for which EPA has set a TT or an AL must include the applicable definitions from 40 CFR § 141.153, as applicable.

A CCR that contains information regarding a Level 1 or Level 2 assessment required under 567—subrule 41.2(1) must include the applicable assessment definitions from 40 CFR § 141.153.

*c. Information on detected contaminants.* This paragraph specifies the information required in each CCR for contaminants subject to mandatory monitoring (except *Cryptosporidium*, which is listed in 42.3(3)“c”(2)) as follows: regulated contaminants subject to an MCL, AL, MRDL, or TT; contaminants for which monitoring is required by 40 CFR § 141.40 (unregulated contaminants), 567—subrule 41.9(1) (sodium), and 567—41.13(455B) (other contaminants); and disinfection byproducts (DBPs) or microbial contaminants for which monitoring is required by 567—Chapters 40 to 43, except as provided under 42.3(3)“e”(1), and which are detected in the finished water. Ammonia monitoring conducted pursuant to 567—subrule 41.9(2) is not subject to this paragraph. For the purposes of this subrule, “detected” means at or above the levels prescribed as follows: inorganic contaminants in 567—subparagraph 41.3(1)“e”(1); VOCs and SOCs in 567—paragraph 41.5(1)“b”; radionuclide contaminants in 567—paragraph 41.8(1)“c”; DBPs in 567—subparagraph 83.6(7)“a”(6)“3”; and other contaminants with HAs, as assigned by the department.

(1) Contaminant data must be displayed in one or more tables. Any additional monitoring results which a CWS chooses to include in its CCR must be displayed separately.

1. Contaminant data must be derived from data collected to comply with departmental monitoring and analytical requirements. Where a system is allowed to monitor for contaminants less often than once a year, the CCR table(s) must include the results, the most recent sampling date, and a brief statement indicating that the data in the CCR are from the most recent testing done in accordance with the regulations. No data older than five years need be included.

2. For detected regulated contaminants listed in Appendix A to Subpart O of 40 CFR Part 141, the table(s) must contain:

- The contaminant MCL, expressed as a number equal to or greater than 1.0 (as provided in Appendix A to Subpart O of 40 CFR Part 141);
- The contaminant MCLG, expressed in the same units as the MCL;
- If there is no MCL for a detected contaminant, the table(s) must indicate that there is a TT, or specify the AL applicable to that contaminant, and the CCR must include the definition for TT or AL, as appropriate.

3. For contaminants subject to an MCL, except turbidity and E.coli, the table(s) must contain the highest contaminant level used to determine compliance with a primary drinking water standard and the range of detected levels, expressed in the same units as the MCL, as follows:

- When MCL compliance is determined annually or less frequently: the highest detected level at any sampling point and the range of detected levels.
- When MCL compliance is determined by calculating a running annual average (RAA) of all samples taken at a sampling point: the highest average of any of the sampling points and the range of all sampling points. For TTHM and HAA5 MCLs, systems must include the highest locational running annual average (LRAA) for TTHM and HAA5 and the range of individual sample results for all monitoring locations. If more than one location exceeds the TTHM or HAA5 MCL, the system must include the LRAAs for all locations that exceed the MCL.
- When MCL compliance is determined on a systemwide basis by calculating an RAA average of all samples at all sampling points: the average and range of detection.

Note: When rounding of results to determine MCL compliance is allowed by the regulations, rounding should be done prior to multiplying the results by the factor in Appendix A to Subpart O of 40 CFR Part 141.

4. For turbidity: The highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 567—43.5(455B), 567—43.9(455B), or 567—43.10(455B) for the filtration technology being used, when turbidity is being reported pursuant to the cited rules. The CCR should include an

explanation of the reasons for measuring turbidity.

5. For lead and copper: the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the AL.

6. For *E. coli* analytical results under 567—subrule 41.2(1), the total number of positive samples.

7. The likely source(s) of detected contaminants to the best of the owner's or operator's knowledge. Specific contaminant information may be available in sanitary surveys or source water assessments, and should be used when available. If the owner or operator lacks specific information on the likely contaminant source, the CCR must include one or more of the typical sources for that contaminant in Appendix A to Subpart O of 40 CFR Part 141 which are most applicable to the system.

8. If a CWS distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table(s) should contain a separate column for each service area and the CCR should identify each separate distribution system. Alternatively, systems may produce separate CCRs tailored to include data for each service area.

9. The table(s) must clearly identify any data indicating MCL, MRDL, or TT violations, and the CCR must contain a clear and readily understandable explanation of the violation, including:

- The length of the violation,
- The potential adverse health effects,
- Actions taken by the system to address the violation, and
- The relevant language from Appendix A to Subpart O of 40 CFR Part 141 describing the potential health effects.

10. For detected unregulated contaminants for which monitoring is required, except *Cryptosporidium*, the table(s) must contain the average and range at which the contaminant was detected. The CCR may include a brief explanation of the reasons for monitoring for unregulated contaminants.

11. CWSs may list the most recent results of the special sodium monitoring requirement according to 567—subrule 41.11(1) in the CCR, instead of providing a separate PN.

12. If a contaminant which does not have an MCL, MRDL, TT, or AL is detected in the water, the PWS must contact the department for the specific health effects language, health advisory level (HAL), and contamination sources.

(2) If monitoring indicates that *Cryptosporidium* may be present in the source water or the finished water, or that radon may be present in the finished water, the CCR must include:

1. A summary of the *Cryptosporidium* monitoring results;
2. The radon monitoring results; and
3. An explanation of the results' significance.

(3) If the system has performed additional monitoring which indicates the presence of other contaminants in the finished water, the system must report any results which may indicate a health concern. To determine if results may indicate a health concern, the CWS can inquire about a current or proposed MCL, MRDL, TT, AL, or HA by contacting the department or by calling the National Safe Drinking Water Hotline ((800)426-4791). The department considers the detection of a contaminant above a proposed MCL or HAL to indicate possible health concerns. For such contaminants, the CCR should include:

1. The monitoring results; and
2. An explanation of the results' significance, noting the existence of an HA or a proposed regulation.

(4) If the system was required to comply with the federal Information Collection Rule pursuant to the 40 CFR Part 141, it must include the results of monitoring in compliance with 40 CFR § 141.142 and 141.143. These results need only be included for five years from the date of the sample or until any of the detected contaminants become regulated and subject to routine monitoring requirements, whichever comes first.

d. *Compliance with 567—Chapters 40, 41, 42, and 43.* In addition to the requirements of 42.3(3) "c"(1) "9," the CCR must note any violation of a requirement listed below that occurred during the year covered by the report, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation. Note any violation of the following:

(1) Monitoring and reporting of compliance data pursuant to 567—Chapters 41 and 43, which includes any contaminant with a MCL, TT, AL, or HA;

(2) The following TTs:

1. Filtration and disinfection prescribed by 567—43.5(455B). For systems which have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes which constitutes a violation, the CCR must include the following statement with the explanation of potential adverse health effects:

“Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.”

2. Lead and copper control requirements. For systems which fail to take one or more actions prescribed by 567—Chapters 41 to 43 pertaining to lead and copper, the CCR must include the relevant language from Appendix A to Subpart O of 40 CFR Part 141.

3. Acrylamide and epichlorohydrin control technologies. For systems which violate the requirements of 567—subparagraph 41.5(1) “b”(3), the CCR must include the relevant language from Appendix A to Subpart O of 40 CFR Part 141.

(3) Record keeping of compliance data pursuant to 567—Chapters 40 to 43;

(4) Special monitoring requirements; and

(5) Violation of an operation permit compliance schedule, administrative order, or judicial order.

*e. Operation permit or administrative order with a compliance schedule.* If a system has been issued a compliance schedule with an extension for compliance, the CCR must contain:

(1) An explanation of the reasons for the extension;

(2) The date on which the extension was issued;

(3) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the compliance schedule; and

(4) A notice of any opportunity for public input in the review or renewal of the compliance schedule.

*f. Mandatory CCR language explaining contaminant occurrence.* CCRs must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water, including bottled water. This explanation may include the statements in subparagraphs (1) to (3) below. Subparagraph (4) is provided as a minimal alternative to subparagraphs (1) to (3). Systems may also develop their own comparable language. A CCR must include the language of 42.3(3) “g.”

(1) “The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity.”

(2) “Contaminants that may be present in source water include:

1. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

2. Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.

3. Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.

4. Organic chemical contaminants, including synthetic and volatile organics, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.

5. Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.”

(3) “In order to ensure that tap water is safe to drink, the department prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.”

(4) “Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the National Safe

Drinking Water Hotline ((800)426-4791).”

*g. Required additional health information.*

(1) A CWS that detects arsenic above 0.010 mg/L and less than or equal to 0.05 mg/L must include in its CCR the arsenic health effects language in Appendix A to Subpart O of 40 CFR Part 141.

(2) A CWS that detects total trihalomethanes (TTHMs) above 0.080 mg/L but below the MCL in 567—subrule 41.5(1), as an annual average, monitored and calculated under the provisions of 567—paragraph 41.5(1)“e,” must include, in its CCR, the TTHM health effects language in Appendix A to Subpart O of 40 CFR Part 141.

(3) All systems.

1. All CCRs must prominently display the following statement:

“Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the national Safe Drinking Water Hotline ((800)426-4791).”

2. All systems may write their own educational statements for the parameters listed in subparagraphs (4) to (7) of this paragraph, but only in consultation with the department.

(4) A CWS which detects arsenic at levels above 0.005 mg/L and less than or equal to 0.010 mg/L must include in its CCR a short information statement about arsenic, using language such as:

“While your drinking water meets EPA’s standard for arsenic, it does contain low levels of arsenic. EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.”

(5) A system which detects nitrate at levels above 5.0 mg/L (half the MCL), but below the MCL must include in its CCR a short informational statement about the impacts of nitrate on children, using language such as:

“Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.”

(6). A system which detects nitrite at levels above 0.50 mg/L (half the MCL), but below the MCL must include in its CCR a short informational statement about the impacts of nitrite on children, using language such as:

“Nitrite in drinking water at levels above 1 ppm is a health risk for infants of less than six months of age. High nitrite levels in drinking water can cause blue baby syndrome. If you are caring for an infant you should ask advice from your health care provider.”

(7) All systems must include in their CCR a short informational statement about lead in drinking water and the effects it has on children, using language such as:

“If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from material and components associated with service lines and home plumbing. [insert name of system] is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the National Safe Drinking Water Hotline (800)426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).”

*h. Additional mandatory CCR requirements.*

(1) The CCR must include the telephone number of the owner, operator, or designee of the CWS as a source of additional information concerning the report.



(2) In communities with a large proportion of non-English speaking residents, as determined by the department, the CCR must contain information regarding the importance of the CCR in the appropriate language(s), or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

(3) The CCR must include information (e.g., time and place of regular board meetings) about opportunities for public participation in decisions that may affect the quality of the water.

(4) Systems may include such additional information as they deem necessary for the PE, consistent with, and not detracting from, the purpose of the CCR.

(5) Systems required to comply with the GW rule (567—41.7(455B)), must include the following in the CCR, when applicable:

1. Any GW system that receives notice from the department of a significant deficiency must inform its customers of any significant deficiency that is uncorrected at the time of the next CCR. The system must continue to inform the public annually until the department determines that particular deficiency is corrected. Each CCR must include the following:

- The nature of the particular significant deficiency and the date the deficiency was identified by the department; and
- For each significant deficiency, the department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

If directed by the department, a system with one or more significant deficiencies that have been corrected before the next CCR must inform its customers of the deficiencies, how the deficiencies were corrected, and the date(s) of correction.

2. Any GW system that receives notice from the department or laboratory of a fecal indicator-positive GW source sample that is not invalidated under 567—paragraph 41.7(3)“d” must inform its customers of such a sample in the next CCR. The system must continue to inform the public annually until the department determines that the fecal contamination in the GW source is addressed under 567—paragraph 41.7(4)“a.” Each CCR must include the following:

- The fecal contamination source (if known) and the dates of the fecal indicator-positive GW source samples;
- Whether the fecal contamination in the GW source has been addressed under 567—paragraph 41.7(4)“a” and the date of such action;
- For each fecal contamination in the GW source that has not been addressed under 567—paragraph 41.7(4)“a,” the department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed; and
- The potential health effects, using the “Fecal coliform or *E. coli*” or “Fecal Indicators (enterococci or coliphage)” health effects language in Appendix A to Subpart O of 40 CFR Part 141.

(6) Pursuant to 567—subrule 41.2(1), any system required to conduct a Level 1 or Level 2 assessment that is not due to an *E. coli* MCL violation must include in the CCR the statements below in “1” to “3” of this subparagraph, as appropriate, filling in the blanks accordingly and including the appropriate statements in the bulleted paragraphs of “4” of this subparagraph.

1. “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 the potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.”

2. “During the past year, we were required to conduct [*insert number of required Level 1 assessments*] Level 1 assessment(s). [*insert number of completed Level 1 assessments*] Level 1 assessment(s) were completed. In addition, we were required to take [*insert number of required corrective actions*] corrective actions, and we completed [*insert number of completed corrective actions*] of these actions.”

3. “During the past year, [*insert number of required Level 2 assessments*] Level 2 assessments were required to be completed for our water system. [*insert number of completed Level 2 assessments*] Level 2 assessment(s) were completed. In addition, we were required to take [*insert number of required corrective*”

actions] corrective actions, and we completed [insert number of completed corrective actions] of these actions.”

4. Any system that has failed to complete all the required assessments or correct all identified sanitary defects is in violation of the TT requirement and must also include one or both of the following statements in its CCR, as appropriate:

- “During the past year, we failed to conduct all of the required assessment(s).”
- “During the past year, we failed to correct all identified defects that were found during the assessment.”

(7) Pursuant to 567—subrule 41.2(1), any system required to conduct a Level 2 assessment due to an *E. coli* MCL violation must include the statements below in 42.3(3) “h”(7)“1” and “2” in its CCR as appropriate, filling in the blanks accordingly and including the appropriate text in the bulleted paragraphs of “3” of this subparagraph.

1. “*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. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.”

2. “We were required to complete a Level 2 assessment because we found *E. coli* bacteria in our water system. In addition, we were required to take [insert number of required corrective actions] corrective actions, and we completed [insert number of completed corrective actions] of these actions.”

3. Any system that has failed to complete the required assessment or correct all identified sanitary defects is in violation of the TT requirement and must also include one or both of the following statements in its CCR, as appropriate:

- “We failed to conduct the required assessment.”
- “We failed to correct all sanitary defects that were identified during the assessment that we conducted.”

(8) Pursuant to 567—subrule 41.2(1), if a system detects *E. coli* and violated the *E. coli* MCL, in addition to completing the CCR table(s) as required in 42.3(3) “c,” the system must include in its CCR one or more of the following statements to describe any noncompliance, as applicable:

1. “We had an *E. coli*-positive repeat sample following a total coliform-positive routine sample.”
2. “We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample.”
3. “We failed to take all required repeat samples following an *E. coli*-positive routine sample.”
4. “We failed to test for *E. coli* when any repeat sample tested positive for total coliform.”

(9) Pursuant to 567—subrule 41.2(1), if a system detects *E. coli* and has not violated the *E. coli* MCL, in addition to completing the CCR table(s) as required in 42.3(3) “c,” the system may include in its CCR a statement that explains that although the system has detected *E. coli*, the system is not in violation of the *E. coli* MCL.

**42.3(4) CCR delivery.**

a. *Required CCR recipients.* Each CWS must mail or otherwise directly deliver one copy of the CCR to each customer.

(1) Systems must make a good-faith effort to reach consumers who do not get water bills, using department-recommended means. An adequate good-faith effort will be tailored to the consumers who are served by the system but are not bill-paying customers. A good-faith effort would include a mix of methods appropriate to the particular system. Reports could be:

1. Posted on the internet;
2. Mailed to postal patrons in metropolitan areas;
3. Advertised in the news media;
4. Published in a local newspaper;
5. Posted in public places;
6. Delivered for distribution by single-billed customers such as apartment buildings or large private employers;
7. Delivered to community organizations.

(2) No later than the date the system is required to distribute the CCR to its customers, each CWS must provide the CCR to the department, followed within three months by a certification that the CCR has been

distributed to customers, and that it is correct and consistent with the previously-submitted compliance monitoring data.

(3) No later than the date the system is required to distribute the CCR to its customers, each CWS must deliver the report to any other agency or clearinghouse identified by the department, such as the Iowa Department of Health and Human Services or county board of health.

*b. CCR availability.* Each CWS must make its CCR available to the public upon request. Each CWS serving 100,000 or more persons must post its current year's CCR to a publicly accessible internet site.

*c. CCR mailing requirement waiver for systems serving 10,000 or fewer in population.* All CWSs serving fewer than 10,000 persons will qualify for a mailing waiver, except for those systems which have: one or more exceedances of a MCL, TT, AL, or HA; an administrative order; a court order; significant noncompliance with monitoring or reporting requirements; or an extended compliance schedule in an operation permit. Even though a PWS has qualified for a mailing waiver, 42.3(4) "a"(2) and (3) and 42.3(4) "b" still apply to all CWSs. A mailing waiver is not allowed for the CCR covering the year during which one of the previously listed exceptions occurred. Systems qualifying for a mailing waiver must:

- (1) Publish their CCR in one or more local newspapers serving the area in which the system is located;
- (2) Inform customers that their CCR will not be mailed, either in the newspapers in which the CCR is published or by other department-approved means; and
- (3) Make their CCR available to the public upon request.

*d. Mailing requirements waiver for systems serving 500 or fewer in population.* All CWSs serving 500 or fewer persons will qualify for a mailing waiver, except for those systems which have the following: one or more exceedances of an MCL, TT, AL, or HA; an administrative order; a court order; significant noncompliance with monitoring or reporting requirements; or an extended compliance schedule in an operation permit. Systems serving 500 or fewer persons which qualify for the waiver may forego the requirements of 42.3(4) "c"(1) and (2) if they provide notice at least once per year to their customers that the CCR is available upon request, by mail, door-to-door delivery, or by posting, in conspicuous places within the service area acceptable to the department. A mailing waiver is not allowed for the CCR covering the year during which one of the previously listed exceptions occurred. Even though a PWS serving 500 or fewer persons has qualified for a mailing waiver, 42.3(4) "a"(2) and (3) and 42.3(4) "b" still apply to all CWSs.

## 567—42.4(455B) Reporting.

### 42.4(1) Reporting requirements other than for lead and copper.

*a.* When required by the department, a PWS shall report to the department within ten days following a test, measurement, or analysis required by 567—Chapter 40 to 43, the results of that test, measurement, or analysis in the form and manner prescribed by the department. This shall include reporting of all positive detects within the same specific analytical method.

*b.* Except where a different reporting period is specified in this rule or 567—Chapters 41 and 43, a PWS shall report to the department within 48 hours after any failure to comply with the monitoring requirements in 567—Chapters 41 and 43. The PWS shall also notify the department within 48 hours of failure to comply with any primary drinking water regulations.

*c.* The PWS, within ten days of completion of each initial and repeat PNs required in 567—42.1(455B), shall submit to the department a certification that it has fully complied with the PN rules. The certification must include a representative copy of each type of notice distributed, published, posted, or made available to the persons served by the system or to the media.

*d.* Additional reporting requirements for the GW rule are listed in 567—paragraph 41.7(6) "a."

*e.* Additional reporting requirements for the coliform rule are listed in 567—paragraph 41.2(1) "n."

**42.4(2) Lead and copper reporting requirements.** All PWSs shall report all of the following to the department.

*a. Reporting requirements for tap water monitoring and water quality parameter (WQP) monitoring.*

(1) Except as provided in 42.4(2) "a"(1) "7," a system shall report the information specified below for all tap water samples in 567—paragraph 41.4(1) "c" and all WQP samples in 567—paragraph 41.4(1) "d" within the first ten days following the end of each applicable monitoring period in 567—41.4(455B). For monitoring

periods with a duration of less than six months, the end of the monitoring period is the last date samples can be collected during that period.

1. The results of all tap samples for lead and copper, including the location of each site and the site selection criteria;

2. Documentation for each tap water lead or copper sample for which the system requests invalidation pursuant to 567—paragraph 41.4(1)“c”(6)“2”;

3. The 90th percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period (calculated in accordance with 567—subparagraph 41.4(1)“b”(3));

4. With the exception of initial tap sampling conducted pursuant to 567—paragraph 41.4(1)“c”(4)“1,” the system shall designate any site which was not sampled during previous monitoring periods, and include an explanation of why sampling sites have changed;

5. For samples collected under 567—subparagraphs 41.4(1)“d”(2) through (5), tap sample results for pH and, where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica, and SEP sample results for applicable WQPs; and

6. The results of all WQP samples collected under 567—subparagraphs 41.4(1)“d”(3) through (6) during each six-month monitoring period in 567—subparagraph 41.4(1)“d”(4) within the first ten days following the end of the monitoring period, unless the department has specified a more frequent reporting requirement.

(2) Certain systems that do not have enough taps that can provide first-draw samples and that have met the six-hour stand time criteria, such as an NTNC with 24-hour operation or a CWS meeting the criteria of 42.2(2)“b”(7), must either:

1. If the department has not approved the non-first-draw sample sites, provide written documentation to the department identifying stand times and locations for enough non-first-draw samples to make up its sampling pool under 567—paragraph 41.4(1)“c”(2)“5” by July 1, 2003; or

2. If the department has already approved the non-first-draw sample sites, identify each site that did not meet the six-hour minimum stand time and the length of stand time for that particular substitute sample (collected pursuant to 567—paragraph 41.4(1)“c”(2)“5.”) Certain systems already include this information in writing with the lead and copper tap sample results required by 567—paragraph 41.4(1)“d”(1)“1.”

(3) At a time specified by the department or, if no specific time is specified, then as early as possible prior to the addition of a new source or any long-term change in water treatment, a system that (1) has optimized corrosion control under 567—subparagraph 43.7(1)“b”(3), (2) is subject to reduced monitoring pursuant to 567—paragraph 41.4(1)“c”(4)“4,” or (3) is subject to a monitoring waiver pursuant to 567—subparagraph 41.4(1)“c”(7), shall send written documentation to the department describing the addition or change. The department must review and approve the addition or change before it is implemented by the system. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing process. . Long-term changes can include dose changes to existing chemicals, but do not include chemical dose fluctuations associated with daily water quality changes. Examples of modifications include the switching of secondary disinfectants, switching of coagulants, or switching of corrosion inhibitor products. In those instances where prior department approval of a new source addition or long-term treatment change is not required, systems are encouraged to provide notification to the department beforehand to minimize the risk that the new source addition or treatment change will adversely affect optimal corrosion control (OCC).

(4) Any small system applying for or subject to a monitoring waiver under 567—subparagraph 41.4(1)“c”(7) shall provide the following information to the department in writing by the specified deadline:

1. By the start of the first applicable monitoring period in 567—subparagraph 41.4(1)“c”(4), any small system applying for a monitoring waiver shall provide documentation demonstrating that it meets the waiver criteria of 567—paragraphs 41.4(1)“c”(7)“1” and “2.”

2. No later than nine years after the monitoring previously conducted pursuant to 567—paragraph 41.4(1)“c”(7)“2” or 41.4(1)“c”(7)“4,” first bulleted paragraph, each small system desiring to maintain its monitoring waiver shall provide the information required by 567—paragraph 41.4(1)“c”(7)“4,” first and second bulleted paragraphs.

3. No later than 60 days after the system becomes aware that it is no longer free of lead- or copper-

containing materials, as appropriate, each small system with a monitoring waiver shall provide written notification, setting forth the circumstances resulting in the lead- or copper-containing materials being introduced into the system and what corrective action, if any, the system plans to remove these materials.

(5) Each GW system that limits WQP monitoring to a subset of entry points under 567—paragraph 41.4(1)“d”(3)“3” shall provide, by the commencement of such monitoring, written correspondence to the department that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

*b. Source water monitoring reporting requirements.*

(1) Systems shall report the sampling results for all source water samples collected within the first ten days following the end of each source water monitoring period in accordance with 567—paragraph 41.4(1)“e.”

(2) With the exception of the first round of source water sampling conducted pursuant to 567—subparagraph 41.4(1)“e”(2), the system shall specify any site which was not sampled during previous monitoring periods, and include an explanation of why the sampling point has changed.

*c. Corrosion control treatment (CCT) reporting requirements.* By the applicable dates under 567—subrule 43.7(1), systems shall report the following:

(1) For systems demonstrating that they have already optimized corrosion control, information required in 567—subparagraphs 43.7(1)“b”(2) or (3).

(2) For systems required to optimize corrosion control, their recommendation regarding optimal corrosion control treatment (OCCT) under 567—paragraph 43.7(2)“a.”

(3) For systems required to evaluate the effectiveness of CCTs under 567—paragraph 43.7(2)“c,” the information required by that paragraph.

(4) For systems required to install OCC designated by the department under 567—paragraph 43.7(2)“d,” a letter certifying that the system has completed installing that treatment.

*d. Source water treatment reporting requirements.* By the applicable dates in 567—subparagraph 43.7(3)“b”(1), systems shall provide the following to the department:

(1) If required under 567—subparagraph 43.7(3)“b”(1), their recommendation regarding source water treatment;

(2) For systems required to install source water treatment under 567—subparagraph 43.7(3)“b”(1), a letter certifying that the system has completed installing the designated treatment within 24 months of the department’ designation.

*e. Lead service line replacement (LSLR) reporting requirements.* Systems shall report the following to the department to demonstrate compliance with 567—subrule 43.7(4):

(1) No later than 12 months after the end of a monitoring period in which a system exceeds the lead AL 1 in 567—paragraph 43.7(4)“a,” the system must submit written documentation of the material evaluation pursuant to 567—subparagraph 41.4(1)“c”(1), identify the initial number of lead service lines (LSLs) in its distribution system at the time the it exceeds the lead AL, and provide its schedule for replacing annually at least seven percent of the initial number of LSLs in its distribution system.

(2) No later than 12 months after the end of a monitoring period in which a system exceeds the lead AL in sampling referred to in 567—paragraph 43.7(4)“a,” and every 12 months thereafter, the system shall demonstrate in writing that it has either:

1. Replaced in the previous 12 months at least seven percent of the initial LSLs (or a greater number of lines specified by the department under 567—paragraph 43.7(4)“e” in its distribution system), or

2. Conducted sampling which demonstrates that the lead concentration in all service line samples from individual line(s), taken pursuant to 567—paragraph 41.4(1)“c”(2)“3,” is less than or equal to 0.015 mg/L. In such cases, the total number of lines replaced and those lines which meet the criteria in 567—paragraph 43.7(4)“c” shall equal at least seven percent of the initial number of lead lines identified under 42.4(2)“e”(1) or the percentage specified by the department under 567—paragraph 43.7(4)“e.” An LSL meeting the criteria of 567—paragraph 43.7(4)“c” may only be used to comply with the seven percent criteria for a specific year, and may not be used again to calculate compliance with the seven percent criteria in future years.

(3) The annual letter submitted under 42.4(2)“e”(2) above shall contain the following:

1. The number of LSLs scheduled to be replaced during the previous year of the system’s replacement

schedule;

2. The number and location of each LSL replaced during the previous year of the system's replacement schedule;

3. If measured, the water lead concentration and location of each LSL sampled, the sampling method, and the sampling date.

(4) Any system which collects LSL samples following partial LSL replacement required by 567—subrule 43.7(4) shall report the results within the first ten days of the month following the month in which the system receives the laboratory results, or as specified by the department. Systems shall also submit any additional requested information in a time and manner prescribed by the department, to verify that all partial LSL replacement activities have taken place.

*f. PE program reporting requirements.*

(1) Any system subject to the PE requirements in 42.2(2) shall, within ten days after the end of each period in which the system is required to perform PE in accordance with 42.2(2) "b," send written documentation to the department containing:

1. A demonstration that the system has delivered the PE materials that meet the content requirements in 42.2(2) "a" and the delivery requirements in 42.2(2) "b"; and

2. A list of all the newspapers, radio stations, television stations, facilities, and organizations to which the system delivered PE materials during the PE period.

(2) Unless required by the department, a system that previously has submitted the information required by 42.4(2) "f"(1) "2" need not resubmit the same information, provided there have been no changes in the distribution list and the system certifies that the PE materials were distributed to the same list previously submitted. The certification is due within ten days after the end of each period in which the system is required to perform PE.

(3) No later than three months following the end of the monitoring period, each system must mail a sample copy of the consumer notice of tap results to the department along with a certification that the notice has been distributed in a manner consistent with 42.2(1).

*g. Additional monitoring data reporting requirements.* A system which collects sampling data in addition to that required by 567—Chapters 41 and 43 shall report the results to the department within the first ten days following the end of the applicable monitoring period under 567—paragraphs 41.4(1) "c," "d," and "e" during which the samples are collected.

**42.4(3) PWS operation and maintenance.**

*a. Required operation records.*

(1) Monthly operation records (MORs) shall be completed by all PWSs, on forms provided by the department or on similar forms, unless a PWS meets all of the following conditions:

1. Supplies an annual average of not more than 25,000 gpd or serves no more than an average of 250 individuals daily;

2. Is a CWS and does not provide any type of treatment, or is a NCWS (NTNC or TNC which has only a cation-exchange softening or iron/manganese removal treatment unit, and meets the requirements of 42.4(3) "a"(2) "7";

3. Does not utilize either a SW or a IGW, either in whole or in part, as a water source;

4. Does not use a TT such as blending to achieve compliance with an MCL, TT, AL, or HA.

(2) MORs shall be completed as described in subparagraph (4) of this subrule, submitted to the department within ten days after the end of each month the system serves water to the public, and maintained at the facility for department inspection for a period of five years. For CWSs and NTNCs, the MOR must be signed by the certified operator in charge. For TNCs, the MOR, if required by the department, must be signed by the owner or the owner's designee.

(3) In addition to the requirements of this paragraph, all PWSs using a SW or IGW source must also comply with the applicable record-keeping requirements in 567—Chapter 43.

(4) MORs shall be completed as follows. Daily monitoring is seven days a week unless otherwise specified by the department.

1. Pumpage or flow. NCWS shall measure and record the total water used each week. Daily measurement

and recording is recommended. CWS shall measure and record the total water used each day. Pumpage or flow reporting may be required in an operation permit where needed to verify MCL compliance.

2. General treatment effectiveness. Where treatment is practiced, the intended effect of the treatment shall be measured and recorded at locations and by methods which best indicate effectiveness of the treatment process, at a frequency specified in **Appendix A of this chapter**.

3. Primary standard treatment effectiveness. Where the raw water quality does not meet the requirements of **567—Chapters 41 and 43** and treatment is practiced for the purpose of complying with a MCL, AL, TT, or HA, the primary standard constituent or an appropriate department-designated indicator constituent shall be measured and recorded daily. Reporting of these results will be required in the operation permit to verify MCL compliance.

4. Secondary standard treatment effectiveness. Where treatment is practiced for the purpose of achieving the recommended level of any constituent designated in the federal secondary standards, measurements shall be measured and recorded at a frequency specified in **Appendix A of this chapter**.

5. Chemical application. Chemicals such as fluoride, iodine, bromine, and chlorine, which are potentially toxic in excessive concentration, shall be measured and recorded daily. Recording shall include the amount of chemical applied each day. Where the PWS is attempting to maintain a residual of the chemical throughout the system, the residual in the system shall be measured and recorded daily. The quantity of all other chemicals applied shall be measured and recorded at least once each week.

6. Static water levels and pumping water levels must be measured and recorded once per month for all GW sources. More or less frequent measurements may be approved by the department where historical data justifies it.

7. NCWS are exempt from the self-monitoring requirements for cation-exchange softening and iron/manganese removal if the treatment unit:

- Is a commercially available “off-the-shelf” unit designed for home use;
- Is self-contained, requiring only a piping connection for installation;
- Operates throughout a range of 35 to 80 psi; and
- Has not been installed for the purpose of removing a contaminant which has an MCL, TT, AL, or HA.

*b. Chemical quality and application.* Any chemical which is added to raw, partially treated, or finished water must be suitable for the intended use in a potable water system. The chemical must be certified by an ANSI accredited third party for conformance with **ANSI/NSF Standard 60**, if such certification exists for the particular product, unless certified chemicals are not reasonably available for use, in accordance with department guidelines. If the chemical is not certified to meet the **ANSI/NSF Standard 60** or no certification is available, the person seeking to supply or use the chemical must prove to the department’s satisfaction that the chemical is not toxic or otherwise a potential hazard in a potable PWS.

The PWS shall keep a record of all chemicals used. This record should include a clear identification of the chemical by brand or generic name and the dosage rate. When chemical treatment is applied with the intent of obtaining an in-system residual, the residuals will be monitored regularly. When chemical treatment is applied and in-system residuals are not expected, the effectiveness of the treatment will be monitored through an appropriate indicative parameter.

(1) Continuous disinfection.

1. When required. Continuous disinfection must be provided at all PWSs, except for GW supplies that either have no treatment facilities or that have only fluoride, sodium hydroxide, or soda ash addition and that meet the bacterial standards in **567—subrule 41.2(1)** and do not show other actual or potential hazardous contamination by microorganisms. For a NCWS that only uses a cation-exchange softening unit meeting the requirements of **42.4(3)“a”(4)**, the continuous disinfection requirement is based upon both the system’s history of coliform bacteria detection and its compliance with the coliform bacteria monitoring requirements in **567—subrule 41.2(1)**.

2. Method. Chlorine is the preferred disinfecting agent. Chlorination may be accomplished with liquid chlorine, calcium or sodium hypochlorites, or chlorine dioxide. Other disinfecting agents will be considered, provided a residual can be maintained in the distribution system, reliable application equipment is available, and residual testing procedures are recognized in the Standard Methods.

3. Chlorine residual. A minimum free available chlorine residual of 0.3 mg/L or a minimum total available chlorine residual of 1.5 mg/L must be continuously maintained throughout the distribution system, except for those points in the distribution system that terminate as dead ends or areas that represent very low use when compared to usage throughout the rest of the distribution system, as determined by the department. All systems using water to which chlorine has been added must monitor daily in the distribution system to ensure the minimum disinfectant residual concentration is met, including both wholesale systems and consecutive systems.

4. Chlorine may be measured by a test kit or an online analyzer meeting the following specifications.

- Test kit. A test kit capable of measuring free and combined chlorine residuals in increments no greater than 0.1 mg/L in the range below 0.5 mg/L, and in increments no greater than 0.2 mg/L in the range from 0.5 mg/L to 1.0 mg/L, and in increments no greater than 0.3 mg/L in the range from 1.0 mg/L to 2.0 mg/L, must be provided at all chlorination facilities. The test kit must use an analysis method recognized in the Standard Methods.

- Online analyzer. Free and total chlorine may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be verified with a grab sample measurement at least every seven days. The analyzer concentration must be within plus or minus 0.1 mg/L or plus or minus 15 percent (whichever is larger) of the grab sample measurement. If the verification is not within this range, immediate actions must be taken to resolve the issue and another verification must be conducted.

5. Leak detection, control, and operator protection. A bottle of at least 56 percent ammonium hydroxide must be provided at all gas chlorination installations for leak detection. Leak repair kits must be available where ton chlorine cylinders are used.

6. Other disinfectant residuals. If an alternative disinfecting agent is approved by the department, the residual levels and test kit type will be assigned by the department in accordance with and based upon the analytical methods in the Standard Methods.

(2) Phosphate compounds.

1. When phosphate compounds are added to any PWS which includes iron or manganese removal or ion-exchange softening, the compounds must be applied after the iron or manganese removal or ion-exchange softening treatment units, unless the department has approved an engineering report demonstrating the suitability for addition prior to these units in accordance with 567—subrule 43.3(2). The department may require the discontinuance of phosphate addition where it interferes with other treatment processes or system operation, or if there is a significant increase in microorganism populations associated with phosphate application.

2. The total phosphate concentration in finished water must not exceed 10 mg/L as PO<sub>4</sub>.

3. Chlorine shall be applied to the phosphate solution in sufficient quantity to give an initial concentration of 10 mg/L in the phosphate solution. A chlorine residual must be maintained in the phosphate solution at all times.

4. Test kits capable of measuring polyphosphate and orthophosphate in a range from 0.0 to 10.0 mg/L in increments no greater than 0.1 mg/L must be provided.

5. Continuous application or injection of phosphate compounds directly into a well is prohibited.

(3) Fluorosilicic acid. Where fluorosilicic acid (H<sub>2</sub>SiF<sub>6</sub>, also called hydrofluosilicic acid) is added to a PWS, a fluoride test kit with a minimum range of from 0.0 to 2.0 mg/L in increments no greater than 0.1 mg/L must be provided. Distilled water and standard fluoride solutions of 0.2 mg/L and 1.0 mg/L must be provided.

*c. Reporting and record-keeping requirements for systems using surface water (SW) and groundwater under the direct influence of surface water (IGW).* In addition to the monitoring requirements in 42.4(3) “a” and “b,” a PWS that uses a SW or IGW source must report monthly to the department the information specified in this subrule when filtration is installed.

(1) Turbidity measurements required by 567—subrule 43.5(3) must be reported within ten days after the end of each month the system serves water to the public. The following information must be reported:

1. The total number of filtered water turbidity measurements taken during the month.

2. The number and percentage of filtered water turbidity measurements taken during the month which are less than or equal to the turbidity limits in 567—paragraphs 43.5(3) “b” through “e” for the filtration technology being used.



3. The date and value of any turbidity measurements taken during the month which exceed 5 NTU. If at any time the turbidity exceeds 5 NTU, the system must inform the department as soon as possible, but no later than 24 hours after the exceedance is known, in accordance with the PN requirements in 42.1(2). This requirement is in addition to the monthly reporting requirement, pursuant to 567—43.5(455B).

(2) Disinfection information in 567—subrule 43.5(2) and 42.4(3)“b” must be reported to the department within ten days after the end of each month the system serves water to the public. The following information must be reported:

1. For each day, the lowest measurement of residual disinfectant concentration in mg/L in water entering the distribution system.

2. The date and duration of each period when the residual disinfectant concentration in water entering the distribution system fell below 0.3 mg/L free residual chlorine or 1.5 mg/L total residual chlorine (TRC) and when the department was notified of the occurrence.

If at any time the residual falls below 0.3 mg/L free residual chlorine or 1.5 mg/L TRC in the water entering the distribution system, the system must notify the department as soon as possible, but no later than by the end of the next business day. The system also must notify the department by the end of the next business day whether or not the residual was restored to at least 0.3 mg/L free residual chlorine or 1.5 mg/L TRC within four hours. This requirement is in addition to the monthly reporting requirement in 567—43.5(455B).

3. The information on the samples taken in the distribution system in conjunction with the total coliform monitoring in 567—paragraph 43.5(2)“d” and pursuant to 567—subparagraph 41.2(1)“c”(7).

(3) Total inactivation ratio. The total inactivation ratio must be calculated each day the treatment plant is in operation, pursuant to 567—paragraph 43.5(2)“a,” and reported on the MOR. If the total inactivation ratio is below 1.0, the system must notify the department within 24 hours.

*d. Reporting and record-keeping requirements for DPBs, disinfectants, and DBP precursors.*

(1) General requirements.

1. In addition to the monitoring requirements in 42.4(3)“a” and “b,” a CWS or NTNC that adds a chemical disinfectant to the water in any part of the treatment process or which provides water that contains a chemical disinfectant must report monthly to the department the information specified in this paragraph by the dates in 567—subparagraphs 41.6(1)“a”(3) and 43.6(1)“a”(3). A TNC which adds chlorine dioxide as a disinfectant or oxidant must report monthly to the department the information specified in this paragraph by the dates in 567—paragraph 43.6(1)“a”(3)“3.”

2. Systems required to sample quarterly or more frequently must report to the department within ten days after the end of each quarter in which samples were collected, notwithstanding the PN provisions of 567—42.1(455B). Systems required to sample less frequently than quarterly must report to the department within ten days after the end of each monitoring period in which samples were collected.

(2) DBPs. Systems must report the information in the following table:

**DBPs Reporting Table**

<b>If you are a system monitoring for...</b>	<b>You must report ...</b>
TTHMs and HAA5 under 567—subparagraph 41.6(1)“c”(4) on a quarterly or more frequent basis	<ol style="list-style-type: none"> <li>1. The number of samples taken during the last quarter.</li> <li>2. The location, date, and result of each sample taken during the last quarter.</li> <li>3. The arithmetic average of all samples taken in the last quarter.</li> <li>4. The annual arithmetic average of the quarterly arithmetic averages for the last four quarters.*</li> <li>5. Whether the MCL was exceeded.</li> <li>6. Under Stage 2, any OELs that were exceeded during the quarter, including the location and date and the calculated TTHM and HAA5 levels.</li> </ol>
TTHMs and HAA5 under 567—subparagraph 41.6(1)“c”(4) less frequently than quarterly, but at least annually	<ol style="list-style-type: none"> <li>1. The number of samples taken during the last year.</li> <li>2. The location, date, and result of each sample taken during the last monitoring period.</li> <li>3. The arithmetic average of all samples taken over the last year.*</li> <li>4. Whether the MCL was exceeded.</li> </ol>
TTHMs and HAA5 under 567—subparagraph 41.6(1)“c”(4) less frequently than annually	<ol style="list-style-type: none"> <li>1. The location, date, and result of the last sample taken.</li> <li>2. Whether the MCL was exceeded.</li> </ol>

Chlorite under 567—subparagraph 41.6(1)“c”(3)	<ol style="list-style-type: none"> <li>1. The number of samples taken each month for the last 3 months.</li> <li>2. The location, date, and result of each sample taken during the last quarter.</li> <li>3. For each month in the reporting period, the arithmetic average of all samples taken in each three sample sets taken in the month.</li> <li>4. Whether the MCL was exceeded, and in which month it was exceeded.</li> </ol>
Bromate under 567—subparagraph 41.6(1)“c”(2)	<ol style="list-style-type: none"> <li>1. The number of samples taken during the last quarter.</li> <li>2. The location, date, and result of each sample taken during the last quarter.</li> <li>3. The arithmetic average of the monthly arithmetic averages of all samples taken in the last year.</li> <li>4. Whether the MCL was exceeded.</li> </ol>

\*The calculation of the RAA will transition from a system-wide RAA calculation under Stage 1 to an LRAA under Stage 2. The transition will commence according to the system schedule listed in 567—paragraph 41.6(1)“b.” Beginning at the end of the fourth calendar quarter that follows the compliance date, and at the end of each subsequent quarter, the system must report the arithmetic average of quarterly results for the last four quarters of each monitoring location. If the calculated LRAA based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, the system must report this information to the department no later than the due date of the next compliance report.

(3) Disinfectants. In addition to the requirements in 567—subparagraph 41.2(1)“c”(7), systems must report the information in the following table:

**Disinfectants Reporting Table**

If you are a ...	You must report ...
System monitoring for chlorine or chloramines under 567—paragraph 43.6(1)“c”(1)“2”	<ol style="list-style-type: none"> <li>1. The number of samples taken during each month of the last quarter.</li> <li>2. The monthly arithmetic average of all samples taken in each month for the last 12 months.</li> <li>3. The arithmetic average of all monthly averages for the last 12 months.</li> <li>4. Whether the MRDL was exceeded.</li> </ol>
System monitoring for chlorine dioxide under 567—paragraph 43.6(1)“c”(1)“3”	<ol style="list-style-type: none"> <li>1. The dates, results, and locations of samples taken during the last quarter.</li> <li>2. Whether the MRDL was exceeded.</li> <li>3. Whether the MRDL was exceeded in any two consecutive daily samples and whether the resulting violation was acute or nonacute.</li> </ol>

(4) DBP precursors and enhanced coagulation or enhanced softening. Systems must report the information in the following table:

**DBP Precursors and Enhanced Coagulation or Enhanced Softening Reporting Table**

If you are a ...	You must report ...
System monitoring monthly or quarterly for TOC under 567—subparagraph 43.6(1)“c”(2) and required to meet the enhanced coagulation or enhanced softening requirements in 567—subparagraphs 43.6(3)“b”(2) or (3)	<ol style="list-style-type: none"> <li>1. The number of paired (source water and treated water, prior to continuous disinfection) samples taken during the last quarter.</li> <li>2. The location, date, and result of each paired sample and associated alkalinity taken during the last quarter.</li> <li>3. For each month in the reporting period that paired samples were taken, the arithmetic average of the percent reduction of TOC for each paired sample, and the required TOC percent removal.</li> <li>4. Calculations for determining compliance with the TOC percent removal requirements in 567—subparagraph 43.6(3)“c”(1).</li> <li>5. Whether the system is in compliance with the enhanced coagulation or enhanced softening percent removal requirements in 567—paragraph 43.6(3)“b” for the last four quarters.</li> </ol>
System monitoring monthly or quarterly for TOC under 567—subparagraph 43.6(1)“c”(2) and meeting one or more of the alternative compliance criteria in 567—subparagraphs 43.6(3)“a”(2) or (3)	<ol style="list-style-type: none"> <li>1. The alternative compliance criterion that the system is using.</li> <li>2. The number of paired samples taken during the last quarter.</li> <li>3. The location, date, and result of each paired sample and associated alkalinity taken during the last quarter.</li> <li>4. The RAA based on monthly averages (or quarterly samples) of source water TOC for systems meeting a criterion in 567—paragraphs 43.6(3)“a”(2)“1” or “3” or of treated water TOC for systems meeting the criterion in 567—paragraph 43.6(3)“a”(2)“2.”</li> <li>5. The RAA based on monthly averages (or quarterly samples) of source water SUVA for systems meeting the criterion in 567—paragraph 43.6(3)“a”(2)“5” or of treated water SUVA for systems meeting the criterion in 567—paragraph 43.6(3)“a”(2)“6.”</li> </ol>

	<p>6. The RAA of source water alkalinity for systems meeting the criterion in 567—paragraph 43.6(3) “a”(2)“3” and of treated water alkalinity for systems meeting the criterion in 567—paragraph 43.6(3) “a”(3)“1.”</p> <p>7. The RAA for both TTHM and HAA5 for systems meeting the criterion in 567—paragraphs 43.6(3) “a”(2)“3” or “4.”</p> <p>8. The RAA for the amount of magnesium hardness removal (as CaCO<sub>3</sub>, in mg/L) for systems meeting the criterion in 567—paragraph 43.6(3) “a”(3)“2.”</p> <p>9. Whether the system is in compliance with the particular alternative compliance criterion in 567—subparagraph 43.6(3) “a”(2) or (3).</p>
SW/IGW system on reduced monitoring for TTHM/HAA5 under 567—paragraph 41.6(3) “d”	<p>For each treatment plant that treats surface or IGW source water, report:</p> <ol style="list-style-type: none"> <li>1. The number of source water TOC samples taken each month during the last quarter.</li> <li>2. The date and result of each sample taken during the last quarter.</li> <li>3. The quarterly average of monthly samples taken during the last quarter or the result of the quarterly sample.</li> <li>4. The RAA of quarterly averages from the past four quarters.</li> <li>5. Whether the TOC RAA exceeded 4.0 mg/L.</li> </ol>

### 567—42.5(455B) Record maintenance.

**42.5(1) Record maintenance requirements.** Any owner or operator of a PWS subject to the provisions of this rule shall retain on its premises, or at a convenient location near its premises, the following records:

*a. Analytical records.*

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

1. Sampling date, place, and time, and the name of the person who collected the sample;
2. Sample identification, indicating whether it was a routine distribution system sample, check sample, raw or process water sample, or other special purpose sample;
3. Analysis date;
4. Laboratory and person responsible for performing analysis;
5. Analytical technique or method used; and
6. Analysis results.

(2) Record retention for specific analytes.

1. Microbiological and turbidity. Records of microbiological and turbidity analyses made pursuant to 567—Chapters 41 and 43 shall be kept for not less than five years.
2. Radionuclides, inorganic compounds, and organic compounds. Records of chemical analyses made pursuant to 567—Chapter 41 shall be kept for not less than ten years. Additional lead and copper requirements are listed in 42.5(1) “b.”

*b. Lead and copper.* A system subject to the requirements of 42.4(2) shall retain original records of all data and analyses, reports, surveys, PE, letters, evaluations, schedules, and any other information required by 567—41.4(455B) and 567—Chapter 43. These records shall be kept for not less than twelve years.

*c. Records of action.* Records of action taken by the system to correct violations of primary drinking water regulations (including administrative orders) shall be kept for not less than five years after the last action taken with respect to the particular violation involved.

*d. Sanitary surveys.* Copies of any written reports, summaries, or communications relating to any sanitary surveys of the system, shall be kept for not less than ten years after completion of the sanitary survey involved.

*e. Operation or construction permits.* Records concerning an operation or a construction permit issued pursuant to 567—Chapter 43 shall be kept for a period ending not less than ten years after the system achieves compliance with an MCL, TT, AL, or HA, or after the system in question completes the associated construction project.

*f. PN.* Records of PNs, including the CCR, PN examples, and PN certifications, shall be kept for not less than five years.

*g. Self-monitoring.* MORs must be completed as described in 42.4(3) “a”(2) and maintained at the facility for department inspection for at least five years. All data generated at the facility to comply with the self-monitoring requirements must be maintained at the facility for department inspection for not less than five years. The data shall be in a form that allows easy retrieval and interpretation. Examples of data that must be retained

include, but are not limited to, recorder charts, logbooks, bench sheets, SCADA records, and electronic files.

*h. Monitoring plans.* Copies of monitoring plans developed pursuant to 567—Chapters 41, 42, and 43 shall be kept for the same period of time as the records of analyses taken under the plans are required to be kept, unless otherwise specified.

*i. GW rule.* Additional record-keeping requirements for the GW rule are listed in 567—paragraph 41.7(6)“b.”

*j. Level 1 and 2 assessment forms and corrective action.* The record-keeping requirements in this paragraph pertain to the coliform bacteria sampling requirements in 567—subrule 41.2(1).

(1) Systems must maintain any assessment form, regardless of who conducts the assessment, and documentation of corrective actions completed as a result of those assessments, or other available summary documentation of the sanitary defects and corrective actions taken under 567—paragraph 41.2(1)“m.”. These records shall be maintained at the facility for department inspection for not less than five years after completion of the assessment or corrective action.

(2) Systems must maintain a record of any repeat sample taken that meets department criteria for an extension of the 24-hour period for collecting repeat samples in accordance with 567—paragraph 41.2(1)“j.”

**42.5(2)** Reserved.

These rules are intended to implement Iowa Code sections 455B.171 through 455B.188 and 455B.190 through 455B.192.

**APPENDIX A: MINIMUM SELF-MONITORING REQUIREMENTS (SMRs)**

I. Minimum Self-Monitoring Requirements (SMRs) for TNCs (excluding SW or IGW PWSs).

- The SMRs only apply to those systems meeting the monthly operation report (MOR) criteria in 42.4(3)“a”(1).
- TNCs are exempt from the SMRs for point-of-use (POU) treatment devices, unless the device is used to remove a contaminant which has an MCL, TT, or HA, in which case additional SMRs will be assigned by the department.
- Daily monitoring for TNCs applies only when the facility is in operation.
- Additional or more frequent monitoring requirements may be assigned by the department in the operation permit.
- Additional SMRs are required if treatment is used to remove a regulated contaminant, or a contaminant which has an MCL, TT, or HA. See Section II for the SMRs for specific treatment types.

All TNCs which meet the MOR criteria in 42.4(3)“a”(1) must measure the following parameters, as applicable.

Parameter	Sample Site	Frequency
<b>GENERAL REQUIREMENTS</b>		
Pumpage (Flow)	raw:	1/week
	finished:	1/week
Disinfectant Residual***	finished:	1/day
	distribution system**:	1/day
Disinfectant, quantity used	day tank/scale:	1/day
Static Water and Pumping Water Levels (Drawdown)****	each active well:	1/month
<b>ION EXCHANGE OR REVERSE OSMOSIS FOR NITRATE REMOVAL</b>		
Nitrate	finished:	1/day
<b>UV LIGHT</b>		
Lamp Status (On/Off)	Each lamp:	1/day

\*TNCs must measure and record the total water used each week, but daily measurements are recommended, and may be required by the department for specific PWSs.

\*\*Monitoring shall be conducted at representative points in the distribution system which adequately demonstrate compliance with 42.4(3)“b”(1).

\*\*\*The department may reduce the required sample site locations for a system with a minimal distribution system and only hypopneumatic tank storage.

\*\*\*\*More or less frequent measurements may be approved by the department where justified by historical data.

II. Minimum SMRs for CWS, NTNC, and SW/IGW TNC

- The SMR only apply to those systems meeting the MOR criteria in 42.4(3)“a”(1).
- NTNCs are exempt from the SMRs for POU treatment devices, unless the device is used to remove a contaminant which has an MCL, TT, AL, or HA, in which case additional SMRs will be assigned by the department.
- Daily monitoring for NTNCs applies only when the facility is in operation.
- These are the minimum SMRs. Additional or more frequent monitoring requirements may be assigned in an operation permit.

A. General Requirements. All PWSs which meet the MOR criteria in 42.4(3)“a”(1) must measure the following parameters, as applicable. TNCs that provide treatment other than a cation exchange softening unit or iron/manganese removal treatment unit must meet the requirements in the CWS column.

Parameter	PWS Type:	NTNC* & SW/IGW TNC	CWS
	Sample Site	Frequency	Frequency
Pumpage (Flow)	raw:	1/week	1/day
	finished:	1/week	1/day
Consecutive systems (flow)	All master meters:	1/day	

Parameter	PWS Type:	NTNC* & SW/IGW TNC	CWS
	Sample Site	Frequency	Frequency
Static Water and Pumping Water Levels (Drawdown)**	each active well:	1/month	

\*NTNCs must measure and record the total water used each week, but daily measurements are recommended, and may be required by the department for specific PWSs.

\*\*If requested by the system, the department may allow an alternate frequency for systems with pressure tanks or controls that operate the well to ensure constant pump discharge pressure.

B. Chemical Addition. All PWSs which apply chemicals in the treatment process must monitor the following parameters for the applicable processes.

Pumpage or Flow:		<0.1 MGD	0.1-0.5 MGD	>0.5 MGD
Water Treatment Plant Classification:		A & I	II	III & IV
Parameter	Sample Site	Frequency	Frequency	Frequency
<b>DISINFECTION</b>				
Disinfectant Residual**	finished:	1/day		
	distribution system*:	1/day		
Calculated MRDL (monthly average)	distribution system:	1/month		
Calculated MRDL (RAA)	distribution system:	1/calendar quarter		
Disinfectant, quantity used	day tank/scale:	1/day		
<b>FLUORIDATION</b>				
Fluoride	raw:	1/quarter	1/month	
	finished:	1/day	1/day	
Fluoride, quantity used	day tank/scale:	1/day		
<b>pH ADJUSTMENT</b>				
pH	finished:	1/week	2/week	1/day
Caustic Soda, quantity used	day tank/scale:	1/week		
<b>PHOSPHATE ADDITION</b>				
Phosphate, as PO <sub>4</sub>	finished:	1/week	2/week	1/day
Phosphate, quantity used	day tank/scale:	1/week		
<b>AMMONIA ADDITION</b>				
Chemical, quantity used	day tank/scale:	1/day		
Total residual chlorine (TRC)	finished:	1/day		
	distribution system:	1/day		
Monochloramine	finished:	1/day		
	distribution system:	1/day		
Free ammonia	finished:	1/day		
	distribution system:	1/day		
<b>OTHER CHEMICALS</b>				
Chemical	finished:	1/week	2/week	1/day
Chemical, quantity used	day tank/scale:	1/week		

\*Monitoring shall be conducted at representative points in the distribution system which adequately demonstrate compliance with 42.4(3)“b”(1).

\*\*The department may reduce the required sample site locations for a system with a minimal distribution system, only hydropneumatic tank storage, and, if a CWS, it serves less than 100 persons.

C. Iron or Manganese Removal. All CWS, NTNC, and publicly-owned TNC systems with iron or manganese removal equipment must monitor for the following parameters. This monitoring is not required if the removal equipment can be purchased “off the shelf,” is self-contained (requiring only a piping connection for installation), and operates throughout a range of 35 to 80 psi. Any chemicals which are applied during the treatment process must be measured under section B of this appendix. Systems with manganese removal must conduct the manganese monitoring. If a system utilizes the treatment only for iron removal, manganese self-monitoring is not required.

Pumpage or Flow:		<0.1 MGD	0.1-0.5 MGD	>0.5 MGD
Water Treatment Plant Classification:		I	II	III & IV
Parameter	Sample Site	Frequency	Frequency	Frequency
Iron	raw:	1/quarter	1/month	1/month
	finished:	1/week	2/week	1/day
Manganese*	raw:	1/quarter	1/month	
	finished:	1/day	1/day	
IRON/MANGANESE REMOVAL EQUIPMENT INSTALLED FOR ARSENIC REMOVAL				
Iron	raw:	1/month		
	finished:	1/day		

\*A system may be allowed to conduct manganese self-monitoring 1/week if it meets all of the following criteria: an average annual pumpage of less than 0.1 MGD, raw water manganese less than 0.3 mg/L, and agrees to conduct quarterly PN.

D. Lime Softening of GW (excluding IGW) and pH Adjustment for Iron and Manganese Removal, by precipitation and coagulation processes utilizing lime, soda ash, or other chemical additions. Testing is only required if a specific chemical is added.

Pumpage or Flow:		<0.1 MGD	0.1-0.5 MGD	>0.5 MGD
Water Treatment Plant Classification:		I	II	III & IV
Parameter	Sample Site	Frequency	Frequency	Frequency
Alkalinity	raw:	1/quarter	1/month	
	finished:	1/day	1/day	
Hardness as CaCO <sub>3</sub>	raw:	1/quarter	1/month	
	finished:	1/day	1/day	
Iron	raw:	1/quarter	1/month	1/month
	finished:	1/week	2/week	1/day
Manganese	raw:	1/quarter	1/month	
	finished:	1/day	1/day	
pH	raw:	1/week		
	finished:	1/day		
Temperature	raw	1/week		

E. Cation Exchange (Zeolite) Softening. All CWS, NTNC, and publicly-owned TNC systems with ion exchange softening equipment must monitor for the following parameters. This monitoring is not required if the ion exchange softening equipment can be purchased “off the shelf,” is self-contained (requiring only a piping connection for installation), and operates throughout a range of 35 to 80 psi. Any chemicals which are applied during the treatment process must be measured under [section B of this appendix](#). An annual sodium sample of the finished water is required of all CWSs that use cation exchange softening, and will also meet the special sodium monitoring requirement of [567—paragraph 41.11\(1\)“f.”](#)

Pumpage or Flow:		<0.1 MGD	0.1-0.5 MGD	>0.5 MGD
Water Treatment Plant Classification:		I	II	III & IV
Parameter	Sample Site	Frequency	Frequency	Frequency
Hardness as CaCO <sub>3</sub>	raw:	1/quarter	1/month	1/month
	finished:	1/week	2/week	1/day
pH	finished:	1/week	2/week	1/day
Sodium*	finished:	1/year		
Bypass, in flow or percent bypassed	bypass:	1/day		
ION EXCHANGE FOR RADIONUCLIDE REMOVAL				
Hardness as CaCO <sub>3</sub>	raw:	1/month		
	finished:	1/day		

\*The annual sodium sample required in [567—paragraph 41.11\(1\)“f.”](#) will satisfy this requirement.

## F. Filtration and Disinfection Requirements for SWs or IGWs.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
CT Ratio*	finished:	1/day
Calculated V Value	distribution system:	1/month
Calculated MRDL (monthly average)	distribution system:	1/month
Calculated MRDL (RAA)	distribution system:	1/calendar quarter
Disinfectant Residual**	finished:	continuous
	distribution system**:	1/day
Disinfectant, quantity used	day tank/scale:	1/day
pH	finished:	1/day
Temperature	raw:	1/day
	finished:	1/day
Turbidity	IFE:	At least every 15 minutes
	raw and CFE:	See 567—subrules 43.5(3) and 43.5(4), and rules 567—43.9 (455B) and 567—43.10 (455B) for specific requirements Populations greater than 100,000 - continuous turbidity monitoring or hourly grab samples Populations less than 100,000 - Every 4 hours the system serves water to the public or more frequently as long as measurements are recorded at equal time intervals and detailed in the system's turbidity protocol.; continuous turbidity monitoring may be substituted for grab sample monitoring if the continuous process is validated using a department-approved turbidity protocol
Turbidity, 95th percentile calculation	CFE:	Monthly, per 567 paragraph—43.5(3) "b"
Continuous turbidity monitoring instrument***	Each turbidimeter:	Each turbidimeter must be verified with a grab sample measurement at least once per week

\*Determine the total inactivation ratio (CT<sub>calc</sub>/CT<sub>99.9</sub>) before the first customer during peak hourly flow each day the treatment plant is in operation; see 567—paragraph 43.5(2)\*a."

\*\*Monitoring shall be conducted to demonstrate compliance with 42.4(3) "b," 567—subrules 43.5(2) and 43.5(4), and 567—43.6(455B).

\*\*\*The calibration of each turbidimeter used for compliance must be verified to demonstrate IFE compliance with 567—paragraphs 43.9(4)\*a" and 43.10(5)\*a", and CFE compliance with 567—subparagraph 43.5(4)\*b"(1), and subrules 43.9(3) and 43.10(4).

## G. Clarification or Lime Softening of SW or IGW.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Alkalinity	raw:	1/day
	raw :	SW/IGW systems; 1/month at same time raw water TOC sample is collected
	finished:	1/day
Carbon dioxide (CO <sub>2</sub> ), quantity used	tank/scale/feeder:	1/week
Caustic Soda, quantity used	day tank/scale:	1/week
CT Ratio*	finished:	1/day
Disinfectant Residual**	finished:	continuous
	distribution system**:	daily
Disinfectant, quantity used	day tank/scale:	1/day
Continuous disinfectant monitoring instrument	location of instrument:	The calibration of instruments used for continuous disinfectant monitoring must be verified with a grab sample measurement at least every 7 days
Hardness as CaCO <sub>3</sub>	raw:	1/day
	finished:	1/day
Lime, quantity used	day tank/scale/feeder:	1/week



Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
pH	raw:	1/day
	finished:	1/day
Temperature	raw:	1/day
	finished:	1/day
TOC	raw:	1/month at the same time the CFE sample is taken
	CFE:	1/month at the same time the raw sample is taken
	Source water alkalinity:	1/month at the same time the raw sample is taken
Turbidity	raw and CFE:	See 567—subrules 43.5(3) and 43.5(4), and 567—43.9 (455B) and 567—43.10 (455B) for specific requirements
	IFE:	At least every 15 minutes

\*Determine the total inactivation ratio (CT<sub>calc</sub>/CT<sub>99.9</sub>) before the first customer during peak hourly flow each day the treatment plant is in operation; see 567—paragraph 43.5(2)“a.”

\*\*Monitoring shall conducted to demonstrate compliance with 42.4(3)“b.” 567—subrules 43.5(2) and 43.5(4), and 567—43.6(455B). Systems serving 3,300 or fewer persons may take grab samples in lieu of providing continuous monitoring at the frequencies in 567—sub paragraph 43.5(4)“b”(2)

#### H. Reverse Osmosis, Nanofiltration, or Electrodialysis.

Parameter	Pumpage or Flow:	<0.1 MGD	>0.1 MGD
	Sample Site	Frequency	Frequency
Alkalinity	raw:	1/quarter	1/month
	finished:	1/day	1/day
Antiscalant, quantity used	day tank/scale:	1/week	
Bypass flow or percent bypassed	bypass:	1/day	
Cleaning chemical, quantity used	day tank/scale	1/week	
Hardness as CaCO <sub>3</sub>	raw:	1/quarter	1/month
	finished:	1/day	1/day
Iron	raw:	1/day	
Manganese	raw:	1/day	
pH	raw:	1/week	
	finished:	1/day	
Total Dissolved Solids	raw:	1/month	

#### I. Anion Exchange (i.e., Nitrate Reduction).

Parameter	Pumpage or Flow:	<0.1 MGD	>0.1 MGD
	Sample Site	Frequency	Frequency
Bypass flow or percent bypassed	bypass:	1/day	
Nitrate	raw:	1/day	
	finished:	1/day	
Source water	Document which sources were in use during each month and when well or source rotation is made		
Sulfate*	raw:	1/week	
	finished:	1/week	

\*If required by the department.

#### J. Activated Carbon or Air-Stripping for TTHM, VOC, or SOC Removal (GAC or PAC).

Parameter	Pumpage or Flow:	<0.1 MGD	>0.1 MGD
	Sample Site	Frequency	Frequency
TOC	finished:	1/quarter	1/month

K. Lead and Copper: Corrosion Control and WQPs. The specific SMRs for corrosion control and WQPs are listed in 567—paragraph 41.4(1)“d” and 567—subrules 43.7(1) and 43.7(2).

## L. Hydrous Manganese Oxide (HMO) Filtration and Manganese Co-precipitation for Radium Removal.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Chemical additive, quantity used	day tank/scale:	1/day
Manganese	raw:	1/month
	finished:	1/day
Pumpage or Flow	raw	1/day
Bypass flow, percent bypass, or blend	bypass/blend:	1/day

## M. Acrylamide and Epichlorohydrin Addition.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Chemical additive, third-party or manufacturer's certification*	Combination of dose and monomer level	Annually

\*Levels must not exceed values specified in 567—subparagraph 41.5(1)“b”(2).

N. Source Blending for Contaminant Control. The specific SMRs for blending of source water to achieve compliance with an MCL, TT, AL, or HA will be specified in an operation permit on a case-by-case basis in accordance with 42.4(3)“a”(2).

O. 4-log Treatment of Viruses for GW Systems. Operation permits will include the mandatory operational requirements for the approved 4-log virus treatment in accordance with 567—paragraph 41.7(4)“b.” All GW systems that provide at least 4-log virus treatment must measure the following parameters, where applicable.

Parameter	Population served:	25 - 3,300	>3,300
	Sample Site	Frequency	
Chemical disinfectant*	finished:	1/day**	continuously
Contact tank level	level:	1/day	
Peak flow rate	flow meter:	continuously	
pH	finished:	1/day	
Temperature***	finished:	1/day	

\*Residual disinfectant concentration monitoring must be done using the analytical methods in 567—subparagraph 43.5(4)“a”(5) at a department-approved location, and must record the concentration each day that water is served to the public.

\*\*GW systems must collect a daily grab sample during the hour of peak flow or at another department-specified time.

\*\*\*Daily temperature monitoring is assigned initially for one year so that the lowest temperature can be determined and assigned for subsequent compliance monitoring.

P. Biological Treatment Process for Ammonia Removal. Operation permits may include additional mandatory operational requirements for the treatment process.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Ammonia, as N**	finished*:	1/week
	distribution system*:	1/week
Dissolved oxygen (DO)	contactor inlet:	1/day
	contactor outlet:	1/day
Nitrite, as N**	finished*:	1/day
	distribution system*:	1/day

\* One sample from the finished water must be collected monthly, split for analysis, and analyzed by a certified laboratory and the system.

\*\*The department may reduce the required sampling frequency once nitrification is achieved in the biological filter or contactor and the system is consistently using free available chlorine for disinfection.

## Q. Membrane Filtration (including micro and ultra filtration)

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Antiscalant, quantity used	day tank/scale:	1/week
Cleaning chemical, quantity used	day tank/scale:	1/week
Direct integrity test (DIT)*	each membrane unit:	1/day*
Indirect integrity test**	each membrane unit:	continuous**
Log removal value (LRV)*	each membrane unit:	1/day*
Upper control limit***	each membrane unit	If the DIT result exceeds the control limit, the system must remove the membrane from service
Continuous turbidity monitoring equipment***		Each turbidimeter used for compliance must be verified with a grab sample measurement at least once per week

\*Systems must conduct DITs on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation. A DIT must also be conducted to verify repairs.

\*\*Unless the department approves an alternative parameter, continuous indirect integrity monitoring must include continuous filtrate turbidity monitoring conducted at a frequency of no less than once every 15 minutes on each membrane unit.

\*\*\*Systems must establish a control limit within the sensitivity limits of the DIT in order to demonstrate compliance with 567—paragraphs 43.11(12)“b”(3)“4” and 43.11(12)“b”(3)“5.”

\*\*\*\*The calibration of each turbidimeter used for compliance must be verified to demonstrate compliance with 567—paragraphs 43.9(4)“a” and 43.10(5)“a.”

R. CWS and NTNC Systems Using Ozone Treatment. CWS and NTNC systems that use ozone in their treatment process must comply with the bromide requirements of subrule 567—43.6(2).

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Bromate	finished:	1/month*

\*The department may allow systems required to analyze for bromate to reduce bromate monitoring from monthly to once per quarter, if the system demonstrates that the average source water bromide concentration is less than 0.05 mg/L based upon representative monthly measurements for one year. The system must continue bromide monitoring to remain on reduced bromate monitoring.

S. Ultraviolet Light (UV). All CWS and NTNC systems must comply with these requirements.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Alarm during off-specification conditions	each reactor:	1/5 minutes
UV intensity	each lamp:	1/day
UVT	each lamp:	1/day
Ratio of minimum UV dose calculated and recorded every 4 hours to the required UV dose; OR calculate and record the log inactivation every four hours	each reactor:	1/day
Lamp status	each lamp:	1/4 hours**
Individual UV reactor flow	each reactor:	1/4 hours
	max UV flow:	daily
	total UV flow:	daily total
Total volume of off-specification water	each reactor:	1/day
	all reactors:	monthly total
Percent of off-specification water produced	all reactors:	monthly total
Perform UVT analyzer check protocol	-	1/week
Perform UV sensor verification*	each sensor	1/month

\*Reference sensor(s) must be calibrated at least once per year at a qualified facility against a traceable standard. Calibration records must be maintained for inspection during sanitary surveys. If the reference sensor is found to be out of calibration, the calibration frequency should be increased.

\*\*Systems serving fewer than 500 persons may record lamp status 1/day.

T. Chlorine Dioxide. All CWS, NTNC and TNC systems must comply with these requirements. In the event of an acute or nonacute violation, systems must also comply with paragraph 567—43.6(1) “e”.

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Chlorine dioxide	finished:	1/day
Chlorite	finished:	1/day

U. Copper Ion Generator

Parameter	Pumpage or Flow:	All
	Sample Site	Frequency
Copper residual	finished:	1/week
Copper residual	injection stream:	1/week