DEPARTMENT OF ENVIRONMENTAL QUALITY

~~OFFICE OF~~ DRINKING WATER AND MUNICIPAL ASSISTANCE **DIVISION**

SUPPLYING WATER TO THE PUBLIC

Filed with the Secretary of State on _____
These rules take effect immediately upon filing with the Secretary of State

(By authority conferred on the department of environmental quality by section 5 of 1976 PA 399, MCL 325.1005)

R 325.10102, R 325.10105, R 325.10108, R 325.10401a, R 325.10405, R 325.10410, R 325.10413, R 325.10420, R 325.10604f, R 325.10710a, R 325.10710b, R 325.310710d, R 325.11506, and R 325.11604 of the Michigan Administrative Code are amended as follows:

R 325.10102 Definitions; A, B.

Rule 102. As used in these rules:

(a) "Act" means 1976 PA 399, MCL 325.1001 to 325.1023 and known as the safe drinking water act.

(b) "Action level" means the concentration of lead or copper in water as specified in R 325.10604f(1)(c) that determines, in some cases, the treatment requirements that a water supply is required to complete.

(c) "Advisory board" means the advisory board of examiners appointed by the director under section 9(2) of the act.

(d) "Alteration" means the modification of, or addition to, an existing waterworks system, or portion of the system, that affects any of the following:

(i) Flow.

(ii) Capacity.

(iii) System service area.

(iv) Source.

(v) Treatment.

(vi) Reliability.

(e) "Approved analytical technique" means a calculation, determination, or other laboratory examination or procedure that has been approved by the United States environmental protection agency under 40 C.F.R. part 141, which is adopted by reference in R 325.10605.

(f) "Approved basement" means a basement which has walls and a floor that are constructed of concrete or its equivalent, which is essentially watertight, which is effectively drained, and which is in daily use.

(g) "Aquifer" means an underground water-bearing formation which is saturated and which transmits water in sufficient quantities to serve as a water supply.

(h) "Artesian" means a condition of internal pressure which causes the water level in a well to rise above the aquifer used to supply water at the well location.

(i) "Asset management program" means a program that identifies the desired level of service at the lowest life cycle cost for rehabilitating, repairing, or replacing the assets associated with the waterworks system.

(j) "Back-up operator" means a certified operator designated by the public water supply to be in charge of the waterworks system or portion of the waterworks system when the operator in charge is not available.

(k) "Bag filters" means pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside.

(l) "Bank filtration" means a water treatment process that uses a well to recover surface water that has naturally infiltrated into groundwater through a river bed or bank or banks. Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well or wells.

(m) "Bottled drinking water" means water that is ultimately sold, provided, or offered for human consumption in a closed container.

(n) "Business Day" means Monday through Friday, except for federal or state holidays.

R 325.10105 Definitions; F to L.

Rule 105. As used in these rules:

(a) "Federal act" means the safe drinking water act of 1974, 42 U.S.C.§300f et seq. and the state and local assistance set forth in 40 C.F.R. part 35, §35.600 to §35.630; national primary drinking water regulations set forth in 40 C.F.R. part 141; and national primary drinking water regulations implementation set forth in 40 C.F.R. part 142 promulgated by EPA (2014) under the federal act.

(b) "Filter profile" means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, that includes an assessment of filter performance while another filter is being backwashed.

(c) "Finished water" means water that is introduced into the distribution system of a public water supply and is intended for distribution and consumption without further treatment, except as treatment necessary to maintain water quality in the distribution system, for example, booster disinfection, addition of corrosion control chemicals.

(d) "Firm capacity," as applied to wells, pumping stations, or units of treatment systems, means the production capability of each respective part of the waterworks system with the largest well, pump, or treatment unit out of service.

(e) "First draw sample" means a 1-liter sample of tap water which has been standing in plumbing pipes for not less than 6 hours and which is collected without flushing the tap.

(f) "Flowing stream" means a course of running water flowing in a definite channel.

(g) "GAC10" means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with TTHM and HAA5 MCLs based on a locational running annual average under R 325.10610 shall be 120 days.

(h) "GAC20" means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days.

(i) "Gravity storage tank" means an elevated or ground level finished water storage reservoir that, during normal use, operates under atmospheric pressure.

(j) "Ground water" or "groundwater" means the water in the zone of saturation in which all of the pore spaces of the subsurface material are filled with water.

(k) "Ground water under the direct influence of surface water (GWUDI)" means any water beneath the surface of the ground with significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as Giardia lamblia or Cryptosporidium, or significant and relatively rapid shifts in water characteristics, such as turbidity, temperature, conductivity, or pH, that closely correlate to climatological or surface water conditions. The department will determine direct influence for individual sources in accordance with this definition and R 325.10611(1) and will notify the supply of its determination.

(l) "Grout" means neat cement, concrete, or other sealing material which is approved by the department and which is used to seal a well casing in a well.

(m) "Haloacetic acids (five) (HAA5)" mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid), rounded to 2 significant figures after addition.

(n) "Imminent hazard" means that, in the judgment of the director, there is a violation, or a condition that may cause a violation, of the state drinking water standards at a public water supply requiring immediate action to prevent endangering the health of people.

(o) "Initial compliance period" means January 1993 to December 1995. For a supply that has less than 150 service connections, the initial compliance period is January 1996 to December 1998 for contaminants listed in part 6 of these rules that have an effective date of January 17, 1994.

(p) "Lake/reservoir" means a natural or man-made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow.

(q) "Large water supply" or "large water system," for the purpose of lead and copper control, means a public water supply that serves more than 50,000 persons.

(r) "Lead service line" means a service line which is made of lead ~~and which connects the water main to the building inlet~~ and/**or** any lead pigtail, gooseneck, or other fitting that is connected to the ~~lead~~ **service** line.

(s) "Level 1 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the supply triggered the assessment. Level 1 assessment shall be conducted by the supply operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (for example, whether a ground water supply is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The supply shall conduct the assessment consistent with any department directives that tailor specific assessment elements with respect to the size and type of the supply and the size, type, and characteristics of the distribution system.

(t) "Level 2 assessment" means an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the supply triggered the assessment. A level 2 assessment provides a more detailed examination of the supply (including the supply's monitoring and operational practices) than does a level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. Level 2 assessment shall be conducted by the department. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (for example, whether a ground water supply is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The department shall conduct the assessment tailoring specific assessment elements with respect to the size and type of the supply and the size, type, and characteristics of the distribution system. The supply shall comply with any expedited actions or additional actions required by the department in the case of an E. coli MCL violation.

(u) "License" means the license that is issued by the department to a water hauler, or for a water hauling tank, under section 18 of the act.

(v) "Limited treatment system" means a treatment system, including, but not limited to, disinfection, fluoridation, iron removal, ion exchange treatment, phosphate application, or filtration other than complete treatment.

(w) "Living unit" means a house, apartment, or other domicile occupied or intended to be occupied on a day-to-day basis by an individual, family group, or equivalent.

(x) "Locational running annual average (LRAA)" means the average of sample analytical results for samples taken at a particular monitoring location during the previous 4 calendar quarters.

R 325.10108 Definitions; S.

Rule 108. As used in these rules:

(a) "Sanitary defect" means a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

(b) "Sanitary survey" means an evaluation, including an on-site review of a waterworks system or a portion of the waterworks system, including all of the following applicable components for existing or potential health hazards for the purpose of determining the ability of the public water supply to produce, treat, and distribute adequate quantities of water meeting state drinking water standards:

(i) Source.

(ii) Treatment.

(iii) Distribution system.

(iv) Finished water storage.

(v) Pumps, pump facilities, and controls.

(vi) Monitoring, reporting, and data verification.

(vii) System management and operation.

(viii) Operator compliance with state requirements.

(c) "Seasonal supply" means a noncommunity water supply that is not operated as a public water supply on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

(d) "Service connection" means a direct connection from a distribution water main to a living unit or other site to provide water for drinking or household purposes.

(e) "Service line" means the pipe from the water main including corporation stops and curb stops until it connects to customer site piping or to the building plumbing at the first shut off value inside the building, or 5 feet inside the building, whichever is shorter.

(~~e~~) **(f)** "Service line sample" means a 1 liter sample of water that has been standing for not less than 6 hours in a service line.

(~~f~~) **(g)** "Shift operator" means a certified operator, other than the operator in charge, who is in charge of an operating shift of a waterworks system.

(~~g~~) **(h)** "Single-family structure," for the purpose of lead and copper control, means a building which is constructed as a single-family residence and which is currently used as either a residence or a place of business.

(~~h~~) **(i)** "Small water supply" or "small water system," for the purpose of lead and copper control, means a public water supply that serves fewer than 3,301 persons.

(~~i~~) **(j)** "SOC" means synthetic organic chemical.

(~~j~~) **(k)** "Source" means the point of origin of raw water or means treated water that is purchased or obtained by a public water supply, by a water hauler, or by a person who provides bottled water.

(~~k~~) **(l)** "State drinking water standards" means quality standards setting limits for contaminant levels or establishing treatment techniques to meet standards necessary to protect the public health.

(~~l~~) **(m)** "Static water level" means the distance measured from an established datum at or above ground level to the water surface in a well which is not being pumped, which is not under the influence of pumping, and which is not flowing under artesian pressure.

(~~m~~) **(n)** "Subpart H system" or "subpart H supply" means a public water supply using surface water or ground water under the direct influence of surface water as a source.

(~~n~~) **(o)** "Suction line" means a pipe or line that is connected to the inlet side of a pump or pumping equipment.

(~~o~~) **(p)** "Supplier of water" or "supplier" means a person who owns or operates a public water supply, and includes a water hauler.

(~~p~~) **(q)** "Surface water" means water that rests or flows on the surface of the ground.

(~~q~~) **(r)** "SUVA" means specific ultraviolet absorption at 254 nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (uv254) (in m-1) by its concentration of dissolved organic carbon (DOC) (in mg/l). Therefore, SUVA units are l/mg-m.

(~~r~~) **(s)** "System with a single service connection" means a public water supply that supplies drinking water to consumers through a single service line.

PART 4. PUBLIC NOTIFICATION AND PUBLIC EDUCATION

R 325.10401a General public notification requirements.

Rule 401a. (1) Each community water supply, nontransient noncommunity water supply, or transient noncommunity water supply shall give notice for violations of the maximum contaminant level (MCL), maximum residual disinfection level (MRDL), treatment technique (TT), monitoring requirements, testing procedures in these rules, and for other situations, as listed in the following provisions:

(a) Violations and other situations requiring public notice, including all of the following:

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

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

(iii) Failure to perform water quality monitoring, as required by part 7 of these rules.

(iv) Failure to comply with testing procedures as prescribed by part 6 of these rules.

(b) Variance and exemptions under part 3 of these rules, including both of the following:

(i) Operation under a variance or an exemption.

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

(c) Special public notices, including all of the following:

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

(ii) Exceedance of the nitrate MCL by noncommunity water supplies, where granted permission by the department.

(iii) Fluoride level above 2.0 mg/l as specified in R 325.10408a.

(iv) Availability of unregulated contaminant monitoring data.

(v) Other violations and situations which are determined by the department to require a public notice under this part and which are not already listed in table 1 of this rule. The tier assignment for each specific violation or situation requiring a public notice is identified in table 1 of this rule. Community and noncommunity water supplies are also considered "water supplies" or "supplies" in this rule, R 325.10402 to R 325.10407 and R 325.10408a to R 325.10409.

(2) Public notice requirements are divided into 3 tiers to take into account the seriousness of the violation or situation and of the potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in subrule (1) of this rule are determined by the tier to which the violation or situation is assigned. The definition of each tier is provided in the following provisions:

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

(b) Tier 2 public notice is required for all other violations and situations that have potential to have serious adverse effects on human health.

(c) Tier 3 public notice is required for all other violations and situations not included in tier 1 and tier 2. The tier assignment for each specific violation or situation is identified in table 1 of this rule.

(3) Supplies shall provide public notice to the following:

(a) Each supply shall provide public notice to persons served by the supply as specified in this part. Supplies that sell or otherwise provide drinking water to other public water supplies, such as to consecutive supplies, shall give public notice to the consecutive supply. The consecutive supply shall provide public notice to the persons it serves.

(b) If a public water supply has a violation in a portion of the distribution system that is physically or hydraulically isolated from other parts of the distribution system, then the department may grant permission, which shall be in writing, to the supply to limit distribution of the public notice to only persons served by that portion of the system which is out of compliance. To be physically separated, the supply shall show that the affected portion of the distribution system is separated from other parts of the distribution system with no interconnections. To be considered hydraulically separated, the supply shall show that the design of the distribution system or the system operation, or both, created a situation where water in the affected portion is effectively isolated from the water in all other parts of the distribution system because of projected water flow patterns and water pressure zones.

(4) The supply, within 10 days of completing the public notification requirements under this part for the initial public notice and applicable repeat notices, shall submit to the department a certification that it fully complied with the public notification regulations. The supply shall include with this certification a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the supply and to the media.

Table 1 Violations and other situations requiring public notice

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of MCL, MRDL, treatment technique, monitoring and reporting, and testing procedure requirements:				
A. Microbiological contaminants				
Total coliform until March 31, 2016	2	R 325.10602(a) and (b)	3	R 325.10704 to R 325.10707a R 325.10702(2) R 325.10707b(4)
Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations) beginning April 1, 2016	2	R 325.10704j(2)(a)	3	R 325.10704j(3) R 325.10704j(4)(a)
Seasonal supply failure to follow department-approved start-up plan before serving water to the public or failure to provide certification to the department beginning April 1, 2016	2	R 325.10704j(2)(b)	3	R 325.10704j(4)(c)
Fecal coliform/E. coli until March 31, 2016	1	R 325.10602(c)	1, 3 [2]	R 325.10704(3) R 325.10707b(4)

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
E. coli (MCL, monitoring, and reporting violations) beginning April 1, 2016	1	R 325.10704j(1)	3	R 325.10704j(3)(b) R 325.10704j(4)(a) R 325.10704j(4)(b)
E. coli (TT violations resulting from failure to perform level 2 Assessments or corrective action) beginning April 1, 2016	2	R 325.10704j(2)(a)	n/a	n/a
Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	2, 1 [3]	R 325.10611b	3	R 325.10605 R 325.10720(2)(a) and (b)
Violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	R 325.10611, R 325.10611a, and R 325.10611b	3	R 325.10605 R 325.10720(2)(c) and (d)
Violations of disinfection profiling and benchmarking	N/A	N/A	3	R 325.10722
Violations of filter backwash recycling provisions	2	R 325.10611c	3	R 325.1507
Violations of enhanced treatment for cryptosporidium	2	R 325.10611e to R 325.10611m	2, 3	40 CFR §141.701 to §141.705, as adopted by reference in R 325.10720b, R 325.10720c and R 325.10720d. Failure to collect 3 or more samples for Cryptosporidium analysis is a Tier 2 violation requiring special notice as required in R 325.10408d. All other monitoring and testing procedure violations are Tier 3.

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Violations of rules for ground water supplies subject to R 325.10612	2	R 325.10612b	3	R 325.10739(7) R 325.10739a(5)
B. Inorganic chemicals (IOC)				
Antimony	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Arsenic	2	R 325.10604c(1)	3	R 325.10710(4) and (5) R 325.10605
Asbestos (fibers longer than 10 µm)	2	R 325.10604c(1)	3	R 325.10710(4), (6)
Barium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Beryllium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Cadmium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Chromium (total)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Cyanide (free)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Fluoride	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Mercury (inorganic)	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Nitrate (as nitrogen)	1	R 325.10604c(1)	1, 3 [4]	R 325.10710(3), (4), (7), and (9)(b)
Nitrite (as nitrogen)	1	R 325.10604c(1)	1, 3 [4]	R 325.10710(3), (4), (8), and (9)(b)
Total nitrate and nitrite (as nitrogen)	1	R 325.10604c(1)	3	R 325.10710(4)
Selenium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
Thallium	2	R 325.10604c(1)	3	R 325.10710(4) and (5)
C. Lead and copper (action level for lead is ~~0.015~~ **0.010** mg/l, for copper is 1.3 mg/l)				
Lead and copper rule (TT)	2	R 325.10604f(1) – (5) R 325.10410(2) and (3)	3	R 325.10710a to R 325.10710c and R 325.10605
D. Synthetic organic chemicals (SOC)				
2,4-D	2	R 325.10604d(1)	3	R 325.10717
2,4,5-TP (silvex)	2	R 325.10604d(1)	3	R 325.10717
Alachlor	2	R 325.10604d(1)	3	R 325.10717
Atrazine	2	R 325.10604d(1)	3	R 325.10717
Benzo(a)pyrene (PAHs)	2	R 325.10604d(1)	3	R 325.10717

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Carbofuran	2	R 325.10604d(1)	3	R 325.10717
Chlordane	2	R 325.10604d(1)	3	R 325.10717
Dalapon	2	R 325.10604d(1)	3	R 325.10717
Di (2-ethylhexyl) adipate	2	R 325.10604d(1)	3	R 325.10717
Di (2-ethylhexyl) phthalate	2	R 325.10604d(1)	3	R 325.10717
Dibromochloropropane	2	R 325.10604d(1)	3	R 325.10717
Dinoseb	2	R 325.10604d(1)	3	R 325.10717
Dioxin (2,3,7,8-TCDD)	2	R 325.10604d(1)	3	R 325.10717
Diquat	2	R 325.10604d(1)	3	R 325.10717
Endothall	2	R 325.10604d(1)	3	R 325.10717
Endrin	2	R 325.10604d(1)	3	R 325.10717
Ethylene dibromide	2	R 325.10604d(1)	3	R 325.10717
Glyphosate	2	R 325.10604d(1)	3	R 325.10717
Heptachlor	2	R 325.10604d(1)	3	R 325.10717
Heptachlor epoxide	2	R 325.10604d(1)	3	R 325.10717
Hexachlorobenzene	2	R 325.10604d(1)	3	R 325.10717
Hexachlorocyclo-pentadiene	2	R 325.10604d(1)	3	R 325.10717
Lindane	2	R 325.10604d(1)	3	R 325.10717
Methoxychlor	2	R 325.10604d(1)	3	R 325.10717
Oxamyl (vydate)	2	R 325.10604d(1)	3	R 325.10717
Pentachlorophenol	2	R 325.10604d(1)	3	R 325.10717
Picloram	2	R 325.10604d(1)	3	R 325.10717
Polychlorinated biphenyls [PCBs]	2	R 325.10604d(1)	3	R 325.10717
Simazine	2	R 325.10604d(1)	3	R 325.10717
Toxaphene	2	R 325.10604d(1)	3	R 325.10717
E. Volatile organic chemicals (VOC)				
Benzene	2	R 325.10604b(1)	3	R 325.10716
Carbon tetrachloride	2	R 325.10604b(1)	3	R 325.10716
Chlorobenzene (monochloro-benzene)	2	R 325.10604b(1)	3	R 325.10716
O-dichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
P-dichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
1,2-dichloroethane	2	R 325.10604b(1)	3	R 325.10716
1,1-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Cis-1,2-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Trans-1,2-dichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Dichloromethane	2	R 325.10604b(1)	3	R 325.10716
1,2-dichloropropane	2	R 325.10604b(1)	3	R 325.10716
Ethylbenzene	2	R 325.10604b(1)	3	R 325.10716
Styrene	2	R 325.10604b(1)	3	R 325.10716

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Tetrachloro-ethylene	2	R 325.10604b(1)	3	R 325.10716
Toluene	2	R 325.10604b(1)	3	R 325.10716
1,2,4-trichlorobenzene	2	R 325.10604b(1)	3	R 325.10716
1,1,1-trichloroethane	2	R 325.10604b(1)	3	R 325.10716
1,1,2-trichloroethane	2	R 325.10604b(1)	3	R 325.10716
Trichloroethylene	2	R 325.10604b(1)	3	R 325.10716
Vinyl chloride	2	R 325.10604b(1)	3	R 325.10716
Xylenes (total)	2	R 325.10604b(1)	3	R 325.10716
F. Radioactive contaminants				
Beta/photon emitters	2	R 325.10603(2)(c)	3	R 325.10605 R 325.10725 R 325.10730
Alpha emitters (gross alpha)	2	R 325.10603(2)(b)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729
Combined radium (226 & 228)	2	R 325.10603(2)(a)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729
Uranium (pCi/L)	2	R 325.10603(2)(d)	3	R 325.10605 R 325.10725 R 325.10726 R 325.10728 R 325.10729
G. Disinfection byproducts (DBP), byproduct precursors, disinfectant residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBP). The department sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THM) and haloacetic acids (HAA). See R 325.10610 to R 325.10610d, and R 325.10719e to R 325.10719n for disinfection byproduct MCLs, disinfectant MRDLs, and related monitoring requirements.				
Total trihalomethanes (TTHM)	2	R 325.10610(2) R 325.10610b(2)(a)	3	R 325.10610d, R 325.10719e(1) and (2)(a), and R 325.10719h to R 325.10719n
Haloacetic acids (HAA)	2	R 325.10610(2) R 325.10610b(2)(a)	3	R 325.10610d, R 325.10719e(1) and (2)(a), and R 325.10719h to R 325.10719n

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
Bromate	2	R 325.10610 R 325.10610b(2)(b)	3	R 325.10719e(1) and (2)(c)
Chloramine (MRDL)	2	R 325.10610a R 325.10610b(3)(a)	3	R 325.10719e(1) and (3)
Chlorine (MRDL)	2	R 325.10610a R 325.10610b(3)(a)	3	R 325.10719e(1) and (3)
Chlorite	2	R 325.10610 R 325.10610b(2)(c)	3	R 325.10719e(1) and (2)(b)
Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	R 325.10610a R 325.10610b(3)(b)(ii)	2 *, 3	R 325.10719e(1), (3)(b)(i) and (iii)
	* Failure to monitor for chlorine dioxide at the entrance to the distribution system the day after exceeding the MRDL at the entrance to the distribution system is a tier 2 violation.			
Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	1 *	R 325.10610a R 325.10610b(3)(b)(i)	1	R 325.10719e(1), (3)(b)(ii) and (iii)
	* If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and 1 or more samples taken in the distribution system the next day exceed the MRDL, tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers tier 1 notification.			
Control of DBP precursors—TOC (TT)	2	R 325.10610b(4) R 325.10610c	3	R 325.10719e(1) and (4)
Bench marking and disinfection profiling	N/A	N/A	3	R 325.10722
Development of monitoring plan	N/A	N/A	3	R 325.10719e(5)
H. Other treatment techniques				
Acrylamide (TT)	2	R 325.10604e	N/A	N/A
Epichlorohydrin (TT)	2	R 325.10604e	N/A	N/A
II. Other monitoring:				
Unregulated contaminants	N/A	N/A	3	40 CFR §141.40 [5]
Nickel	N/A	N/A	3	R 325.10710(4), (5), and (9)
III. Public notification for variances and exemptions:				
Operation under a variance or exemption	3	R 325.10302	N/A	N/A
Violation of conditions of a variance or exemption	2	R 325.10312	N/A	N/A

Contaminant	MCL/MRDL/TT violations [1]		Monitoring, testing, & reporting procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
IV. Other situations requiring public notification:				
Fluoride level above 2.0 mg/l	3	R 325.10408a(1)	N/A	N/A
Exceedance of nitrate MCL for noncommunity supplies, as allowed by the department	1	R 325.10604c(3)	N/A	N/A
Availability of unregulated contaminant monitoring data	3	R 325.10407	N/A	N/A
Waterborne disease outbreak	1	R 325.10734(4)	N/A	N/A
Source water sample positive for Fecal Indicator: E.coli, enterococci, or coliphage	1	R 325.10739(6)	N/A	N/A
Other waterborne emergencies and other situations as determined by the department	1 or 2 or 3 *	N/A	N/A	N/A
	* Waterborne emergencies require a tier 1 public notice. The department may place other situations in any tier it determines appropriate, based on threat to public health.			

[1]MCL - Maximum contaminant level, MRDL - maximum residual disinfectant level, TT - treatment technique.

[2]Failure to test for fecal coliform or E. coli is a tier 1 violation if testing is not done after any repeat sample tests positive for coliform. All other total coliform monitoring and testing procedure violations are tier 3.

[3]Supplies with treatment technique violations involving a single exceedance of a maximum turbidity limit under R 325.10611b(1) are required to initiate consultation with the department within 24 hours after learning of the violation. Based on this consultation, the department may subsequently decide to elevate the violation to tier 1. If a supply is unable to make contact with the department in the 24-hour period, the violation is automatically elevated to tier 1.

[4]Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial sample exceeds the MCL is a tier 1 violation. Other monitoring violations for nitrate are tier 3.

[5]Title 40 CFR part 141 Section 40, being 40 CFR §141.40, (2014), which pertains to Unregulated Contaminant Monitoring, is contained in Title 40 CFR parts 136 to 149 and is available for purchase for $67.00 from the superintendent of documents at the address in R 325.10116. The material is available for inspection from the offices of the department at the address in R 325.10116(a) or available on the Internet at http://www.ecfr.gov/.

R 325.10405 Content of public notice.

Rule 405. (1) If a community or noncommunity water supply that is subject to R 325.10401a has a violation or situation requiring public notification, then each public notice shall include all of the following elements:

(a) A description of the violation or situation, including the contaminant or contaminants of concern, and, as applicable, the contaminant level or levels.

(b) When the violation or situation occurred.

(c) The potential adverse health effects from the violation or situation, including the standard language under subrule (4)(a) or (4)(b) of this rule, whichever is applicable.

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

(e) If alternative water supplies should be used.

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

(g) What the supply is doing to correct the violation or situation.

(h) When the supply expects to return to compliance or resolve the situation.

(i) The name, business address, and phone number of the supply or designee of the supply as a source of additional information concerning the notice.

(j) A statement to encourage the notice recipient to distribute the public notice to other persons served, using the standard language under subrule (4)(c) of this rule, where applicable.

(2) All of the following elements shall be included in the public notice for public water supplies operating under a variance or exemption:

(a) If a public water supply has been granted a variance or an exemption, then the public notice shall contain all of the following elements:

(i) An explanation of the reasons for the variance or exemption.

(ii) The date on which the variance or exemption was issued.

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

(iv) A notice of opportunities for public input in the review of the variance or exemption.

(b) If a public water supply violates the conditions of a variance or exemption, then the public notice shall contain the 10 elements listed in subrule (1) of this rule.

(3) The public notice shall be presented in the following manner:

(a) Each public notice required by this part shall meet all of the following criteria:

(i) Shall be displayed in a conspicuous way when printed or posted.

(ii) Shall not contain overly technical language or very small print.

(iii) Shall not be formatted in a way that defeats the purpose of the notice.

(iv) Shall not contain language which nullifies the purpose of the notice.

(b) In communities where more than 10% of the consumers are non English speaking consumers, the public notice shall contain information in the appropriate language or languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the supply to obtain a translated copy of the notice or to request assistance in the appropriate language.

(4) The supply shall include the following standard language in the public notice:

(a) The supply shall include in each public notice the health effects language specified in table 1 of this rule corresponding to each MCL, MRDL, and treatment technique violation listed in table 1 of R 325.10401a, and for each violation of a condition of a variance or exemption.

(b) The supply shall include the following language in the notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in table 1 of R 325.10401a: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we 'did not monitor or test' or 'did not complete

all monitoring or testing' for [contaminant or contaminants], and therefore cannot be sure of the quality of your drinking water during that time."

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

Table 1 Regulated contaminants

Key
AL=Action level
MCL=Maximum contaminant level
MCLG=Maximum contaminant level goal
mfl=Million fibers per liter
MRDL=Maximum residual disinfectant level
MRDLG=Maximum residual disinfectant level goal
mrem/year=Millirems per year (a measure of radiation absorbed by the body)
N/A=Not applicable
NTU=Nephelometric turbidity units (a measure of water clarity)
pci/l=Picocuries per liter (a measure of radioactivity)
ppm=Parts per million, or milligrams per liter (mg/l)
ppb=Parts per billion, or micrograms per liter (µg/l)
ppt=Parts per trillion, or nanograms per liter
ppq=Parts per quadrillion, or picograms per liter
TT=Treatment technique

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Microbiological contaminants						
Total coliform bacteria until March 31, 2016	MCL: For water supplies analyzing 40 or more samples per month, not more than 5.0% of the monthly samples may be positive for total coliform. For supplies analyzing fewer than 40 samples per month, not more than 1 sample per month may be positive for total coliform.			zero	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Total coliform bacteria beginning April 1, 2016. This row applies to Consumer Confidence Reporting.	TT	No conversion necessary	TT	N/A	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system.
Fecal coliform and E. coli until March 31, 2016	zero	No conversion necessary	zero	zero	Human and animal fecal waste	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
E. coli beginning April 1, 2016	MCL: Routine and repeat samples are total coliform-positive and either is E. coli-positive or supply fails to take all required repeat samples following E. coli-positive routine sample or supply fails to analyze total coliform-positive repeat sample for E. coli			zero	Human and animal fecal waste	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.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Coliform Assessment and/or Corrective Action Violations beginning April 1, 2016. This row applies to public notification. For Consumer Confidence Reporting, see R 325.10413(12)(g)(i).	N/A	No conversion necessary	TT	N/A	N/A	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. [THE SUPPLY MUST USE ONE OF THE FOLLOWING APPLICABLE SENTENCES:] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
E. coli Assessment and/or Corrective Action Violations beginning April 1, 2106. This row applies to public notification. For Consumer Confidence Reporting, see R 325.10413(12)(g)(ii).	N/A	No conversion necessary	TT	N/A	N/A	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 violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. [THE SUPPLY MUST USE ONE OF THE FOLLOWING APPLICABLE SENTENCES:] We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.
Seasonal Supply Treatment Technique Violations of the Total Coliform Rule beginning April 1, 2016.	N/A	No conversion necessary	TT	N/A	N/A	When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at R 325.10405(4)(b) shall be used. When this violation includes failure to complete other actions, the appropriate public notice elements found in R 325.10405(1) shall be used.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Fecal indicator under groundwater requirements in R 325.10612 et. al: - E.coli - enterococci or - coliphage)	TT	No conversion necessary	TT	E.coli: zero Others: N/A	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Violations of rules for ground water supplies subject to R 325.10612	TT	No conversion necessary	TT	N/A	N/A	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
Turbidity (ntu)	TT	No conversion necessary	TT	N/A	Soil runoff	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Other microbiological contaminants						
Giardia lamblia, viruses, heterotrophic plate count (HPC) bacteria, legionella, cryptosporidium	TT*	No conversion necessary	TT*	zero	Naturally present in the environment	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.
	* The treatment technique violations that involve turbidity exceedances may use health effects language for turbidity instead.					

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Inorganic contaminants						
Antimony (ppb)	0.006	1000	6	6	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.010	1000	10	0	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos [fibers longer than 10 µm] (mfl)	7 mfl	No conversion necessary	7	7	Decay of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	No conversion necessary	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	0.004	1000	4	4	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Cadmium (ppb)	0.005	1000	5	5	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium [total] (ppb)	0.1	1000	100	100	Discharge from steel and pulp mills; erosion of natural deposits	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Cyanide [free] (ppb)	0.2	1000	200	200	Discharge from steel/metal factories; discharge from plastic and fertilizer factories	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride (ppm)	4.0	No conversion necessary	4.0	4.0	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than 9 years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Mercury [inorganic] (ppb)	0.002	1000	2	2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate [as nitrogen] (ppm)	10	No conversion necessary	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite [as nitrogen] (ppm)	1	No conversion necessary	1	1	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Total nitrate and nitrite [as nitrogen] (ppm)	10	No conversion necessary	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits	Infants below the age of 6 months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	0.05	1000	50	50	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Thallium (ppb)	0.002	1000	2	0.5	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Lead and copper						
Lead (ppb)	AL=~~0.015~~ **0.010**	1000	AL=~~15~~ **10** (TT)	zero	Corrosion of household plumbing systems; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Copper (ppm)	AL=1.3	No conversion necessary	AL=1.3 (TT)	1.3	Corrosion of household plumbing systems; erosion of natural deposits	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's disease should consult their personal doctor.
Synthetic organic contaminants including pesticides and herbicides						
2,4-D (ppb)	0.07	1000	70	70	Runoff from herbicide used on row crops	Some people who drink water containing the weed killer 2,4-d well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
2,4,5-TP [silvex] (ppb)	0.05	1000	50	50	Residue of banned herbicide	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Alachlor (ppb)	0.002	1000	2	zero	Runoff from herbicide used on row crops	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
Atrazine (ppb)	0.003	1000	3	3	Runoff from herbicide used on row crops	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a)pyrene [PAHs] (ppt)	0.0002	1,000,000	200	zero	Leaching from linings of water storage tanks and distribution lines	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	0.04	1000	40	40	Leaching of soil fumigant used on rice and alfalfa	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood or nervous or reproductive systems.
Chlordane (ppb)	0.002	1000	2	zero	Residue of banned termiticide	Some people who drink water containing chlordane in excess of the mcl over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
Dalapon (ppb)	0.2	1000	200	200	Runoff from herbicide used on rights of way	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Di(2-ethylhexyl) adipate (ppb)	0.4	1000	400	400	Discharge from chemical factories	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience toxic effects such as weight loss, liver enlargement, or possible reproductive difficulties.
Di(2-ethylhexyl) phthalate (ppb)	0.006	1000	6	zero	Discharge from rubber and chemical factories	Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane [DBCP] (ppt)	0.0002	1,000,000	200	zero	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Dinoseb (ppb)	0.007	1000	7	7	Runoff from herbicide used on soybeans and vegetables	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
Dioxin [2,3,7,8-TCDD] (ppq)	0.00000003	1,000,000,000	30	zero	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat (ppb)	0.02	1000	20	20	Runoff from herbicide use	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Endothall (ppb)	0.1	1000	100	100	Runoff from herbicide use	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
Endrin (ppb)	0.002	1000	2	2	Residue of banned insecticide	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
Ethylene dibromide (ppt)	0.00005	1,000,000	50	zero	Discharge from petroleum refineries	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	0.7	1000	700	700	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	0.0004	1,000,000	400	zero	Residue of banned pesticide	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide (ppt)	0.0002	1,000,000	200	zero	Breakdown of heptachlor	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene (ppb)	0.001	1000	1	zero	Discharge from metal refineries and agricultural chemical factories	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Hexachlorocyclopentadiene (ppb)	0.05	1000	50	50	Discharge from chemical factories	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
lindane (ppt)	0.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
Methoxychlor (ppb)	0.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [vydate] (ppb)	0.2	1000	200	200	Runoff/leaching from insecticide used on apples, potatoes, and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
Pentachlorophenol (ppb)	0.001	1000	1	zero	Discharge from wood preserving factories	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
Picloram (ppb)	0.5	1000	500	500	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Polychlorinated biphenyls [PCBs] (ppt)	0.0005	1,000,000	500	zero	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Simazine (ppb)	0.004	1000	4	4	Herbicide runoff	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
Toxaphene (ppb)	0.003	1000	3	zero	Runoff/leaching from insecticide used on cotton and cattle	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
Volatile organic contaminants						
Benzene (ppb)	0.005	1000	5	zero	Discharge from factories; leaching from gas storage tanks and landfills	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
Carbon tetrachloride (ppb)	0.005	1000	5	zero	Discharge from chemical plants and other industrial activities	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene (ppb)	0.1	1000	100	100	Discharge from chemical and agricultural chemical factories	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
O-dichlorobenzene (ppb)	0.6	1000	600	600	Discharge from industrial chemical factories	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
P-dichlorobenzene (ppb)	0.075	1000	75	75	Discharge from industrial chemical factories	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-dichloroethane (ppb)	0.005	1000	5	zero	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
1,1-dichloroethylene (ppb)	0.007	1000	7	7	Discharge from industrial chemical factories	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Cis-1,2-dichloroethylene (ppb)	0.07	1000	70	70	Discharge from industrial chemical factories	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
Trans-1,2-dichloroethylene (ppb)	0.1	1000	100	100	Discharge from industrial chemical factories	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	0.005	1000	5	zero	Discharge from pharmaceutical and chemical factories	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-dichloropropane (ppb)	0.005	1000	5	zero	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Ethylbenzene (ppb)	0.7	1000	700	700	Discharge from petroleum refineries	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Styrene (ppb)	0.1	1000	100	100	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
Tetrachloro-ethylene (ppb)	0.005	1000	5	Zero	Discharge from factories and dry cleaners	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
Toluene (ppm)	1	No conversion necessary	1	1	Discharge from petroleum factories	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
1,2,4-trichlorobenzene (ppb)	0.07	1000	70	70	Discharge from textile-finishing factories	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-trichloroethane (ppb)	0.2	1000	200	200	Discharge from metal degreasing sites and other factories	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-trichloroethane (ppb)	0.005	1000	5	3	Discharge from industrial chemical factories	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Trichloroethylene (ppb)	0.005	1000	5	zero	Discharge from metal degreasing sites and other factories	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Vinyl chloride (ppb)	0.002	1000	2	zero	Leaching from PVC piping; discharge from plastics factories	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes [total] (ppm)	10	No conversion necessary	10	10	Discharge from petroleum factories; discharge from chemical factories	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Radioactive contaminants						
Beta/photon emitters (mrem/yr)	4 mrem/yr	No conversion necessary	4	zero	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta particle and photon radioactivity in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters [gross alpha] (pci/l)	15 pCi/L	No conversion necessary	15	zero	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium [226 & 228] (pci/l)	5 pCi/L	No conversion necessary	5	zero	Erosion of natural deposits	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (pCi/L)	30 ug/L	No conversion necessary	30	Zero	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Disinfection byproducts (DBP), byproduct precursors, and disinfectant residuals: where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBP). The department sets standards for controlling the levels of disinfectants and DBP in drinking water, including trihalomethanes (THM) and haloacetic acids (HAA). See R 325.10610 to R 325.10610d and R 325.10719e to R 325.10719n for disinfection byproduct MCLs, disinfectant MRDLs, and related monitoring requirements.						
Total trihalomethanes [TTHM] (ppb)	0.080*	1000	80*	N/A	By-product of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
	* The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.					
Haloacetic acids (HAAs) (ppb)	0.060*	1000	60*	N/A	By-product of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
	* The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.					
Bromate (ppb)	0.010	1000	10	zero	By-product of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines (ppm)	MRDL = 4	No conversion necessary	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Chlorine (ppm)	MRDL = 4	No conversion necessary	MRDL = 4	MRDLG = 4	Water additive used to control microbes	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite (ppm)	1	No conversion necessary	1	0.8	By-product of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine dioxide (ppb)	MRDL = 0.8	1000	MRDL = 800	MRDLG = 800	Water additive used to control microbes	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
	Add the following only to public notification where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL: "The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system which delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers." Add the following only to public notification where 1 or more distribution system samples are above the MRDL: "The chlorine dioxide violations reported today include exceedances of the drinking water standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure."					

Contaminant in CCR units	Traditional MCL in mg/l, except where noted	To convert for CCR, multiply by	MCL in CCR units	MCLG in CCR units	Major sources in drinking water	Health effects language
Total organic carbon [TOC - control of DBP precursors] (ppm)	TT	No conversion necessary	TT	None	Naturally present in the environment	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.
Other treatment techniques						
Acrylamide	TT	No conversion necessary	TT	zero	Added to water during sewage/ wastewater treatment	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
Epichlorohydrin	TT	No conversion necessary	TT	zero	Discharge from industrial chemical factories; an impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

R 325.10410 Public education regarding lead.

Rule 410. (1) Each community and noncommunity water supply that monitors for lead under R 325.10710a shall deliver a consumer notice of lead **and copper** tap water monitoring results to persons served by the water supply at sites that are tested, as specified in subrule (5) of this rule. A community or noncommunity water supply is also considered "water supply" or "supply" in this rule. A water supply that exceeds the lead action level based on tap water samples that are collected under R 325.10710a **shall issue public advisory as required by §325.1019(2) of Act 399 and** shall deliver the public education materials contained in subrule (2) of this rule under the requirements in subrule (3) of this rule. A water supply that exceeds the lead action level shall offer to arrange for sampling the tap water of a customer who requests sampling under subrule (4) of this rule. The water supply is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.

(2) Both of the following apply to the content of written public education materials:

(a) Water supplies shall include the following elements in printed materials, for example, brochures and pamphlets, in the same order as listed below. In addition, language in paragraphs (i) to (ii) and (vi) of this subdivision shall be included in the materials, exactly as written, except for the text in brackets in these paragraphs for which the water supply shall include supply-specific information. Any additional information presented by a water supply shall be consistent with the information below and be in plain language that can be understood by the general public. Water supplies shall submit all written public education materials to the department prior to delivery. The department may require the supply to obtain approval of the content of written public materials prior to delivery.

(i) IMPORTANT INFORMATION ABOUT LEAD IN YOUR DRINKING WATER. [INSERT NAME OF WATER SUPPLY] 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.

(ii) 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.

(iii) Sources of Lead.

(A) Explain what lead is.

(B) Explain possible sources of lead in drinking water and how lead enters drinking water. Include information on home/building plumbing materials and service lines that may contain lead.

(C) Discuss other important sources of lead exposure in addition to drinking water, for example, paint.

(D) Explain the unpredictability of lead release, the limits of 1-time tests, and the high lead content of some lead particulates.

(iv) Discuss the steps the consumer can take to reduce their exposure to lead in drinking water.

(A) Encourage running the water to flush out the lead.

(B) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.

(C) Explain that boiling water does not reduce lead levels.

(D) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or treatment of water**, including the availability of filters certified to remove lead**.

(E) Suggest that parents have their child's blood tested for lead.

(v) Explain why there are elevated levels of lead in the supply's drinking water, if known, and what the water supply is doing to reduce the lead levels in homes/buildings in this area.

(vi) For more information, call us at [INSERT YOUR NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT YOUR WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's Web site at http://www.epa.gov/lead or contact your health care provider.

(b) In addition to including the elements specified in subdivision (a) of this subrule, community water supplies shall:

(i) Tell consumers how to get their water tested.

(ii) Discuss lead in plumbing components and the difference between low lead and lead free.

(iii) Tell consumers about the availability of lead-free plumbing fixtures.

(3) All of the following provisions apply to delivery of public education materials:

(a) For public water supplies serving communities that have more than 10% non-English speaking consumers, the public education materials shall contain information in the appropriate language or languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the water supply to obtain a translated copy of the public education materials or to request assistance in the appropriate language.

(b) A community water supply that exceeds the lead action level on the basis of tap water samples collected under R 325.10710a, and that is not already conducting public education tasks under this rule, shall conduct the public education tasks under this rule **within 60 days of notification by the department of a lead action level exceedance or** within 60 days after the end of the monitoring period in which the exceedance occurred**, whichever is sooner**. The following apply:

(i) Deliver printed materials meeting the content requirements of subrule (2) of this rule to all bill paying customers.

(ii) All of the following provisions apply to contacting at risk customers:

(A) Contact customers who are most at risk by delivering education materials that meet the content requirements of subrule (2) of this rule to local public health agencies even if they are not located within the water supply's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water supply's users. The water supply shall 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 service area of the water supply. If lists are provided, supplies shall deliver education materials that meet the content requirements of subrule (2) of this rule to all organizations on the provided lists.

(B) Contact customers who are most at risk by delivering materials that meet the content requirements of subrule (2) of this rule to all of the following organizations that are located within the water supply's service area, along with an informational notice that encourages distribution to all the organization's potentially affected customers or community water supply's users:

(1) Public and private schools or school boards.

(2) Women, Infants and Children (WIC) and Head Start programs.

(3) Public and private hospitals and medical clinics.

(4) Pediatricians.

(5) Family planning clinics.

(6) Local welfare agencies.

(7) Community centers.

(8) Adult foster care facilities.

(C) Make a good faith effort to locate all of the following organizations within the service area and deliver materials that meet the content requirements of subrule (2) of this rule to them, 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 specific contact list of these

organizations from the local public health agencies, even if the agencies are not located within the water supply's service area:

(1) Licensed childcare centers.

(2) Public and private preschools.

(3) Obstetricians-gynecologists and midwives.

(iii) Not less often than quarterly, provide information on or in each water bill as long as the supply exceeds the action level for lead. The message on the water bill shall include the following statement exactly as written except for the text in brackets for which the water supply shall include supply-specific information: [INSERT NAME OF WATER SUPPLY] found high levels of lead in drinking water in some homes. Lead can cause serious health problems. For more information please call [INSERT NAME OF WATER SUPPLY] [or visit (INSERT YOUR WEB SITE HERE)]. The message or delivery mechanism can be modified in consultation with the department; specifically, the department may allow a separate mailing of public education materials to customers if the water supply cannot place the information on water bills.

(iv) Post material meeting the content requirements of subrule (2) of this rule on the water supply's Web site if the supply serves a population greater than ~~100,000~~ **1,000**.

(v) Submit a press release to newspaper, television, and radio stations.

(vi) In addition to subdivision (i) to (v) of this subrule, supplies shall implement not fewer than 3 activities from 1 or more categories listed below. The educational content and selection of these activities shall be determined in consultation with the department.

(A) Public service announcements.

(B) Paid advertisements.

(C) Public area information displays.

(D) E-mails to customers.

(E) Public meetings.

(F) Household deliveries.

(G) Targeted individual customer contact.

(H) Direct material distribution to all multifamily homes and institutions.

(I) Other methods approved by the department.

(vii) For supplies that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the department has established an alternate monitoring period, the last day of that period.

(c) As long as a community water supply exceeds the action level, it shall repeat the activities under subdivision (b)(i) to (ii) of this subrule as described in all of the following, as applicable:

(i) A community water supply shall repeat the education materials delivery tasks contained in subdivision (b)(i) to (ii) of this subrule and repeat the additional activities tasks contained in subdivision (b)(vi) of this subrule every 12 months.

(ii) A community water supply shall repeat the water bill information tasks contained in subdivision (b)(iii) of this subrule with each billing cycle.

(iii) A community water supply serving a population greater than ~~100,000~~ **1,000** shall post and retain material on a publicly accessible Web site under subdivision (b)(iv) of this subrule.

(iv) The community water supply shall repeat the press release task in subdivision (b)(v) of this subrule twice every 12 months on a schedule agreed upon with the department. The department may allow activities in subdivision (b) of this subrule to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension shall be approved in writing by the department before the 60-day deadline.

(d) Within **60 days of notification by the department of a lead action level exceedance or within** 60 days after the end of the monitoring period in which the exceedance occurred, **whichever is sooner,** unless it already is repeating public education tasks under subdivision (e) of this subrule, a nontransient noncommunity water supply shall deliver the public education materials specified by subrule (2) of this rule under all of the following provisions:

(i) Post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the supply.

(ii) Distribute informational pamphlets, or brochures, or both, on lead in drinking water to each person served by the nontransient noncommunity water supply. The department may allow the supply to utilize electronic transmission instead of or combined with printed materials as long as it achieves at least the same coverage.

(iii) For supplies that are required to conduct monitoring annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or, if the department has established an alternate monitoring period, the last day of that period.

(e) A nontransient noncommunity water supply shall repeat the posting and distributing tasks contained in subdivision (d) of this subrule at least once during each calendar year in which the supply exceeds the lead action level. The department can allow activities in subdivision (d) of this subrule to extend beyond the 60-day requirement if needed for implementation purposes on a case-by-case basis; however, this extension shall be approved in writing by the department in advance of the 60-day deadline.

(f) A water supply may discontinue delivery of public education materials if the supply has met the lead action level during the most recent 6-month monitoring period conducted under R 325.10710a. The supply shall recommence public education under this rule if it subsequently exceeds the lead action level during a monitoring period.

(g) A community water supply may apply to the department, in writing, unless the department has waived the requirement for prior department approval, to use only the text specified in subrule (2)(a) of this rule instead of the text in subrule (2)(a) to (b) of this rule and to perform the tasks listed in subdivisions (d) and (e) of this subrule instead of the tasks in subdivisions (b) and (c) of this subrule if both of the following conditions exist:

(i) The supply is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices.

(ii) The supply provides water as part of the cost of services provided and does not separately charge for water consumption.

(h) A community water supply serving 3,300 or fewer people may limit certain aspects of their public education programs as follows:

(i) With respect to the requirements of subdivision (b)(vi) of this subrule, a supply serving 3,300 or fewer shall implement at least 1 of the activities listed in that paragraph.

(ii) With respect to the requirements of subdivision (b)(ii) of this subrule, a supply serving 3,300 or fewer people may limit the distribution of the public education materials required under that subdivision to facilities and organizations served by the supply that are most likely to be visited regularly by pregnant women and children.

(iii) With respect to the requirements of subdivision (b)(v) of this subrule, the department may waive this requirement for supplies serving 3,300 or fewer persons as long as supply distributes notices to every household served by the supply.

(4) A water supply that fails to meet the lead action level based on tap samples collected under R 325.10710a shall offer to arrange for sampling the tap water of a customer who requests sampling. The supply is not required to pay for collecting or analyzing the sample and is not required to collect and analyze the sample.

(5) All of the following provisions apply to notification of results:

(a) Each supply shall provide a notice of the individual tap results from lead **and copper** tap water monitoring carried out under R 325.10710a to the persons served by the supply at the specific sampling site from which the sample was taken, for example, the occupants of the residence where the tap was tested.

(b) **For lead results less than or equal to the household advisory level for lead,** ~~A~~**a** supply shall provide the consumer notice as ~~soon as practical, but not later than 30 days after the supply learns of the tap monitoring results~~ **follows**:

(i) A supply shall provide the consumer notice as soon as practical, but not later than 30 days after the supply learns of the tap monitoring results.

(~~i~~**ii**) The consumer notice shall include the results of lead **and copper** tap water monitoring for the tap that was tested, an explanation of the health effects of lead **and copper**, list steps consumers can take to reduce exposure to lead **and copper** in drinking water and contact information for the water utility. The notice shall also provide the maximum contaminant level goal**s** and the action level**s** for lead **and copper** and the definitions for these 2 terms from R 325.10413(4) and (6).

(c) **For lead results greater than the household advisory level for lead, a supply shall provide the consumer notice as follows:**

(i) A supply shall provide the consumer notice as soon as practical, but not later than 3 business days after the supply learns of the tap monitoring results. Mailed notices postmarked within 3 business days of receiving the results are satisfactory.

(ii) A supply shall provide notice of the results to the department and the local health department within 3 business days after the supply learns of the tap monitoring results. The department shall refer the results to the Department of Health and Human Services for escalated response.

(iii) In addition to all information specified in R 325.10410(5)(b)(ii), the notice must include a statement on how the consumer can request blood lead level testing and a household plumbing assessment to diagnose the potential sources of lead in drinking water.

(d)The consumer notice shall be provided to persons served at the tap that was tested, either by mail or by another method approved by the department. For example, upon approval by the department, a non-transient non-community water supply could post the results on a bulletin board in the facility to allow users to review the information. The supply shall provide the notice to customers at sample taps tested, including consumers who do not receive water bills.

(6) The director shall appoint a statewide drinking water advisory council to assist the department in developing lead public awareness campaign materials and advise the department on efforts to educate the public about lead in drinking water.

(a) The membership of the statewide council shall consist of 1 community water supply representative, 1 noncommunity water supply representative, 1 representative of the administrative branch of a local government agency, 1 medical professional, 1 professor of public health at a university in the state, 1 representative of an environmental or public health advocacy group, 1 public health educator, and 2 members of the public at large. To be eligible for appointment to the state council, an individual shall have a demonstrated interest in or knowledge of lead in drinking water and its effects, as well as a demonstrated record of, or commitment to, working to protect the public from lead in water.

(b) The members first appointed to the statewide council shall be appointed within 90 days after the effective date of this rule.

(c) Members of the statewide council shall serve for terms of 3 years or until a successor is appointed, whichever is later, except certain of the members first appointed may be appointed for shorter terms to achieve a staggering of terms.

(d) If a vacancy occurs on the statewide council, an appointment for the unexpired term shall be made in the same manner as the original appointment.

(e) A member of the statewide council may be removed for incompetence, dereliction of duty, malfeasance, misfeasance, or nonfeasance in office, or any other good cause.

(f) At the first meeting of the statewide council, the council shall elect from its members a chairperson and other officers as it considers necessary or appropriate. After the first meeting, the council shall meet at least quarterly.

(g) A majority of the members of the statewide council constitute a quorum for the transaction business at a meeting of the council. A majority of the members present and serving are required for official action of the council.

(h) The business that the statewide council may perform shall be conducted at a public meeting of the council held in compliance with the Open Meetings Act, 1976 PA 267, MCL 15.261 TO 15.275.

(i) A writing prepared, owned, used, in the possession of, or retained by the statewide council in the performance of an official function is subject to the Freedom of Information Act, 1976 PA 442, MCL 15.231 TO 15.246.

(j) The statewide council shall do the following:

(i) Develop plans for continuing public awareness about lead in drinking water.

(ii) In consultation with the department and the Department of Health and Human Services, generate public awareness campaign materials about lead to be distributed by water supplies.

(iii) Assist in promoting the transparency of data and documents related to lead in drinking water within the state.

(v) Advise and consult with community councils on the development of appropriate plans for remediation and public education to be implemented if the lead action level is exceeded.

(vi) Provide advice, direction, and assistance to individual community supplies and their councils.

(7) Each publically owned supply that serves a population of 50,000 or more, and each consecutive water system that serves a population of 50,000 or more, shall create a water system advisory council. Councils shall operate as follows:

(a) A council shall consist of at least 5 members, appointed by the community supply. To be eligible for appointment to the council, an individual shall have a demonstrated interest in or knowledge about lead in drinking water and its effects, as well as a demonstrated record of, or commitment to, working to protect the public from lead in water.

(b) The members first appointed to a council shall be appointed within 180 days after the effective date of this rule.

(c) The business that the council may perform shall be conducted at a public meeting of the council and held in compliance with the Open Meeting Act, 1976 PA 267, MCL 15.261 TO 15.275.

(d) The first meeting of a council shall be called by the community supply. At the first meeting, the council shall elect from its members a chairperson and other officers as it consider necessary or appropriate. After the first meeting, the council shall meet at least annually.

(e) A writing prepared, owned, used, in the possession of, or retained by the council in the performance of an official function is subject to the Freedom of Information Act, 1976 PA 442, MCL 15.231 TO 15.246.

(f) The council shall do the following:

(i) Develop plans for continuing public awareness about lead in drinking water, even when the action level is not exceeded.

(ii) Review public awareness campaign materials provided by the statewide drinking water advisory council to ensure the needs and interests of the community, considering the economic and cultural diversity of its residents, are addressed.

(iv) Advise and consult with the community supply on the development of appropriate plans for remediation and public education to be implemented if a lead action level is exceeded.

(iv) Assist in promoting transparency of all data and documents related to lead in drinking water within the community supply service area.

(v) Collaborate with local community groups to ensure that residents have the opportunity to be involved in efforts to educate the community about lead in drinking water.

(d) A water system advisory council may independently seek advice, direction, and assistance from the department or the statewide advisory council.

R 325.10413 Annual consumer confidence reporting; content of reports.

Rule 413. (1) Each community water supply shall provide to its customers an annual report that contains the information specified in this rule and the information specified in R 325.10414.

(2) Each report shall identify the source or sources of the water delivered by the community water supply by providing information on both of the following:

(a) The type of the water; for example, surface water or ground water.

(b) The commonly used name, if any, and location of the body or bodies of water.

(3) If a source water assessment has been completed, then the report shall notify consumers of the availability of the information and the means to obtain it. In addition, a community supply is encouraged to highlight in the report significant sources of contamination in the source water area if the supply has readily available information. If a supply has received a source water assessment from the department, then the report shall include a brief summary of the supply's susceptibility to potential sources of contamination, using language provided by the department or written by the operator.

(4) Each report shall include both of the following definitions:

(a) "Maximum Contaminant Level Goal" or "MCLG" means the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

(b) "Maximum Contaminant Level" or "MCL" means the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

(5) A report for a community water supply operating under a variance or an exemption issued under section 20 of the act shall include the definition for variances and exemptions. "Variances and exemptions" means state or EPA permission not to meet an MCL or a treatment technique under certain conditions.

(6) A report that contains data on regulated contaminants using any of the following terms shall include the applicable definitions:

(a) "Treatment technique" or "TT" means a required process intended to reduce the level of a contaminant in drinking water.

(b) "Action level" or "AL" means the concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a water supply shall follow.

(c) "Maximum residual disinfectant level goal" or "MRDLG" means the level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

(d) "Maximum residual disinfectant level" or "MRDL" means the highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

(7) A report that contains information regarding a level 1 or level 2 assessment required under total coliform provisions of R 325.10704a to R 325.10704k shall include the following applicable definitions:

(a) Level 1 assessment: A level 1 assessment is a study of the water supply to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

(b) Level 2 assessment: A level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

(8) The report shall include all of the following information on detected contaminants subject to mandatory monitoring, except Cryptosporidium:

(a) This subrule applies to all of the following contaminants:

(i) Contaminants subject to an MCL, action level, maximum residual disinfectant level, or treatment technique known as regulated contaminants.

(ii) Contaminants for which monitoring is required by 40 CFR §141.40, as referenced in R 325.10401a, known as unregulated contaminants.

(iii) Disinfection byproducts or microbial contaminants for which monitoring is required by 40 C.F.R. §§141.142 and 141.143, except as provided under subrule (9)(a) of this rule, and which are detected in the finished water.

(b) The data relating to the contaminants specified in this subrule shall be displayed in 1 table or in several adjacent tables. Any additional monitoring results that a community supply chooses to include in its report shall be displayed separately.

(c) The data shall be derived from data collected to comply with EPA and state monitoring and analytical requirements during the previous calendar year with the following exceptions:

(i) If a supply is allowed to monitor for regulated contaminants less often than once a year, then the table or tables shall include the date and results of the most recent sampling and the report shall include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulations. Data older than 5 years need not be included.

(ii) Results of monitoring in compliance with 40 C.F.R. §§141.142 and 141.143 need only be included for 5 years from the date of last sample or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first.

(d) For detected regulated contaminants in table 1 of R 325.10405, the table or tables shall contain all of the following information:

(i) The MCL for that contaminant expressed as a number equal to or greater than 1.0, as provided in table 1 of R 325.10405.

(ii) The MCLG for that contaminant expressed in the same units as the MCL.

(iii) If there is not an MCL for a detected contaminant, then the table shall indicate that there is a treatment technique, or specify the action level, applicable to that contaminant. The report shall also include the definitions for treatment technique or action level, or both, as appropriate, and specified in subrule (6) of this rule.

(iv) For contaminants subject to an MCL, except turbidity, total coliform, fecal coliform, and E. coli, the table shall indicate the highest contaminant level used to determine compliance with a drinking water standard and the range of detected levels as follows:

(A) If compliance with the MCL is determined annually or less frequently, then the table shall indicate the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

(B) If compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point, then the table shall indicate the highest average of any of the sampling points and the range of all sampling points expressed in the same units as the MCL. For the MCLs for TTHM and HAA5 in R 325.10610(2) that are based on a locational running annual average, supplies shall include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If more than 1 location exceeds the TTHM or HAA5 MCL, the supply shall include the locational running annual averages for all locations that exceed the MCL.

(C) If compliance with the MCL is determined on a supply-wide basis by calculating a running annual average of all samples at all sampling points, then the table shall indicate the average and range of detection expressed in the same units as the MCL. Note to subdivision (d)(iv) of this subrule: When rounding of results to determine compliance with the MCL is allowed, rounding may be done before multiplying the results by the factor listed in table 1 of R 325.10405.

(v) For turbidity reported under R 325.10720 and R 325.10611b, the table shall indicate the highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits for the filtration technology being used. The report shall include an explanation of the reasons for measuring turbidity.

(vi) For lead and copper, the table shall indicate the ninetieth percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level.

(vii) For total coliform analytical results until March 31, 2016, the table shall indicate either of the following:

(A) The highest monthly number of positive samples for supplies collecting fewer than 40 samples per month.

(B) The highest monthly percentage of positive samples for supplies collecting not less than 40 samples per month.

(viii) For fecal coliform and E. coli until March 31, 2016, the table shall indicate the total number of positive samples.

(ix) The table shall indicate the likely source or sources of detected contaminants to the best of the supply's knowledge. Specific information regarding contaminants may be available in sanitary surveys

and source water assessments and the supply shall use the information when it is available. If the supply lacks specific information on the likely source, then the report shall include 1 or more of the typical sources for that contaminant listed in table 1 of R 325.10405 that are most applicable to the community water supply.

(x) For E. coli analytical results under the total coliform provisions of R 325.10704a to R 325.10704k, the table shall indicate the total number of positive samples.

(e) If a community water supply distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, then the table may contain a separate column for each service area and the report may identify each separate distribution system. Alternatively, supplies may produce separate reports tailored to include data for each service area.

(f) The table or tables shall clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques and the report shall contain a clear and readily understandable explanation of the violation including the length of the violation, the potential adverse health effects, and actions taken by the supply to address the violation. The supply shall use the relevant language in table 1 of R 325.10405 to describe the potential health effects.

(g) For detected unregulated contaminants for which monitoring is required, except Cryptosporidium, the table or tables shall contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.

(9) All of the following information shall be included on Cryptosporidium, radon, and other contaminants:

(a) If the supply has performed any monitoring for Cryptosporidium, including monitoring performed to satisfy the requirements of 40 C.F.R. §141.143, which indicates that Cryptosporidium may be present in the source water or the finished water, the report shall include both of the following:

(i) A summary of the results of the monitoring.

(ii) An explanation of the significance of the results.

(b) If the supply has performed any monitoring for radon which indicates that radon may be present in the finished water, then the report shall include both of the following:

(i) The results of the monitoring.

(ii) An explanation of the significance of the results.

(c) If the supply has performed additional monitoring which indicates the presence of other contaminants in the finished water, then the supply is encouraged to report any results that may indicate a health concern. To determine if results may indicate a health concern, the supply may determine if EPA has proposed a national primary drinking water regulation or issued a health advisory for that contaminant by calling the safe drinking water hotline (800-426-4791). EPA considers detections above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, the report may include both of the following:

(i) The results of the monitoring.

(ii) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

(d) Levels of sodium monitored under R 325.10717b during the year covered by the report.

(10) For compliance with state drinking water standards, in addition to the requirements of subrule (7)(f) of this rule, the report shall note any violation that occurred during the year covered by the report for all of the following requirements and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the supply has taken to correct the violation:

(a) Monitoring and reporting of compliance data.

(b) For filtration and disinfection prescribed by R 325.10611, R 325.10611a, and R 325.10611b, supplies 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 shall include the following language as part of the explanation of potential adverse health effects in the report: "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."

(c) For lead and copper control requirements prescribed by R 325.10604f, supplies that fail to take 1 or more actions prescribed by R 325.10604f(1)(d), R 325.10604f(2), R 325.10604f(3), R 325.10604f(4), or R 325.10604f(5) shall include the applicable language of table 1 of R 325.10405 for lead, copper, or both, in the report.

(d) For treatment techniques for acrylamide and epichlorohydrin prescribed by R 325.10604e, supplies that violate the requirements of R 325.10604e shall include the relevant language from table 1 of R 325.10405 in the report.

(e) Recordkeeping of compliance data.

(f) Special monitoring requirements prescribed by R 325.10717b.

(g) Violation of the terms of a variance, an exemption, or an administrative or judicial order.

(11) For variances and exemptions, if a supply is operating under the terms of a variance or an exemption issued under section 20 of the act, then the report shall contain all of the following information:

(a) An explanation of the reasons for the variance or exemption.

(b) The date on which the variance or exemption was issued.

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

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

(12) The report shall include all of the following additional information:

(a) A brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. The explanation may include the language of paragraphs (i) to (iii) of this subdivision or supplies may use their own comparable language. The report also shall include the language of paragraph (iv) of this subdivision.

(i) The sources of drinking water, both tap water and bottled water, including 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, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

(ii) Contaminants that may be present in source water including all of the following:

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

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

(C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

(D) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

(E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

(iii) To ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water supplies. FDA regulations establish limits for contaminants in bottled water that shall provide the same protection for public health.

(iv) 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 United States environmental protection agency's safe drinking water hotline (800-426-4791).

(b) The report shall include the telephone number of the owner, operator, or designee of the community water supply as a source of additional information concerning the report.

(c) In communities that have more than 10% non-English speaking residents, the report shall contain information in the appropriate language or languages regarding the importance of the report or the report

shall contain a telephone number or address where residents may contact the supply to obtain a translated copy of the report or assistance in the appropriate language.

(d) The report shall include information about opportunities for public participation in decisions by the supplies that may affect the quality of the water; for example, time and place of regularly scheduled board meetings.

(e) The supply may include such additional information as it determines necessary for public education consistent with, and not detracting from, the purpose of the report.

(f) Groundwater supplies required to comply with groundwater provisions of R 325.10612 shall comply with all of the following:

(i) A groundwater supply that receives notice from the department of a significant deficiency or notice from a laboratory of a fecal indicator-positive groundwater source sample that is not invalidated by the department under R 325.10739(3) shall inform its customers of any significant deficiency that is uncorrected at the time of the next report or of any fecal indicator-positive groundwater source sample in the next report. The groundwater supply shall continue to inform the public annually until the department determines that particular significant deficiency is corrected or the fecal contamination in the groundwater source is addressed under R 325.10612a(1). Each report shall include all of the following elements:

(A) The nature of the particular significant deficiency or the source of the fecal contamination, if the source is known, and the date the significant deficiency was identified by the department or the dates of the fecal indicator-positive groundwater source samples.

(B) If the fecal contamination in the groundwater source has been addressed under R 325.10612a(1) and the date of the action.

(C) For each significant deficiency or fecal contamination in the groundwater source that has not been addressed under R 325.10612a(1), the department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed.

(D) If the groundwater supply receives notice of a fecal indicator-positive groundwater source sample that is not invalidated by the department under R 325.10739(3), the potential health effects using the health effects language of Table 1 of R 325.10405.

(ii) If directed by the department, a groundwater supply with significant deficiencies that have been corrected before the next report is issued shall inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction under paragraph (i) of this subdivision.

(g) Supplies required to comply with total coliform provisions of R 325.10704a to R 325.10704k shall comply with all of the following:

(i) A supply required to comply with the level 1 assessment requirement or a level 2 assessment requirement that is not due to an E. coli MCL violation shall comply with all of the following:

(A) Include in the report the text, "Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct the problems that were found during these assessments."

(B) Include in the report as appropriate, filling in the blanks accordingly the text, "During the past year we were required to conduct [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s). [INSERT NUMBER OF LEVEL 1 ASSESSMENTS] level 1 assessment(s) were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions."

(C) Include in the report as appropriate, filling in the blanks accordingly the text, "During the past year [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] level 2 assessments were required to be completed for our water supply. [INSERT NUMBER OF LEVEL 2 ASSESSMENTS] Level 2 assessments were completed. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions."

(D) A supply that has failed to complete all the required assessments or correct all identified sanitary defects, is in violation of the treatment technique requirement and shall also include 1 or both of the following statements, as appropriate:

(1) During the past year we failed to conduct all of the required assessment(s).

(2) During the past year we failed to correct all identified defects that were found during the assessment.

(ii) A supply required to undergo a level 2 assessment due to an E. coli MCL violation shall comply with all of the following:

(A) Include in the report the text, "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 the problems that were found during these assessments."

(B) Include in the report as appropriate, filling in the blanks accordingly the text, "We were required to complete a level 2 assessment because we found E. coli in our water system. In addition, we were required to take [INSERT NUMBER OF CORRECTIVE ACTIONS] corrective actions and we completed [INSERT NUMBER OF CORRECTIVE ACTIONS] of these actions."

(C) A supply that has failed to complete the required assessment or correct all identified sanitary defects, is in violation of the treatment technique requirement and shall also include one or both of the following statements, as appropriate:

(1) We failed to conduct the required assessment.

(2) We failed to correct all sanitary defects that were identified during the assessment that we conducted.

(iii) If a supply detects E. coli and has violated the E. coli MCL, in addition to completing the table as required in subrule (8)(d) of this rule, the supply shall include 1 or more of the following statements to describe the noncompliance, as applicable:

(A) We had an E. coli-positive repeat sample following a total coliform-positive routine sample.

(B) We had a total coliform-positive repeat sample following an E. coli-positive routine sample.

(C) We failed to take all required repeat samples following an E. coli-positive routine sample.

(D) We failed to test for E. coli when a repeat sample tests positive for total coliform.

(iv) If a supply detects E. coli and has not violated the E. coli MCL, in addition to completing the table as required in subrule (8)(d) of this rule, the supply may include a statement that explains that although they have detected E. coli, they are not in violation of the E. coli MCL.

(h) For water supplies with lead service lines, or service lines of unknown material, the report shall include the number of lead service lines and service lines of unknown material present in the supply.

R 325.10420 Annual consumer confidence reporting; contaminants for vulnerable subpopulation.

Rule 420. Pursuant to section 14 of the act, if any contaminants listed in table 1 of this rule are detected above a level of concern as indicated in table 1 of this rule, then the consumer confidence report shall include a description of the potential adverse health effects and the vulnerable subpopulation that may be susceptible to the level of contaminant detected. The community water supply may use the relevant language provided in table 1 of R 325.10405.

Table 1 Contaminants for vulnerable subpopulation reporting

Contaminant	Susceptible vulnerable subpopulation	Level of concern
Fecal coliform/ E. coli	Infants, young children, the elderly, and people with severely compromised immune systems.	Confirmed presence (any confirmed detect)

Copper	People with Wilson's disease.	1.3 mg/l (ppm)
Fluoride	Children.	4.0 mg/l (ppm)
Lead	Infants and children.	~~15.0~~ **10.0** µg/l (ppb)
Nitrate	Infants below the age of 6 months.	10.0 mg/l (ppm)
Nitrite	Infants below the age of 6 months.	1.0 mg/l (ppm)

PART 6. STATE DRINKING WATER STANDARDS AND ANALYTICAL METHODS

R 325.10604f Treatment techniques for lead and copper; **household advisory level for lead**.

Rule 604f. (1) Treatment techniques for lead and copper **and the household advisory level for lead** are as follows:

(a) This rule, R 325.10410, and R 325.10710a to R 325.10710d are the requirements for lead and copper and apply to community and nontransient noncommunity water supplies. These public water supplies are considered "water supplies" or "supplies" in this rule, R 325.10410, and R 325.10710a to R 325.10710d.

(b) These rules establish a treatment technique that includes requirements for corrosion control treatment, source water treatment, lead service line replacement, and public education. These requirements are triggered, in some cases, by lead and copper action levels measured in samples that are collected at consumers' taps.

(c) **Through December 31, 2023**, ~~T~~the lead action level is exceeded if the ninetieth percentile lead level is more than 0.015 milligrams per liter (mg/l) in tap water samples collected during a monitoring period conducted under R 325.10710a. **Beginning January 1, 2024, the lead action level is exceeded if the ninetieth percentile lead level is more than 0.010 mg/l in tap water samples collected during a monitoring period conducted under R 325.10710a**. The copper action level is exceeded if the ninetieth percentile copper level is more than 1.3 mg/l in tap water samples collected during a monitoring period conducted under R 325.10710a. The ninetieth percentile lead and copper levels shall be computed as follows:

(i) The **highest lead** result~~s~~ **and the highest copper result from each sampling site** ~~of all lead or copper samples~~ taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.

(ii) The number of samples taken during the monitoring period shall be multiplied by 0.9.

(iii) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (ii) of this subdivision is the ninetieth percentile contaminant level.

(iv) If a total of 5 samples are collected per monitoring period, the ninetieth percentile is computed by taking the average of the highest and second highest concentrations.

(v) For a water supply that has been allowed by the department to collect fewer than 5 samples under R 325.10710a(3), the sample result with the highest concentration is considered the 90th percentile value.

(d) A supply shall install and operate optimal corrosion control treatment on the system under subrules (2) and (3) of this rule. A supply that is in compliance with the applicable corrosion control treatment requirements specified by the department under subrules (2) and (3) of this rule is in compliance with the treatment requirement.

(e) A supply exceeding the lead or copper action level shall implement all applicable source water treatment requirements specified by the department under subrule (4) of this rule.

(f) A supply exceeding the lead action level after implementation of applicable corrosion control and source water treatment requirements shall complete the lead service line replacement requirements contained in subrule (5) of this rule.

(g) Under R 325.10410, all water supplies shall provide a consumer notice of lead **and copper** tap water monitoring results to persons served at the sites (taps) that are tested. A supply exceeding the lead action level shall implement the public education requirements specified in R 325.10410.

(h) Tap water monitoring for lead and copper, monitoring for water quality parameters, source water monitoring for lead and copper, and analyses of the monitoring results under this subrule shall be completed under R 325.10605, R 325.10710a, R 325.10710b, and R 325.10710c.

(i) A supply shall report, to the department, the information required by the treatment provisions of this subrule and R 325.10710d.

(j) A supply shall maintain records under R 325.11506(1)(e).

(k) Failure to comply with the applicable requirements of this rule, R 325.10410, R 325.10710a, R 325.10710b, R 325.10710c, R 325.10605, R 325.10710d, and R 325.11506(1)(e) constitutes a violation of these rules for lead or copper, as applicable.

(l) The household advisory level for lead is exceeded if the lead level at an individual sampling location is more than 0.040 milligrams per liter (mg/l), when collected pursuant to a sampling protocol designed to represent water typically drawn for consumption.

(2) Corrosion control treatment steps apply to small, medium size, and large water supplies as follows:

(a) A supply shall complete the applicable corrosion control treatment requirements described in subrule (3) of this rule by the deadlines established in this rule. A large water supply (serving more than 50,000 persons) shall complete the corrosion control treatment steps specified in subdivision (d) of this subrule, unless the supply is considered to have optimized corrosion control under subdivision (b) (ii) or (iii) of this subrule. A small water system (serving 3,300 or fewer persons) and a medium size water system (serving more than 3,300, but fewer than 50,001 persons) shall complete the corrosion control treatment steps specified in subdivision (e) of this subrule unless the supply is considered to have optimized corrosion control under subdivision (b)(i), (ii), or (iii) of this subrule.

(b) A supply is considered to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in subrule (3) of this rule if the supply is in compliance with 1 of the criteria specified in paragraphs (i) to (iii) of this subdivision. A supply which is considered to have optimized corrosion control under this subdivision and which has treatment in place, **or is receiving water from a supply considered optimized under this subdivision,** shall continue to operate and**/or** maintain optimal corrosion control treatment and meet the requirements that the department determines appropriate to ensure optimal corrosion control treatment is maintained. All of the following provisions apply to being considered to have optimized corrosion control:

(i) A small or medium size water supply is considered to have optimized corrosion control if the supply is in compliance with the lead and copper action levels during each of 2 consecutive 6-month monitoring periods during which monitoring is conducted under R 325.10710a.

(ii) A water supply may be considered by the department to have optimized corrosion control treatment if the supply demonstrates, to the satisfaction of the department, that it has conducted activities equivalent to the corrosion control steps applicable to the system under subrule (3) of this rule. Supplies considered to have optimized corrosion control under this subdivision shall operate in compliance with the department designated optimal water quality control parameters under subrule (3)(g) of this rule and continue to conduct lead and copper tap and water quality parameter sampling under R 325.10710a(4)(c) and R 325.10710b(4), respectively. A supply shall provide the department with all of the following information to support a determination under this subdivision:

(A) The results of all test samples collected for each of the water quality parameters specified in subrule (3)(c)(iii) of this rule.

(B) A report that explains the test methods used by the water supply to evaluate the corrosion control treatments listed in subrule (3) of this rule, the results of all tests conducted, and the basis for the supply's selection of optimal corrosion control treatment.

(C) A report that explains how corrosion control has been installed and how it is being maintained to ensure minimal lead and copper concentrations at consumers' taps.

(D) The results of tap water samples collected under R 325.10710a at least once every 6 months for 1 year after corrosion control has been installed.

(iii) A water supply is considered to have optimized corrosion control if it submits results of tap water monitoring conducted under R 325.10710a and source water monitoring conducted under R 325.10710c that demonstrates, for 2 consecutive 6-month monitoring periods, that the difference between the ninetieth percentile tap water lead level computed under subrule (1)(c) of this rule and the highest source water lead concentration is less than the practical quantitation level for lead. In addition, all of the following provisions apply:

(A) A supply whose highest source water lead level is below the method detection limit is considered to have optimized corrosion control under this paragraph if the supply's ninetieth percentile tap water lead level is less than or equal to the practical quantitation level for lead for 2 consecutive 6-month monitoring periods.

(B) A water supply considered to have optimized corrosion control under this paragraph shall continue monitoring for lead and copper at the tap not less frequently than once every 3 calendar years using the reduced number of sites specified in R 325.10710a(3) and collecting the samples at times and locations specified in R 325.10710a(4)(d)(iv).

(C) A water supply considered to have optimized corrosion control under this subdivision shall notify the department, in writing, under R 325.10710d(a)(iii) of an upcoming long-term change in treatment or addition of a new source as described in that subdivision. The department shall review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water supply. The department may require the supply to conduct additional monitoring or to take other action the department considers appropriate consistent with the requirements of R 325.10604f(2) to ensure that the supply maintains minimal levels of corrosion in the distribution system.

(D) As of July 12, 2001, a supply is not considered to have optimized corrosion control under this subdivision, and shall implement corrosion control treatment under subparagraph (E) of this paragraph unless it meets the copper action level.

(E) A supply that is no longer considered to have optimized corrosion control under this subdivision shall implement corrosion control treatment under the deadlines in subdivision (e) of this subrule. A large water supply shall adhere to the schedule specified in that subdivision for medium size water supplies, with the time periods for completing each step being triggered by the date the supply is no longer considered to have optimized corrosion control under this subdivision.

(c) If a small or medium size water supply exceeds the lead or copper action level and the supply is required to perform the corrosion control treatment steps, the supply may cease completing the treatment steps when the supply is in compliance with both action levels during each of 2 consecutive monitoring periods conducted under R 325.10710a and the supply submits the results to the department. If the supply thereafter exceeds the lead or copper action level during a monitoring period, the supply shall recommence the applicable treatment steps beginning with the first treatment step that was not previously completed in its entirety. The department may require a supply to repeat treatment steps that were previously completed by the supply if the department determines that this is necessary to properly implement the treatment requirements of this rule. The department shall notify the supply in writing of the determination and explain the basis of the decision. If a small or medium size water supply exceeds the lead or copper action level, the supply, including supplies considered to have optimized corrosion control under subdivision (b) of this subrule, shall implement corrosion control treatment steps under subdivision (e) of this subrule.

(d) Except as provided in subdivision (b)(ii) and (iii) of this subrule, a large water supply shall complete all of the following corrosion control treatment steps by the indicated dates:

(i) Step 1: A supply shall conduct initial monitoring during 2 consecutive 6-month monitoring periods by January 1, 1993.

(ii) Step 2: A supply shall complete corrosion control studies by July 1, 1994.

(iii) Step 3: By January 1, 1997, a supply shall install optimal corrosion control treatment as designated by the department.

(iv) Step 4: A supply shall complete follow-up sampling by January 1, 1998.

(v) Step 5: A supply shall operate in compliance with the department specified optimal water quality control parameters and continue to conduct tap sampling.

(e) Except as provided in subdivision (b) of this subrule, small and medium size water supplies shall complete all of the following corrosion control treatment steps by the indicated time periods:

(i) Step 1: A supply shall conduct initial tap sampling under R 325.10604f(3)(a) until the supply either exceeds the lead or copper action level or becomes eligible for reduced monitoring. The supply that exceeds the lead or copper action level shall recommend optimal corrosion control treatment within 6 months after the end of the monitoring period during which it exceeds 1 of the action levels.

(ii) Step 2: Within 12 months after the end of the monitoring period during which a supply exceeds the lead or copper action level, the department may require the supply to perform corrosion control studies under subdivision (3)(b) of this rule. If the department does not require the supply to perform the studies, the department shall specify optimal corrosion control treatment under subdivision (3)(d) of this rule within the following timeframes:

(A) For medium-size supplies, within 18 months after the end of the monitoring period during which the supply exceeds the lead or copper action level.

(B) For small supplies, within 24 months after the end of the monitoring period during which the supply exceeds the lead or copper action level.

(iii) Step 3: If the department requires a supply to perform corrosion control studies under subdivision (3)(b) of this rule, the supply shall complete the studies within 18 months after the department requires that the studies be conducted. If the supply has performed corrosion control studies under paragraph (ii) of this subdivision, the department shall designate optimal corrosion control treatment under subdivision (3)(d) of this rule within 6 months after completion of the corrosion control studies.

(iv) Step 4: A supply shall install optimal corrosion control treatment within 24 months after the department designates the treatment.

(v) Step 5: A supply shall complete follow-up sampling under R 325.10710a(4)(b) within 36 months after the department designates optimal corrosion control treatment. The department shall review the supply's installation of treatment and designate optimal water quality control parameters under R 325.10604f(3)(d)(ii) within 6 months after the supply's completion of follow-up sampling.

(vi) Step 6: A supply shall operate in compliance with the department designated optimal water quality control parameters under R 325.10604f(3)(d)(ii) and continue to conduct tap sampling under R 325.10710a(4)(c) and R 325.10710b(6).

(3) A water supply shall complete all the corrosion control treatment requirements described in this subrule that are applicable to the system under subrule (2) of this rule. All of the following apply:

(a) Based on the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium size water systems that exceed the lead or copper action level shall recommend the installation of 1 or more of the corrosion control treatments listed in subdivision (c)(i) of this subrule that the supply believes constitutes optimal corrosion control for that system. The department may require the supply to conduct additional water quality parameter monitoring under R 325.10710b(4) to assist the department in reviewing the supply's recommendation.

(b) When required by the department, a small or medium size water supply that exceeds the lead or copper action level shall perform corrosion control studies under subdivision (c) of this subrule to identify optimal corrosion control treatment for the supply.

(c) Perform corrosion control studies as follows:

(i) A water supply that performs corrosion control studies shall evaluate the effectiveness of each of the following treatments and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that supply:

(A) Alkalinity and pH adjustment.

(B) Calcium hardness adjustment.

(C) The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.

(ii) The water supply shall evaluate each of the corrosion control treatments using pipe rig/loop tests, metal coupon tests, partial system tests, or analyses based on documented analogous treatments with other water supplies of similar size, water chemistry, and distribution system configuration.

(iii) A water supply shall measure all of the following water quality parameters in tests conducted under this paragraph before and after evaluating the corrosion control treatments listed in paragraph (i)(A) to (C) of this subdivision:

(A) Lead.

(B) Copper.

(C) pH.

(D) Alkalinity.

(E) Calcium.

(F) Conductivity.

(G) Orthophosphate, when an inhibitor containing a phosphate compound is used.

(H) Silicate, when an inhibitor containing a silicate compound is used.

(I) Water temperature.

(J) Sulfate

(K) Chloride

(iv) The water supply shall identify all chemical or physical constraints that limit or prohibit the use of a particular corrosion control treatment and shall document the constraints with 1 or both of the following:

(A) Data and documentation demonstrating that a particular corrosion control treatment has adversely affected other water treatment processes when used by another water supply with comparable water quality characteristics.

(B) Data and documentation demonstrating that the supply has previously attempted to evaluate a particular corrosion control treatment and has found that the treatment is ineffective or adversely affects other water quality treatment processes.

(v) A water supply shall evaluate the effect of the chemicals used for corrosion control treatment in other water quality treatment processes.

(vi) On the basis of an analysis of the data generated during each evaluation, a water supply shall recommend, to the department, in writing, the treatment option that the corrosion control studies indicate constitutes optimal corrosion control treatment for that supply. The water system shall provide a rationale for its recommendation together with all supporting documentation specified in paragraphs (i) to (v) of this subdivision.

(d) Department designation of optimal corrosion control treatment shall be as follows:

(i) Based on consideration of available information, including, where applicable, studies performed under subdivision (c) of this subrule and a supply's recommended treatment alternative, the department will either approve the corrosion control treatment option recommended by the supply or will designate alternative corrosion control treatment from the treatment specified in subdivision (c)(i) of this subrule. When designating optimal treatment, the department shall consider the effects that additional corrosion control treatment will have on water quality parameters and on other water quality treatment processes.

(ii) The department shall notify the supply of its decision on optimal corrosion control treatment in writing and explain the basis for this determination. If the department requests additional information to aid its review, the water supply shall provide the information.

(e) Each supply shall properly install and operate, throughout its distribution system, the optimal corrosion control treatment designated by the department.

(f) The department shall evaluate the results of all lead and copper tap samples and water quality control parameter samples submitted by the water supply and determine whether the supply has properly installed and operated the optimal corrosion control treatment designated by the department in subdivision (d) of this subrule. Upon reviewing the results of tap water and water quality control parameter monitoring by the supply, both before and after the supply installs optimal corrosion control treatment, the department shall designate all of the following:

(i) A minimum value or a range of values for pH measured at each entry point to the distribution system.

(ii) If a corrosion inhibitor is used, a minimum concentration or a range of concentrations for the inhibitor, measured at each entry point to the distribution system, that the department determines is necessary to form a passivating film on the interior walls of the pipes of the distribution system.

(iii) If alkalinity is adjusted as part of optimal corrosion control treatment, a minimum concentration or a range of concentrations for alkalinity, measured at each entry point to the distribution system. The department may designate values for additional water quality control parameters determined by the department to reflect optimal corrosion control for the supply. The department shall notify the supply in writing of these determinations and explain the basis for its decision.

(g) All supplies optimizing corrosion control shall continue to operate and maintain optimal corrosion control treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the department, under this subdivision for all samples collected under R 325.10710b(6) to (8). Compliance with the requirements of this subdivision shall be determined every 6 months, as specified under R 325.10710b(6). A water system is out of compliance with the requirements of this subdivision for a 6-month period if it has excursions for a department specified parameter on more than 9 days during the period. An excursion occurs when the daily value for 1 or more of the water quality parameters measured at a sampling location is below the minimum value or outside the range designated by the department. The department may delete results of obvious sampling errors from this calculation. Daily values are calculated as follows:

(i) On days when more than 1 measurement for the water quality parameter is collected at the sampling location, the daily value shall be the average of all results collected during the day regardless of whether they are collected through continuous monitoring, grab sampling, or a combination of both.

(ii) On days when only 1 measurement for the water quality parameter is collected at the sampling location, the daily value shall be the result of that measurement.

(iii) On days when a measurement is not collected for the water quality parameter at the sampling location, the daily value shall be the daily value calculated on the most recent day on which the water quality parameter was measured at the sample site.

(h) The department's determination of the optimal corrosion control treatment specified in subdivision (d) of this subrule or optimal water quality control parameters may be modified by the department. If a request for modification is by a supply or other interested person, the request shall be in writing, shall explain why the modification is appropriate, and shall provide supporting documentation. The department may modify its determination where it concludes that a change is necessary to ensure that the supply continues to optimize corrosion control treatment.

(4) A water supply shall complete the applicable source water monitoring and treatment requirements by the following deadlines:

(a) The deadlines for completing source water treatment steps are as follows:

(i) Step 1: A supply exceeding the lead or copper action level shall complete lead and copper source water monitoring under R 325.10710c(2) and make a treatment recommendation to the department under

paragraph (b)(i) of this subdivision not later than 180 days after the end of the monitoring period during which the lead or copper action level was exceeded. The department shall make a determination regarding source water treatment under paragraph (b)(ii) of this subrule within 6 months after submission of monitoring results under this paragraph.

(ii) Step 2: If the department requires installation of source water treatment, the supply shall install the treatment within 24 months after the date of written notification by the department under paragraph (i) of this subdivision.

(iii) Step 3: The supply shall complete follow-up tap water monitoring under R 325.10710a(4)(b) and source water monitoring under R 325.10710c(3) within 36 months after the date of written notification by the department under paragraph (i) of this subdivision. The department shall review the supply's installation and operation of source water treatment and specify maximum permissible source water levels under R 325.10604f(4)(b)(iv) within 6 months after completion of the follow-up tap water monitoring and source water monitoring of this paragraph.

(iv) Step 4: A supply shall operate in compliance with the department specified maximum permissible lead and copper source water levels and shall continue source water monitoring.

(b) Source water treatment requirements are as follows:

(i) A system that exceeds the lead or copper action level shall recommend, in writing, to the department, the installation and operation of 1 of the source water treatments listed in paragraph (ii) of this subdivision. A supply may recommend that no treatment be installed based on a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.

(ii) The department shall complete an evaluation of the results of all source water samples submitted by the supply to determine whether source water treatment is necessary to minimize lead or copper levels in water delivered to users' taps. If the department determines that source water treatment is needed to minimize lead or copper levels in water that is delivered to users' taps, the department will either require installation and operation of the source water treatment recommended by the supply or require the installation and operation of another source water treatment from among the following alternatives:

(A) Ion exchange.

(B) Reverse osmosis.

(C) Lime softening.

(D) Coagulation/filtration.

If the department requests additional information to aid in its review, the water supply shall provide the information by the date specified by the department in its request. The department shall notify the supply in writing of its determination and set forth the basis for its decision.

(iii) Each supply shall properly install and operate the source water treatment designated by the department under paragraph (ii) of this subdivision. The department shall review the source water samples taken by the supply both before and after the supply installs source water treatment and determine whether the supply has properly installed and operated the source water treatment designated by the department.

(iv) Based on the department's review of the source water treatment, the department shall designate the maximum permissible lead and copper concentrations for finished water entering the distribution system. These levels shall reflect the contaminant removal capability of the treatment properly operated and maintained. The department shall notify the supply in writing and explain the basis for its decision. Each water supply shall maintain lead and copper levels below the maximum permissible concentrations designated by the department at each sampling point monitored under R 325.10710c. A supply is out of compliance with this subrule if the level of lead or copper at a sampling point is more than the maximum permissible concentration designated by the department.

(v) Upon its own initiative or in response to a request by a water supply or other interested person, the department may modify its determination of the source water treatment or maximum permissible lead and copper concentrations for finished water entering the distribution system. A request for modification by a supply or other interested person shall be in writing, explain why the modification is

appropriate, and provide supporting documentation. The department may modify its determination where it concludes that a change is necessary to ensure that the supply continues to minimize lead and copper concentrations in source water. A revised determination shall be made in writing, set forth the new treatment requirements, explain the basis for the department's decision, and provide an implementation schedule for completing the treatment modifications.

(5) **For a water supply that exceeds the lead action level after installing corrosion control or source water treatment**, ~~L~~ **l**ead service line replacement requirements are as follows:

(a) A water supply that exceeds the lead action level in tap samples taken under R 325.10710a(4)(b) after installing corrosion control or source water treatment, or both, whichever sampling occurs later, shall replace lead service lines under the requirements of this subrule. If a supply is in violation of subrule (2) or (4) of this rule for failure to install source water or corrosion control treatment, then the department may require the supply to commence lead service line replacement after the date that the supply was required to conduct monitoring under R 325.10710a(4)(b).

(b) ~~Both of t~~ **T**he following ~~apply~~ **applies** to the schedule of lead service line replacement:

(i) Annually, a water supply shall replace not less than 7% of the initial number of lead service lines in its distribution system. The initial number of lead service lines is the number of lead lines in place when the replacement program begins. The supply shall identify the initial number of lead service lines in its distribution system, ~~including an identification of the portion or portions owned by the system~~, based on a materials evaluation, including the evaluation required under R 325.10710a(1), **or the materials inventory required under R 325.11604(c) ,** ~~and relevant legal authorities, for example, contracts and local ordinances, regarding the portion owned by the system.~~ The first year of lead service line replacement shall begin on the first day following the end of the monitoring period in which the action level was exceeded in subdivision (a) of this subrule. If monitoring is required annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs. If the department has established an alternate monitoring period, then the end of the monitoring period will be the last day of that period.

~~(ii) A water supply resuming a lead service line replacement program after the cessation of its lead service line replacement program as allowed by subdivision (c) of this subrule shall update its inventory of lead service lines to include those sites that were previously determined not to require replacement through the sampling provision under subdivision (c) of this subrule. The supply will then divide the updated number of remaining lead service lines by the number of remaining years in the program to determine the number of lines that shall be replaced per year. The 7% lead service line replacement is based on a 15-year replacement program, so, for example, supplies resuming lead service line replacement after previously conducting 2 years of replacement would divide the updated inventory by 13. For those supplies that have completed a 15-year lead service line replacement program, the department will determine a schedule for replacing or retesting lines that were previously tested out under the replacement program when the supply re-exceeds the action level.~~

~~(c) A water supply is not required to replace an individual lead service line if the lead concentration in all service line samples from that line, taken under R 325.10710a(2)(c), is less than or equal to 0.015 mg/l.~~

(~~d~~) **(c)** A water supply shall replace that portion of the lead service line that it owns. If the supply does not own the entire lead service line, the supply shall notify the owner of the line, or the owner's authorized agent, that the supply will replace the portion of the service line that it owns and shall offer to replace the owner's portion of the line **at water supply expense**. ~~A supply is not required to bear the cost of replacing the privately owned portion of the line, nor is it required to replace the privately owned portion where the owner chooses not to pay the cost of replacing the privately owned portion of the line, or where replacing the privately owned portion would be precluded by state, local, or common law.~~ A water supply that does not replace the entire length of the service line also shall complete both of the following tasks:

(i) Not less than 45 days before commencing with the partial replacement of a lead service line, the water system shall provide notice to the resident or residents of all buildings served by the line

explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumers can take to minimize their exposure to lead. The water supply may provide notice under the previous sentence less than 45 days before commencing partial lead service line replacement where the replacement is in conjunction with emergency repairs. In addition, the water supply shall inform the resident or residents served by the line that the supply will, at the supply's expense, collect a sample from each partially replaced lead service line that is representative of the water in the service line for analysis of lead content, as prescribed under R 325.10710a(2)(c), within 72 hours after the completion of the partial replacement of the service line. The supply shall collect the sample and report the results of the analysis to the owner and the resident or residents served by the line within 3 business days of receiving the results. Mailed notices postmarked within 3 business days of receiving the results are satisfactory.

(ii) The water supply shall provide the information required by paragraph (i) of this subdivision to the residents of individual dwellings by mail or by other methods approved by the department. If multifamily dwellings are served by the line, the supply shall have the option to post the information at a conspicuous location.

(~~e~~) **(d)** A water supply shall replace lead service lines on a shorter schedule than that required by this subrule, if directed by the department. The department shall take into account the number of lead service lines in the system, where a shorter replacement schedule is feasible. The department shall make this determination in writing and notify the supply of its finding within 6 months after the supply is triggered into lead service line replacement based on monitoring referenced in subdivision (a) of this subrule.

(~~f~~) **(e)** A supply may cease replacing lead service lines **under this subrule** when ~~first draw~~ samples collected under R 325.10710a(2)~~(b)~~ meet the lead action level during each of 2 consecutive monitoring periods and the supply submits the results to the department. If the ~~first draw samples~~ **supply** thereafter exceed**s** the lead action level, the supply shall recommence replacing lead service lines under subdivision (b)~~(ii)~~ **(i)** of this subrule.

(~~g~~) **(f)** To demonstrate compliance with subdivisions (a) to ~~(d)~~ **(c)** of this subrule, a supply shall report the information specified in R 325.10710d(e) to the department.

(6) Unless subject to service line replacement requirements under subrule (5) of this rule, water supply service line replacement requirements are as follows:

(a) A water supply shall replace all lead service lines, and galvanized service lines if the service line is or was connected to lead piping or lead components. Service lines that are physically disconnected from the distribution system are exempt from this requirement.

(b) Beginning the year after the preliminary distribution system materials inventory is complete, service lines under this subrule shall be replaced at a rate averaging 5% per year, not to exceed 20 years total for replacement of all service lines under this subrule, or on a schedule approved by the department.

(c) If a supply controls the entire service line, the supply shall replace the entire service line at the water supply's expense.

(d) A supply is presumed to control the entire service line unless the supply demonstrates in writing that it does not have any of the following forms of control over the entire service line, as provided by state statute, local ordinance, public service contract, or other applicable legal authority:

(i) Authority to set standards for construction, repair, or maintenance of the service line.

(ii) Authority to replace, repair, or maintain the service line.

(iii) Ownership of the service line.

(e) If a supply controls less than the entire service line, the supply shall offer to the building owner to replace the entire service line, including the portion of the service line under the building owner's control, at the supply's expense. If the building owner consents, the supply shall replace the entire service line at the supply's expense. If the building owner does not consent, the supply may replace the portion of the service line that it controls as follows:

(i) Not less than 45 days before commencing the partial lead service line replacement, the water supply shall provide notice to the owner and residents of all buildings served by the line explaining that they may experience a temporary increase of lead levels in their drinking water, along with guidance on measures consumer can take to minimize their exposure to lead.

(ii) The water supply may provide notice less than 45 days before commencing partial lead service line replacement where the replacement is in conjunction with emergency repairs.

(iii) The water supply shall inform the resident or residents served by the line that the supply will, at the supply's expense, collect a sample from each partially replaced lead service line for analysis of lead content, as prescribed under R 325.10710A(2)(c), within 72 hours after the completion of the partial replacement of the service line. The supply shall collect the sample and report the results of the analysis to the owner and the resident or residents served by the line within 3 business days of receiving the results. Mailed notices postmarked within 3 business days of receiving the results are satisfactory.

PART 7. SURVEILLANCE, INSPECTION, AND MONITORING

R 325.10710a Lead and copper in tap water; monitoring requirements.

Rule 710a. (1) Sample site location provisions for lead and copper monitoring in tap water of community and nontransient noncommunity water supplies are as follows:

(a) By the applicable date for the commencement of monitoring under subrule (4)(a) of this rule, each water supply shall complete a materials evaluation of its distribution system to identify a pool of targeted sampling sites that is in compliance with the requirements of this rule ~~and that is large enough to ensure that the water supply can collect the number of lead and copper tap samples required under subrule (3) of this rule~~. **The water supply shall also use the results of its distribution system materials inventory required under R 325.11604(c) to update the sampling pool as necessary.** All sites from which ~~first draw~~ samples are collected shall be selected from the pool of targeted sampling sites. Sampling sites may not include faucets that have point of use or point of entry treatment devices designed to remove inorganic contaminants. **By January 1, 2020, and in a form and manner specified by the department, a supply shall submit to the department a lead and copper tap sampling pool as follows:**

(i) The sampling pool shall, at a minimum, identify sufficient sites to ensure the water supply can collect the number of tap samples required for standard monitoring under subrule (3) of this rule.

(ii) The sampling pool shall identify the location of the sites and describe how each site meets selection criteria in subrule (1) of this rule.

(iii) A water supply may update its sampling pool as frequently as necessary. Updates shall be submitted to the department. Updates shall identify any site removed from the sampling pool and why the site was removed. The sampling pool shall identify the location of any site added to the pool and describe how the site meets selection criteria.

(b) A water supply shall use the information on lead, copper, and galvanized steel that it is required to collect under 40 C.F.R. §141.42(d), (Special Monitoring for Corrosivity Characteristics) when conducting a materials evaluation. When an evaluation of the information collected under 40 C.F.R. §141.42(d), is insufficient to locate the requisite number of lead and copper sampling sites that are in compliance with the targeting criteria in this subrule, the water supply shall review the sources of information listed in paragraphs (i) to (iii) of this subdivision to identify a sufficient number of sampling sites. The provisions of 40 C.F.R. §141.42(d) are adopted by reference in R 325.10112. In addition, the supply shall collect all of the following information, where possible, in the course of its normal operations, for example, checking service line materials when reading water meters or performing maintenance activities:

(i) All plumbing codes, permits, and records in the files of the building department or departments that indicate the plumbing materials installed within publicly and privately owned structures connected to the distribution system.

(ii) All inspections and records of the distribution system that indicate the material composition of the service connections connecting a structure to the distribution system.

(iii) All existing water quality information, which includes the results of all prior analyses of the system or individual structures connected to the system, that indicates locations which may be particularly susceptible to high lead or copper concentrations.

(c) The sampling sites selected for a community water supply's sampling pool (tier 1 sampling sites) shall consist of single family structures to which either or both of the following provisions apply**, giving priority to sites with higher potential risk for lead exposure**:

(i) The structures contain ~~copper pipes soldered with lead and installed after 1982 or that contain~~ lead pipes.

(ii) The structures are served by a lead service line. When multiple family residences comprise not less than 20% of the structures served by a water supply, the supply may include these types of structures in its sampling pool.

(d) A community water supply that has insufficient tier 1 sampling sites shall complete its sampling pool with tier 2 sampling sites, that consist of buildings, including multiple family residences to which either or both of the following provisions apply**, giving priority to sites with higher potential risk for lead exposure**:

(i) The structures contain ~~copper pipes soldered with lead and installed after 1982 or that contain~~ lead pipes.

(ii) The structures are served by a lead service line.

(e) A community water supply that has insufficient tier 1 and tier 2 sampling sites shall complete its sampling pool with tier 3 sampling sites, that consist of single family structures containing copper pipes soldered with lead and installed before ~~1983~~ **July 1988**. A community water supply with insufficient tier 1, tier 2, and tier 3 sampling sites shall complete its sampling pool with representative sites throughout the distribution system. For purposes of this subrule, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the system.

(f) The sampling sites selected for a nontransient, noncommunity water supply (tier 1 sampling sites) shall consist of buildings to which either or both of the following provisions apply**, giving priority to sites with higher potential risk for lead exposure**:

(i) The structures contain ~~copper pipes soldered with lead and installed after 1982 or that contain~~ lead pipes.

(ii) The structures are served by a lead service line.

(g) A nontransient, noncommunity water supply that has insufficient tier 1 sites shall complete its sampling pool with sampling sites containing copper pipes soldered with lead and installed before ~~1983~~ **July 1988**. If additional sites are needed to complete the sampling pool, the nontransient noncommunity water supply shall use representative sites throughout the distribution system. For purposes of this subrule, a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the system.

(h) A water supply whose distribution system contains lead service lines shall draw ~~50%~~ **all** of the samples it collects during each monitoring period from sites that contain lead pipes or ~~copper pipes with lead solder and 50% of the samples~~ from sites served by a lead service line. A water supply that cannot identify a sufficient number of sampling sites that are served by a lead service line shall collect ~~first draw~~ tap samples from all of the sites identified as being served by lead service lines and shall complete its sampling pool in compliance with subdivisions (c) to (g) of this subrule.

(2) Sample collection methods provisions for lead and copper monitoring in tap water are as follows:

(a) Sample collection methods at sites without lead service lines are as follows

(~~a)~~ **(i)** All tap samples for lead and copper collected in compliance with this subrule, with the exception of ~~lead service line samples collected under R 325.10604f(5)(c), and~~ samples collected under subdivision (e) of this subrule, shall be first draw samples. **Sites shall not have undergone systematic flushing and the tap aerator shall not have been removed or cleaned in anticipation of sampling efforts conducted under this subrule.**

(~~b) (~~**ii**) Each first draw tap sample for lead and copper shall be **collected in a wide-mouth bottle** 1 liter in volume and have stood motionless in the plumbing system of each sampling site for not less than 6 hours. First draw samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. First draw samples from a nonresidential building shall be **collected in a wide-mouth bottle** 1 liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. Non-first draw samples collected instead of first draw samples under subdivision (e) of this subrule shall be **collected in a wide-mouth bottle** 1 liter in volume and shall be collected at an interior tap from which water is typically drawn for consumption. First draw samples may be collected by the supply or the supply may allow residents to collect first draw samples after instructing the residents about the sampling procedures specified in this subdivision. To avoid problems of residents handling nitric acid, acidification of first draw samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample shall stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a supply allows residents to perform sampling, the supply shall not challenge the accuracy of the sampling results based on alleged errors in sample collection.

(b) Sample collection methods at sites served by lead service lines are as follows:

(i) All tap samples for lead and copper collected in compliance with this subrule shall consist of a first draw sampled followed by a second sample collected at the same tap as follows:

(A) Samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. Samples from a nonresidential building shall be collected at an interior tap from which water is typically drawn for consumption. Sites shall not have undergone systematic flushing and the tap aerator shall not have been removed or cleaned in anticipation of sampling efforts conducted under this subrule.

(B) Each first draw tap sample for lead and copper shall be collected in a wide-mouth bottle 1 liter in volume and have stood motionless in the plumbing system of each sampling site for not less than 6 hours.

(C) Following the first draw sample, a second sample shall be collected after 6 liters of water have been drawn through the tap. The second sample shall be collected in a wide-mouth bottle 1 liter in volume.

(ii) Samples may be collected by the supply or the supply may allow residents to collect samples after instructing the residents about the sampling procedures specified in this subdivision. To avoid problems of residents handling nitric acid, acidification of samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample shall stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a supply allows residents to perform sampling, the supply shall not challenge the accuracy of the sampling results based on alleged errors in sample collection.

(c) Each service line sample shall be 1 liter in volume and have stood motionless in the lead service line for not less than 6 hours. Lead service line samples shall be collected in 1 of the following ways:

(i) At the tap after flushing the volume of water between the tap and the lead service line. The volume of water shall be calculated based on the interior diameter and length of the pipe between the tap and the lead service line.

(ii) Tapping directly into the lead service line.

(iii) If the sampling site is a building constructed as a single family residence, allowing the water to run until there is a significant change in temperature which would be indicative of water that has been standing in the lead service line.

(d) A water supply shall collect each ~~first draw~~ tap sample from the same sampling site from which it collected a previous sample. If, for any reason, the water supply cannot gain entry to a sampling site to collect a follow-up tap sample, the supply may collect the follow-up tap sample from another sampling site in its sampling pool.

(e) A nontransient noncommunity water supply, or a community water supply that meets the criteria of R 325.10410(3)(g), that does not have enough taps that can supply first draw samples, as defined in

R 325.10105, may apply to the department, in writing, to substitute non-first draw samples. The supply shall collect as many first draw samples from appropriate taps as possible and identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The department has the discretion to waive the requirement for prior department approval of non-first draw sample sites selected by the supply, either through department regulation or written notification to the supply.

(3) Water supplies shall collect at least 1 sample**, or 2 samples if subject to subdivision (2)(b) of this rule,** during each monitoring period specified in subrule (4) of this rule from the number of sites listed in the standard monitoring column under this subrule. A supply that conducts reduced monitoring under subrule (4)(d) of this rule shall collect at least 1 sample**, or 2 samples if subject to subdivision (2)(b) of this rule,** from the number of sites specified in the reduced monitoring column under this subrule during each monitoring period specified in subrule (4)(d) of this rule. The reduced monitoring sites shall be representative of the sites required for standard monitoring. A public water supply that has fewer than 5 drinking water taps, that can be used for human consumption meeting the sample site criteria of subrule (1) of this rule to reach the required number of sample sites listed in this subrule, shall collect at least 1 sample from each tap and then shall collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the department may allow these public water supplies to collect a number of samples less than the number of sites specified in this rule, provided that 100% of all taps that can be used for human consumption are sampled. The department shall approve this reduction of the minimum number of samples in writing based on a request from the supply or onsite verification by the department. The department may specify sampling locations when a water supply is conducting reduced monitoring.

Supply Size (Number of People Served)	Number of Sites (Standard Monitoring)	Number of Sites (Reduced Monitoring)
More than 100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
Fewer than 101	5	5

(4) Provisions for the timing of monitoring for lead and copper in tap water are as follows:

(a) The first 6-month monitoring period for small, medium size, and large water supplies shall begin on the following dates:

Supply Size (Number of People Served)	First 6-Month Monitoring Period Begins On
More than 50,000	January 1, 1992
3,301 to 50,000	July 1, 1992
Fewer than 3,301	July 1, 1993

All large water supplies shall be monitored during 2 consecutive 6-month periods. All small and medium size water supplies shall be monitored during each 6-month monitoring period until either of the following occurs:

(i) The supply exceeds the lead or copper action level and is therefore required to implement the corrosion control treatment under R 325.10604f(2), in which case the supply shall continue monitoring under subdivision (b) of this subrule.

(ii) The supply is in compliance with the lead and copper action levels during 2 consecutive 6-month monitoring periods, in which case the supply may reduce monitoring under subdivision (d) of this subrule.

(b) Monitoring provisions after the installation of corrosion control and source water treatment are as follows:

(i) A large water supply that installs optimal corrosion control treatment under R 325.10604f(2)(d)(iii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(d)(iv).

(ii) A small or medium size water supply that installs optimal corrosion control treatment under R 325.10604f(2)(e)(iv) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(2)(e)(v).

(iii) A supply that installs source water treatment under R 325.10604f(4)(a)(ii) shall monitor during 2 consecutive 6-month monitoring periods by the date specified in R 325.10604f(4)(a)(iii).

(c) After the department specifies the values for water quality control parameters, the supply shall monitor during each subsequent 6-month monitoring period, with the first monitoring period to begin on the date the department specifies the optimal values.

(d) Reduced monitoring provisions are as follows:

(i) A small or medium size water supply that is in compliance with the lead and copper action levels during each of 2 consecutive 6-month monitoring periods may reduce the number of samples under subrule (3) of this rule and may reduce the frequency of sampling to once each year. A small or medium size water supply collecting fewer than 5 samples as specified in subrule (3) of this rule, that meets the lead and copper action levels during each of 2 consecutive 6-month monitoring periods may reduce the frequency of sampling to once per year. In no case can the supply reduce the number of samples required below the minimum of 1 sample per available tap. This sampling shall begin during the calendar year immediately following the end of the second consecutive 6-month monitoring period.

(ii) A water supply that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department under R 325.10604f(3)(f) during each of 2 consecutive 6-month monitoring periods may reduce the frequency of monitoring to once each year and reduce the number of lead and copper samples under subrule (3) of this rule if it receives written approval from the department. This sampling shall begin during the calendar year immediately following the end of the second consecutive 6-month monitoring period. The department shall review monitoring, treatment, and other relevant information submitted by the water supply under R 325.10710d, and shall notify the supply in writing when it determines the supply is eligible to commence reduced monitoring under this subrule. The department shall review, and where appropriate, revise its determination when the supply submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iii) A small or medium size water supply **without optimal corrosion control treatment installed and** that is in compliance with the lead and copper action levels during 3 consecutive years of monitoring may reduce the frequency of monitoring for lead and copper from annually to once every 3 years. A small or medium size water supply **without optimal corrosion control treatment installed and** collecting fewer than 5 samples as specified in subrule (3) of this rule, that meets the lead and copper action levels during 3 consecutive years of monitoring may reduce the frequency of sampling to once every 3 years. ~~A water supply that meets the lead action level and maintains the range of values for the water quality control parameters reflecting optimal corrosion control treatment specified by the department under R 325.10604f(3)(f) during 3 consecutive years of monitoring may reduce the frequency of monitoring for lead and copper at the tap from annually to once every 3 years if it receives written approval from the department.~~ Samples collected once every 3 years shall be collected not later than every third calendar year. The department shall review monitoring, treatment, and other relevant information submitted by the supply under R 325.10710d, and shall notify the supply in writing when it determines the supply is eligible to reduce the frequency of monitoring to once every 3 years. The department shall review, and where appropriate, revise its determination when the supply submits new monitoring or treatment data, or when other data relevant to the number and frequency of tap sampling becomes available.

(iv) A water supply that reduces the number and frequency of sampling shall collect these samples from representative sites included in the pool of targeted sampling sites identified in subrule (1) of this rule. A

water supply that samples annually or less frequently shall conduct the lead and copper tap sampling during the month of June, July, August, or September unless the department has approved a different sampling period under subparagraph (A) of this paragraph, as follows:

(A) The department, at its discretion, may approve a different period for conducting the lead and copper tap sampling for supplies collecting a reduced number of samples. The period shall be not longer than 4 consecutive months and shall represent a time of normal operation where the highest levels of lead are most likely to occur. For a nontransient noncommunity water supply that does not operate during the months of June through September, and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the department shall designate a period that represents a time of normal operation for the water supply. This sampling shall begin during the period approved or designated by the department in the calendar year immediately following the end of the second consecutive 6-month monitoring period for supplies initiating annual monitoring and during the 3-year period following the end of the third consecutive calendar year of annual monitoring for supplies initiating triennial monitoring.

(B) Supplies monitoring annually that have been collecting samples during the months of June through September and that received department approval to alter their sample collection period under subparagraph (A) of this paragraph, shall collect their next round of samples during a time period that ends not later than 21 months after the previous round of sampling. Supplies monitoring triennially that have been collecting samples during the months of June through September, and receive department approval to alter the sampling collection period under subparagraph (A) of this paragraph, shall collect their next round of samples during a time period that ends not later than 45 months after the previous round of sampling. Subsequent rounds of sampling shall be collected annually or triennially, as required by this subrule. Small water supplies with waivers, granted under subrule (7) of this rule, that have been collecting samples during the months of June through September and that received department approval to alter their sample collection period under subparagraph (A) of this paragraph shall collect their next round of samples before the end of the 9-year cycle.

(v) A water supply that demonstrates for 2 consecutive 6-month monitoring periods that the tap water lead level computed under R 325.10604f(1)(c) is less than or equal to 0.005 mg/l and the tap water copper level computed under R 325.10604f(1)(c) is less than or equal to 0.65 mg/l may reduce the number of samples under subrule (3) of this rule and reduce the frequency of sampling to once every 3 calendar years.

(vi) The following provisions apply to supplies subject to reduced monitoring:

(A) A small or medium size water supply subject to reduced monitoring that exceeds the lead or copper action level shall resume sampling under subdivision (c) of this subrule and shall collect the number of samples specified for the standard monitoring under subrule (3) of this rule. The supply shall also conduct water quality parameter monitoring under R 325.10710b(4), (5), or (6), as appropriate, during the monitoring period in which it exceeded the action level. The supply may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subrule (3) of this rule after it has completed 2 subsequent consecutive 6-month rounds of monitoring that meet the criteria of paragraph (i) of this subdivision or may resume triennial monitoring for lead and copper at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (iii) or (v) of this subdivision.

(B) A water supply subject to the reduced monitoring frequency that fails to meet the lead action level during a 4-month monitoring period or that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the department under R 325.10604f(3)(f) for more than 9 days in a 6-month period specified in R 325.10710b(6) shall conduct tap water sampling for lead and copper at the frequency specified in subdivision (c) of this subrule, collect the number of samples specified for standard monitoring under subrule (3) of this rule, and shall resume monitoring for water quality parameters within the distribution system under R 325.10710b(6). This standard tap water sampling shall begin not later than the 6-month period beginning January 1 of the calendar year following the lead action level exceedance or water quality parameter excursion. The supply may resume reduced

monitoring for lead and copper at the tap and for water quality parameters within the distribution system under the following conditions:

(1) The supply may resume annual monitoring for lead and copper at the tap at the reduced number of sites specified in subrule (3) of this rule after it has completed 2 subsequent 6-month rounds of monitoring that meet the criteria of paragraph (ii) of this subdivison and the supply has received written approval from the department to resume reduced monitoring on an annual frequency. This sampling shall begin during the calendar year immediately following the end of the second consecutive 6-month monitoring period.

(2) ~~The supply~~ **Supplies without optimal corrosion control treatment** may resume triennial monitoring for lead and copper at the tap at the reduced number of sites after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either paragraph (iii) or (v) of this subdivision and the supply has received written approval from the department to resume triennial monitoring.

(3) The supply may reduce the number of water quality parameter tap water samples required under R 325.10710b(7)(a) and the frequency with which it collects the samples under R 325.10710b(7)(b). The supply may not resume triennial monitoring for water quality parameters at the tap until it demonstrates, under the requirements of R 325.10710b(7)(b), that it has requalified for triennial monitoring.

(vii) A water supply subject to a reduced monitoring frequency under subdivision (d) of this subrule shall notify the department in writing under R 325.10710d(a)(iii) of any upcoming long-term change in treatment or addition of a new source as described in that rule. The department shall review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water supply. The department may require the supply to resume sampling under subdivision (c) of this subrule and collect the number of samples specified for standard monitoring under subrule (3) of this rule or take other appropriate steps such as increased water quality parameter monitoring or reevaluation of its corrosion control treatment given the potentially different water quality considerations.

(5) The results of monitoring conducted in addition to the minimum requirements of this rule shall be considered in calculating the ninetieth percentile lead or copper level.

(6) A sample invalidated under this subrule does not count toward determining lead or copper ninetieth percentile levels under R 325.10604f(1)(c) or toward meeting the minimum monitoring requirements of subrule (3) of this rule. All of the following provisions apply to invalidating samples:

(a) The department may invalidate a lead or copper tap water sample if at least 1 of the following conditions is met:

(i) The laboratory establishes that improper sample analysis caused erroneous results.

(ii) The department determines that the sample was taken from a site that did not meet the site selection criteria of this rule.

(iii) The sample container was damaged in transit.

(iv) There is substantial reason to believe that the sample was subject to tampering.

(b) The supply shall report the results of all samples to the department and all supporting documentation for samples the supply believes should be invalidated.

(c) To invalidate a sample under subdivision (a) of this subrule, the decision and the rationale for the decision shall be documented in writing. The department may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

(d) The water supply shall collect replacement samples for the samples invalidated under this rule if, after the invalidation of 1 or more samples, the supply has too few samples to meet the minimum requirements of subrule (3) of this rule. The replacement samples shall be taken as soon as possible, but not later than 20 days after the date the department invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(7) A small water supply that meets the criteria of this subrule may apply to the department to reduce the frequency of monitoring for lead and copper under this rule to once every 9 years, that is, a "full waiver", if it meets all of the materials criteria specified in subdivision (a) of this subrule and all of the monitoring criteria specified in subdivision (b) of this subrule. If a small water supply meets the criteria in subdivisions (a) and (b) of this subrule only for lead, or only for copper, the supply may apply to the department for a waiver to reduce the frequency of tap water monitoring to once every 9 years for that contaminant only, that is, a "partial waiver". All of the following apply:

(a) The supply shall demonstrate that its distribution system and service lines and all drinking water system plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead containing materials or copper containing materials, or both, as those terms are defined in this subdivision, as follows:

(i) To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead, that is, a "lead waiver", the water supply shall provide certification and supporting documentation to the department that the supply is free of all lead containing materials and that the supply complies with both of the provisions in this paragraph. Both of the following apply:

(A) It does not contain plastic pipes that contain lead plasticizers or plastic service lines that contain lead plasticizers.

(B) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless the fittings and fixtures meet the specifications of standards established under "Prohibition on Use of Lead Pipes, Solder, and Flux: Plumbing Fittings and Fixtures" 42 U.S.C. 300G-6(e), (2006), which is available on the Internet at http://www.law.cornell.edu/uscode/text/42/300g-6.

(ii) To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper, that is, a "copper waiver", the water supply shall provide certification and supporting documentation to the department that the supply does not contain copper pipes or copper service lines.

(b) The supply shall have completed at least one 6-month round of standard tap water monitoring for lead and copper at sites approved by the department and from the number of sites required by subrule (3) of this rule and demonstrate that the ninetieth percentile levels for all rounds of monitoring conducted since the supply became free of all lead containing or copper containing materials, or both, as appropriate, meet the following criteria:

(i) To qualify for a full waiver or a lead waiver, the supply shall demonstrate that the ninetieth percentile lead level does not exceed 0.005 mg/l.

(ii) To qualify for a full waiver or a copper waiver, the supply shall demonstrate that the ninetieth percentile copper level does not exceed 0.65 mg/l.

(c) The department shall notify the supply of its waiver determination, in writing setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the department may require the supply to perform specific activities, for example, limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver, to avoid the risk of lead or copper concentration of concern in tap water. The small supply shall continue monitoring for lead and copper at the tap as required by subdivisions (a) to (d) of this subrule, as appropriate, until it receives written notification from the department that the waiver has been approved.

(d) Monitoring frequencies for supplies with waivers are as follows:

(i) A supply with a full waiver shall conduct tap water monitoring for lead and copper under subrule (4)(d)(iv) of this rule at the reduced number of sampling sites identified in subrule (3) of this rule at least once every 9 years and provide the materials certification specified in subdivision (a) of this subrule for both lead and copper to the department along with the monitoring results. Samples collected every 9 years shall be collected not later than every ninth calendar year.

(ii) A supply with a partial waiver shall conduct tap water monitoring for the waived contaminant under subrule (4)(d)(iv) of this rule at the reduced number of sampling sites specified in subrule (3) of this rule at least once every 9 years and provide the materials certification specified in subdivision (a) of this subrule pertaining to the waived contaminant along with the monitoring results. Samples collected every 9 years for the waived contaminant shall be collected not later than every ninth calendar year. The supply

also shall continue to monitor for the non-waived contaminant under requirements of subrule (4)(a) to (d) of this rule, as appropriate.

(iii) A water supply with a full or partial waiver shall notify the department, in writing, under R 325.10710d(a)(iii) of an upcoming long-term change in treatment or addition of a new source, as described in that rule. The department shall review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water supply. The department has the authority to require the water supply to add or modify waiver conditions, for example, require recertification that the system is free of lead containing or copper containing materials, or both, require additional round or rounds of monitoring, if it considers the modifications are necessary to address treatment or source water changes at the water supply.

(iv) If a water supply with a full or partial waiver becomes aware that it is no longer free of lead containing or copper containing materials, as appropriate, for example, as a result of new construction or repairs, the supply shall notify the department, in writing, not later than 60 days after becoming aware of the change.

(e) If the supply continues to satisfy the requirements of subdivision (d) of this subrule, the waiver will be renewed automatically, unless a condition listed in paragraphs (i) to (iii) of this subdivision occurs. A supply whose waiver has been revoked may reapply for a waiver if it again meets the appropriate materials and monitoring criteria of subdivisions (a) and (b) of this subrule. The waiver is revoked if any of the following conditions exist:

(i) A supply with a full waiver or a lead waiver no longer satisfies the materials criteria of subdivision (a)(i) of this subrule or has a ninetieth percentile lead level of more than 0.005 mg/l.

(ii) A supply with a full waiver or a copper waiver no longer satisfies the materials criteria of subdivision (a)(ii) of this subrule or has a ninetieth percentile copper level of more than 0.65 mg/l.

(iii) The department notifies the supply, in writing setting forth the basis of its decision, that the waiver has been revoked.

(f) A supply whose full or partial waiver has been revoked by the department is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:

(i) If the supply exceeds the lead or copper action level, or both, the supply shall implement corrosion control treatment under the deadlines specified in R 325.10604f(2)(e) and other applicable requirements of this part.

(ii) If the supply meets both the lead and the copper action level, the supply shall monitor for lead and copper at the tap not less frequently than once every 3 years using the reduced number of sample sites specified in subrule (3) of this rule.

(g) Small water supply waivers approved by the department, in writing, before April 11, 2000, shall remain in effect if the supply has demonstrated that it is both free of lead containing and copper containing materials, as required by subdivision (a) of this subrule, and that its ninetieth percentile lead levels and ninetieth percentile copper levels meet the criteria of subdivision (b) of this subrule, and that the supply continues to meet the waiver eligibility criteria of subdivision (e) of this subrule. The first round of tap water monitoring conducted under subdivision (d) of this subrule shall be completed not later than 9 years after the last time the supply has monitored for lead and copper at the tap.

R 325.10710b Monitoring requirements for supplies exceeding lead and copper action levels.

Rule 710b. (1) The requirements of this rule are summarized in table 1 of this rule. The following community and nontransient noncommunity water supplies, which are considered "water supplies" or "supplies" in this rule, shall monitor for water quality parameters in addition to lead and copper under this rule:

(a) Large water supplies.

(b) Small and medium size water supplies that exceed the lead or copper action level **or have optimal corrosion control treatment installed**.

(2) Sample collection methods provisions are as follows:

(a) Tap samples shall be representative of water quality throughout the distribution system taking all of the following factors into account:

(i) The number of persons served.

(ii) The different sources of water.

(iii) The different treatment methods employed by the supply.

(iv) Seasonal variability. Tap sampling under this subdivision is not required to be conducted at taps targeted for lead and copper sampling under R 325.10710a(1). (b) Samples collected at the entry point or points to the distribution system shall be from locations that are representative of each source after treatment. If a supply draws water from more than 1 source and the sources are combined before distribution, the supply shall sample at an entry point to the distribution system during periods of normal operating conditions, for example, when water is representative of all sources being used.

(3) The number of samples a supply is required to collect are as follows:

(a) A supply shall collect 2 tap samples for applicable water quality parameters during each monitoring period specified in subrules (4) to (7) of this rule from the following number of sites:

Supply Size (Number of People Served)	Number of Sites for Water Quality Parameters
More than 100,000	25
10,001 to 100,000	10
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Fewer than 101	1

(b) Except as provided in subrule (5)(c) of this rule, a water supply shall collect 2 samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in subrule (4) of this rule. During each monitoring period specified in subrules (5) to (7) of this rule, a supply shall collect 1 sample for each applicable water quality parameter at each entry point to the distribution system.

(4) A large water supply shall measure the applicable water quality parameters, at the locations specified in the following subdivisions at taps and at each entry point to the distribution system during each 6-month monitoring period specified in R 325.10710a(4)(a). A small or medium size water supply shall measure the applicable water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(a), that the supply exceeds the lead or copper action level **or if optimal corrosion control treatment is installed**:

(a) At taps, a water supply shall measure each of the following:

(i) pH.

(ii) Alkalinity.

(iii) Orthophosphate, when an inhibitor containing a phosphate compound is used.

(iv) Silica, when an inhibitor containing a silicate compound is used.

(v) Calcium.

(vi) Conductivity.
(vii) Water temperature.
(viii) Sulfate
(ix) Chloride
(b) At each entry point to the distribution system, a water supply shall measure each of the applicable parameters that are listed in subdivision (a) of this subrule.
(5) A large water supply that installs optimal corrosion control treatment under R 325.10604f(2)(d)(iii) shall measure the water quality parameters at the locations and frequencies specified in this subrule during each 6-month monitoring period specified in R 325.10710a(4)(b)(i). A small or medium size water supply that installs optimal corrosion control treatment shall measure the water quality parameters at the locations specified in the following subdivisions during each 6-month monitoring period, as specified in R 325.10710a(4)(b)(ii), ~~that the supply exceeds the lead or copper action level~~:
(a) At taps, 2 samples for each of the following:
(i) pH.
(ii) Alkalinity.
(iii) Orthophosphate, when an inhibitor containing a phosphate compound is used.
(iv) Silica, when an inhibitor containing a silicate compound is used.
(v) Calcium, when calcium carbonate stabilization is used as part of the corrosion control.
(vi) Sulfate
(vii) Chloride
(b) Except as provided in subdivision (c) of this subrule, at each entry point to the distribution system, at least 1 sample at least every 2 weeks for each of the following:
(i) pH.
(ii) When alkalinity is adjusted as part of optimal corrosion control, a reading of the dosage rate of the chemical used to adjust alkalinity and a reading of the alkalinity concentration.
(iii) When a corrosion inhibitor is used as part of optimal corrosion control, a reading of the dosage rate of the inhibitor used and a reading of the concentration of orthophosphate or silica, whichever is applicable.
(iv) Sulfate
(v) Chloride
(c) A ground water supply may limit entry point sampling described in subdivision (b) of this subrule to those entry points that are representative of water quality and treatment conditions throughout the system. If water from untreated ground water sources mixes with water from treated ground water sources, the supply shall monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Before the start of the monitoring under this subdivision, the supply shall provide to the department written information identifying the selected entry points and documentation, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.
(6) After the department specifies the values for applicable water quality control parameters reflecting optimal corrosion control treatment under R 325.10604f(3)(f), ~~large~~ water supplies shall measure the applicable water quality parameters under subrule (5) of this rule and determine compliance with the requirement of R 325.10604f(3)(g) every 6 months with the first 6-month period to begin on either January 1 or July 1, whichever comes first, after the department specifies the optimal values under R 325.10604f(3)(f). ~~A small or medium size water supply shall measure the applicable water quality parameters under subrule (5) of this rule during each 6-month period, as specified in this subrule that the supply exceeds the lead or copper action level. For the small or medium size water supply subject to a reduced monitoring frequency under R 325.10710a(4)(d) when the action level is exceeded, the start of the applicable 6-month period under this subrule shall coincide with the start of the applicable monitoring period under R 325.10710a(4)(d).~~ Compliance with department designated optimal water quality parameter values shall be determined as specified under R 325.10604f(3)(g).

(7) Reduced monitoring provisions are as follows:

(a) A supply that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment during each of 2 consecutive 6-month monitoring periods under subrule (6) of this rule shall continue monitoring applicable water quality parameters at the locations and frequencies specified in subrule (5) of this rule. The supply may reduce the number of sites from which it monitors during each 6-month monitoring period to the following:

Supply Size (Number of People Served)	Reduced Number of Sites For Water Quality Parameters
More than 100,000	10
10,001 to 100,000	7
3,301 to 10,000	3
501 to 3,300	2
101 to 500	1
Fewer than 101	1

(b) Reduced monitoring frequency provisions are as follows:

(i) A water supply that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department under R 325.10604f(3)(f) during 3 consecutive years of monitoring specified in this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (a) of this subrule from every 6 months to annually. This sampling begins during the calendar year immediately following the end of the monitoring period in which the third consecutive year of 6-month monitoring occurs. ~~A water supply that maintains the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department under R 325.10604f(3)(f) during 3 consecutive years of annual monitoring specified in this subdivision may reduce the frequency with which it collects the number of tap samples for applicable water quality parameters specified in subdivision (a) of this subrule from annually to every 3 years. This sampling begins not later than the third calendar year following the end of the monitoring period in which the third consecutive year of monitoring occurs.~~

~~(ii) A water supply may reduce the frequency with which it collects tap samples for applicable water quality parameters specified in subdivision (a) of this subrule to every 3 years if it demonstrates during 2 consecutive monitoring periods that its tap water lead level at the ninetieth percentile is less than or equal to the PQL for lead specified in 40 C.F.R §141.89(a)(1)(ii), as adopted by reference in R 325.10605, that its tap water copper level at the ninetieth percentile is less than or equal to 0.65 mg/l for copper in R 325.10604f(1)(c), and that it also has maintained the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the department in R 325.10604f(3)(f). Monitoring conducted every 3 years shall be done not later than every third calendar year.~~

(c) A water supply that conducts sampling annually shall collect the samples evenly throughout the year to reflect seasonal variability.

(d) A water supply subject to the reduced monitoring frequency that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the department for more than 9 days in a 6-month period specified in R 325.10604f(3)(g) shall resume distribution system tap water sampling under the number and frequency requirements specified in subrule (6) of this rule. The supply may resume annual monitoring for water quality parameters at the tap at the reduced number of sites specified in subdivision (a) of this subrule after it has completed 2 subsequent consecutive 6-month rounds of monitoring that meet the criteria of that subdivision ~~or may resume triennial monitoring for water quality parameters at the tap at the reduced number of sites~~

~~after it demonstrates through subsequent rounds of monitoring that it meets the criteria of either subdivision (b)(i) or (ii) of this subrule~~.

(8) The results of monitoring conducted in addition to the minimum requirements of this rule shall be considered in determining the concentrations of water quality parameters.

(9) Table 1 of this rule reads as follows:

Table 1 Summary of Monitoring Requirements for Water Quality Parameters - Lead, Copper, Corrosion Control[1]

Monitoring Period	Parameters[2]	Location	Frequency
Initial monitoring	pH, alkalinity, orthophosphate or silica~~3~~ [2], calcium, conductivity, temperature**, sulfate, chloride**	Taps and at entry point or points to distribution system	6 months
After installation of corrosion control	pH, alkalinity, orthophosphate or silica[3] [2], calcium[4] [3]	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual[5] [4]**, sulfate, chloride**	Entry point or points to distribution system~~6~~ [5]	At least every 2 weeks
After department specifies parameter values for optimal corrosion control	pH, alkalinity, orthophosphate or silica[3] [2], calcium[4] [3]	Taps	Every 6 months
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted as part of corrosion control), inhibitor dosage rate and inhibitor residual[5] [4]**, sulfate, chloride**	Entry point or points to distribution system[6] [5]	At least every 2 weeks
Reduced monitoring	pH, alkalinity, orthophosphate or silica[3] [2], calcium[4] [3]	Taps	Every 6 months annually[7] [6] ~~or every 3 years~~[8] at a reduced number of sites
	pH, alkalinity dosage rate and concentration (if alkalinity adjusted control), inhibitor dosage rate and inhibitor residual[5] [4]**, sulfate, chloride**	Entry point or points to distribution system[6] [5]	At least every 2 weeks

[1] Table is for illustrative purposes; consult the text of this part for precise regulatory requirements.

[2] ~~Small and medium size water supplies shall monitor for water quality parameters during monitoring periods in which the supply exceeds the lead or copper action level.~~

[3] [2] Orthophosphate shall be measured when an inhibitor containing a phosphate compound is used. Silica shall be measured when an inhibitor containing silicate compound is used.

[4] [3] Calcium shall be measured when calcium carbonate stabilization is used as part of corrosion control.

[5] [4] Inhibitor dosage rates and inhibitor residual concentrations (orthophosphate or silica) shall be measured when an inhibitor is used.

[6] [5] Ground water supplies may limit monitoring to representative locations throughout the system.

[7] [6] Water supplies may reduce frequency of monitoring for water quality parameters at the tap from every 6 months to annually if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during 3 consecutive years of monitoring.

~~[8] Water supplies may further reduce the frequency of monitoring for water quality parameters at the tap from annually to once every 3 years if they have maintained the range of values for water quality parameters reflecting optimal corrosion control during 3 consecutive years of annual monitoring. Water supplies may accelerate to triennial monitoring for water quality parameters at the tap if they have maintained ninetieth percentile lead levels less than or equal to 0.005 mg/l, ninetieth percentile copper levels less than or equal to 0.65 mg/l, and the range of water quality parameters designated by the department as representing optimal corrosion control during 2 consecutive 6-month monitoring periods.~~

R 325.10710d Reporting requirements for lead, copper, and corrosion control.

Rule 710d. This rule applies to all community and nontransient noncommunity water supplies. These public water supplies are also considered "water supplies" or "supplies" in this rule. Supplies shall report all of the following information to the department:

(a) Reporting provisions for tap water monitoring for lead and copper and for water quality parameter monitoring are as follows:

(i) Except as provided in subparagraph (G) of this paragraph, a water supply shall report the information specified in this paragraph for all tap water samples specified in R 325.10710a and for all water quality parameter samples specified in R 325.10710b within the first 10 days after the end of each applicable monitoring period specified in R 325.10710a and R 325.10710b, for example, every 6 months, annually, every 3 years, or every 9 years. For monitoring periods with a duration less than 6 months, the end of the monitoring period is the last date samples can be collected during that period as specified in R 325.10710a to R 325.10710b. All of the following apply:

(A) The results of all tap samples for lead and copper, including the location of each site and the criteria in R 325.10710a(1)(c), (d), (e), (f), or (g) used to select the site for the system's sampling pool.

(B) Documentation for each tap water lead or copper sample for which the water supply requests invalidation under R 325.10710a(6)(b).

(C)The ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, calculated in compliance with the provisions of R 325.10604f(1)(c)(i), unless the department calculates the system's ninetieth percentile lead and copper levels under subdivision (h) of this subrule.

(D) With the exception of initial tap sampling conducted under R 325.10710a(4)(a), a water supply shall designate sites not sampled during previous monitoring periods and include an explanation of why sampling sites have changed.

(E) The results of all tap samples for pH and, where applicable, alkalinity, calcium, conductivity, temperature, and orthophosphate or silica collected under R 325.10710b(b) to (e).

(F) The results of all samples collected at the entry point or points to the distribution system for applicable water quality parameters under R 325.10710b(b) to (e).

(G) A water supply shall report the results of all water quality parameter samples collected under R 325.10710b(5) to (8) during each 6-month monitoring period specified in R 325.10710b(6) within the first 10 days following the end of the monitoring period, unless the department has specified a more frequent reporting requirement.

(ii) For a nontransient noncommunity water system, or a community water system meeting the criteria of R 325.10410(3)(g), that does not have enough taps that can provide first draw samples, the supply shall do either of the following as appropriate:

(A) Provide written documentation to the department identifying standing times and locations for enough non-first draw samples to make up its sampling pool under R 325.10710a(2)(e) by the start of the first applicable monitoring period under R 325.10710a(4) that commences after April 11, 2000, unless the department has waived prior department approval of non-first draw sample sites selected by the supply under R 325.10710a(2)(e).

(B) If the department has waived prior approval of non-first draw sample sites selected by the supply, identify, in writing, each site that did not meet the 6-hour minimum standing time and the length of standing time for that particular substitute sample collected under R 325.10710a(2)(e) and include this information with the lead and copper tap sample results submitted under subdivision (a)(i) of this subrule.

(iii) At a time specified by the department, or if no specific time is designated by the department, then as early as possible prior to the addition of a new source or a long-term change in water treatment, a water supply considered to have optimized corrosion control under R 325.10604f(2)(b), a system subject to reduced monitoring under R 325.10710a(4)(d), or a system subject to a monitoring waiver under R 325.10710a(7) shall submit written documentation to the department describing the change or addition. The department shall review and approve the addition of a new source or long-term change in treatment before it is implemented by the water supply. Examples of long-term treatment changes include the addition of a new treatment process or modification of an existing treatment process. Examples of modifications include switching secondary disinfectants, switching coagulants (for example, alum to ferric chloride), and switching corrosion inhibitor products (for example, orthophosphate to blended phosphate). Long- term changes can include dose changes to existing chemicals if the supply is planning long-term changes to its finished water pH or residual inhibitor concentration. Long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes.

(iv) A small water supply applying for a monitoring waiver under R 325.10710a(7), or subject to a waiver granted under R 325.10710a(7)(c), shall provide all of the following information to the department, in writing, by the specified deadline:

(A) By the start of the first applicable monitoring period in R 325.10710a(4), a small water supply applying for a monitoring waiver shall provide the documentation required to demonstrate that it meets the waiver criteria of R 325.10710a(7)(a) and (b).

(B) Not later than 9 years after the monitoring previously conducted under R 325.10710a(7)(b) or R 325.10710a(7)(d)(i), a small water supply desiring to maintain its monitoring waiver shall provide the information required by R 325.10710a(7)(d)(i) and (ii).

(C) Not later than 60 days after it becomes aware that the system is no longer free of lead containing or copper containing material, or both, as appropriate, a small water supply with a monitoring waiver shall provide written notification to the department, setting forth the circumstances resulting in the lead containing or copper containing materials, or both, being introduced into the system and what corrective action, if any, the supply plans to remove these materials.

(v) Each ground water supply that limits water quality parameter monitoring to a subset of entry points under R 325.10710b(5)(c), the supply shall provide, by the commencement of the 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 provisions are as follows:

(i) A water supply shall report the sampling results for all source water samples collected under R325.10710c within the first 10 days after the end of each source water monitoring period, for example, annually, per compliance period, or per compliance cycle, specified in R 325.10710c.

(ii) With the exception of the first round of source water sampling conducted under R 325.10710c(2), a supply shall specify sites that were not sampled during previous monitoring periods and include an explanation of why the sampling points have changed.

(c) A supply shall report the following corrosion control treatment information to the department by the applicable dates specified in R 325.10604f(2):

(i) For a supply that has already optimized corrosion control, the information required in R 325.10604f(2)(b)(ii) or (iii).

(ii) For a supply required to optimize corrosion control, the supply's recommendation regarding optimal corrosion control treatment under R 325.10604f(3)(a).

(iii) For a supply that is required to evaluate the effectiveness of corrosion control treatments under R 325.10604f(3)(c), the information required by R 325.10604f(3)(c).

(iv) For a supply required to install optimal corrosion control designated by the department under R 325.10604f(3)(d), documentation certifying that the supply has completed installing the optimal corrosion control.

(d) A water supply shall provide the following source water treatment information to the department by the applicable dates specified in R 325.10604f(4):

(i) If required under R 325.10604f(4)(b)(i), the supply's recommendation regarding source water treatment.

(ii) For a supply required to install source water treatment under R 325.10604f(4)(b)(ii), documentation certifying that the supply has completed installing the treatment designated by the department within 24 months after the department designated the treatment.

(e) A water supply shall report all of the following lead service line replacement information to the department to demonstrate compliance with the requirements of R 325.10604f(5):

(i) Not later than 12 months after the end of a monitoring period in which a supply exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), the supply shall submit written documentation to the department of the materials evaluation conducted as required in R 325.10710a(1), identify the initial number of lead service lines in its distribution system at the time the supply exceeds the lead action level, and provide the supply's schedule for annually replacing not less than 7% of the initial number of lead service lines in its distribution system.

(ii) Not later than 12 months after the end of a monitoring period in which a supply exceeds the lead action level in sampling referred to in R 325.10604f(5)(a), and every 12 months thereafter, the supply shall submit a written report to the department that demonstrates the supply has complied with either of the following requirements:

(A) Replaced, in the previous 12 months, not less than 7% of the initial lead service lines, or a greater number of lines specified by the department under R 325.10604f(5)(~~e~~**d**), in its distribution system.

~~(B) Conducted sampling demonstrating that the lead concentration in all service line samples from an individual line or lines, taken under R 325.10710a(2)(c), is less than or equal to 0.015 mg/l. In those cases, the total number of lines that were replaced or that meet the criteria specified in R 325.10604f(5)(c), or both, shall equal not less than 7% of the initial number of lead lines identified under subdivision (i) of this subrule or the percentage specified by the department under R 325.10604f(5)(e).~~

(iii) The annual documentation submitted to the department under paragraph (ii) of this subdivision, which shall contain all of the following information:

(A) The number of lead service lines scheduled to be replaced during the previous year of the system's replacement schedule.

(B) The number and location of each lead service line replaced during the previous year of the system's replacement schedule.

(C) If measured, the water lead concentration and location of each lead service line sampled, the sampling method, and the date of sampling.

(iv) At the request of the department, a supply that collects lead service line samples following partial lead service line replacement required by R 325.10604f(5) shall report the results to the department as specified in R 325.10734(1). Supplies shall also report additional information as specified by the

department under R 325.11505(2) to verify that all partial lead service line replacement activities have taken place.

(f) A water supply shall provide the following public education reporting information to the department:

(i) A water supply that is subject to the public education requirements in R 325.10410 shall, within 10 days after the end of each period in which the supply is required to perform public education tasks under R 325.10410(3), send written documentation to the department that contains both of the following:

(A) A demonstration that the supply has delivered the public education materials that meet the content requirements in R 325.10410(2) and the delivery requirements in R 325.10410(3).

(B) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the supply delivered public education materials during the period in which the supply was required to perform public education tasks.

(ii) Unless required by the department, a supply that previously has submitted the information required by paragraph (i)(B) of this subdivision need not resubmit the information required by paragraph (i)(B) of this subdivision, if there have been no changes in the distribution list and the supply certifies that the public education materials were distributed to the same list submitted previously.

(iii) Not later than 3 months following the end of the monitoring period, each supply shall mail a sample copy of the consumer notification of tap results to the department along with a certification that the notification has been distributed consistent with the requirements of R 325.10410(5).

(g) A water supply that collects sampling data in addition to that required by this part shall report the results to the department within the first 10 days following the end of the applicable monitoring period specified in R 325.10710a, R 325.10710b, and R 325.10710c during which the samples are collected.

(h) A water supply is not required to report the ninetieth percentile lead and copper concentrations measured from among all lead and copper tap water samples collected during each monitoring period, as required by subrule (a)(i)(C) of this rule if all of the following provisions are satisfied:

(i) The department has previously notified the supply that it will calculate the supply's ninetieth percentile lead and copper concentrations, based on the lead and copper tap results submitted under paragraph (ii)(A) of this subdivision, and has specified a date before the end of the applicable monitoring period by which the supply shall provide the results of lead and copper tap water samples.

(ii) The supply has provided the following information to the department by the date specified in paragraph (i) of this subdivision:

(A) The results of all tap samples for lead and copper including the location of each site and the criteria under R 325.10710a(1)(c), (d), (e), (f), or (g), under which the site was selected for the system's sampling pool, under subdivision (a)(i)(A) of this subrule.

(B) An identification of sampling sites utilized during the current monitoring period that were not sampled during previous monitoring periods, and an explanation why sampling sites have changed.

(iii) The department has provided the results of the ninetieth percentile lead and copper calculations, in writing, to the supply before the end of the monitoring period.

PART 15. OPERATION REPORTS AND RECORDKEEPING

R 325.11506 Retention of records; generally.

Rule 1506. (1) A community or noncommunity water supply shall retain on its premises or at a convenient location near its premises all of the following records:

(a) Records of bacteriological analyses that are required under part 7 of these rules, which shall be kept for not less than 5 years.

(b) Records of chemical analyses that are required under part 7 of these rules, which shall be kept for not less than 10 years.

(c) Records of microbiological analyses and turbidity analyses that are required under part 7 of these rules, which shall be kept for not less than 5 years.

(d) Records of radiological analyses that are required under part 7 of these rules, which shall be kept for not less than 10 years.

(e) Original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, department determinations, and any other information that is required under R 325.10604f(2) to ~~(5)~~ **(6)**, R 325.10410, and R 325.10710a to R 325.10710c, which shall be retained for not less than 12 years.

(f) Results of the disinfection profile and benchmark, which shall be retained indefinitely.

(g) Copies of monitoring plans developed under these rules shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under this subrule, except as specified elsewhere in these rules.

(2) Actual laboratory reports for chemical, bacteriological, turbidity, disinfection profile and benchmark, and radiological analyses shall be kept; however, the analyses data may be transferred to tabular summaries if all of the following information is included:

(a) The date, place, and time of sampling and the name of the person who collected the sample.

(b) Identification of the sample as a routine distribution system sample, check sample, raw or treated water sample, or other special purpose sample.

(c) The date of the analysis.

(d) The laboratory and the person who was responsible for performing the analysis.

(e) The analytical technique or method used.

(f) The results of the analysis.

(3) Records of action taken by the supply to correct violations of the state drinking water standards shall be kept for not less than 3 years after the last action taken with respect to the particular violation.

(4) Copies of any written reports, summaries, or communications which relate to sanitary surveys of the public water supply and which were conducted by the public water supply itself, by a private consultant, by the department, or by any local, state, or federal agency shall be kept for not less than 10 years after completion of the sanitary survey involved.

(5) Records that involve a variance or an exemption that was granted to a public water supply shall be kept for not less than 5 years after the expiration date of the variance or exemption.

(6) Records that involve any emergency or public notification regarding a public water supply shall be kept for not less than 3 years after the emergency or public notification.

PART 16. GENERAL PLANS

R 325.11604 Contents of general plans for all applicable systems.

Rule 1604. The general plan for a waterworks system shall contain a description of the waterworks system, including ~~both~~ **all** of the following:

(a) The general layout of the entire waterworks system, including treatment systems and distribution systems, and the location of valves, hydrants, storage tanks, watermains, pumps, wells, and pumping facilities.

(b) Rated capacity of the waterworks system, including capacity of the developed water source, treatment system, storage tanks, pumping facilities, and equipment to maintain system reliability.

(c) Community and nontransient noncommunity water supplies shall complete a distribution system materials inventory as follows:

(i) By January 1, 2020, a supply shall complete and submit to the department, a preliminary distribution system materials inventory in a form and manner specified by the department. The preliminary inventory shall consist of a thorough assessment of distribution system materials based on existing sources of information.

(ii) By January 1, 2024, a supply shall submit a verified distribution system materials inventory and provide the results of the inventory to the department in a form and manner specified by the department. The materials inventory under this subsection shall identify whether and where construction materials listed in 40 C.F.R. §141.42(d) are present in the piping, storage structure, pumps, and controls used to deliver water to the public, including service lines.

(iii) The materials inventory shall cover all parts and materials in the service lines. If a customer does not grant access necessary to evaluate the service line, the materials inventory requirements do not apply to the customer-owned portion of the service line to which access is not granted. The supply shall maintain a record of customers that fail to grant access. If access is denied, the record shall include the date of the denial, to whom the denial was communicated, and the denial itself if in writing. If the customer does not respond to requests for access, the record shall include the dates when and manner by which access was requested and by whom it was requested.

(iv) If the supply is unable to determine the content of sections of a service line, the supply shall, in writing, notify the owner and occupant of the potential for lead in the service line and provide information on lead hazards and remediation.

(v) Within 30 days of determining a service line contains lead or is presumed to contain lead, the supply shall provide the owner and occupant of the premises with a written notification of the service line material content. The notification shall include language encouraging residential customers to have a home plumbing materials evaluation completed.

(vi) A community water supply with lead service lines or service lines of unknown content shall include service line information in their annual consumer confidence report, including the number of lead service lines and number of service lines of unknown material. This information shall also be made available on the supply's public website, or upon request if the supply does not have a website.

(vii) A supply with lead service lines shall annually provide the department a summary of service line repairs or replacements in a form and manner specified by the department.

(viii) A supply shall conduct a comprehensive update of its materials inventory every 5 years and submit the updated inventory to the department in a form and manner specified by the department.