

APPENDIX B

PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS

601-B NNPDR Violations and Other Situations Requiring Public Notice

Contaminant	MCL/MRD/TT violations ²		Monitoring and Testing Procedure Violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation
I. Violations of Navajo Nation Primary Drinking Water Regulations (NNPDWR): ³				
A. Microbiological Contaminants				
1. Total coliform	2	205(B)(1)	3	404(A)-(E)
2. Fecal coliform/E. coli	1	205(C)(3)	⁴ 1, 3	404(E)
3. Turbidity MCL	2	206(A)	3	414
4. Turbidity MCL (average of 2 days' samples >5 NTU)	⁵ 2, 1	206(B)	3	414
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	⁶ 2, 1	803(A)(2), 803(C)(2)(a), 805(A)(2), 805(B)(2), 805(C)(2), 805(D), 1305(A)(2), 1305(B), 2106(B)	3	Appendix D §801-D (A)(1), Appendix D §801-D (B)(2) Appendix D §801-D(C)(1), 1306, 2107 (A)(1)-(3), 2107 (B)
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT).	2	802-805	3	Appendix D
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	² 7	⁷ 1302-1305, 2101-2104(A-D)	3	1304, 1306, 2104-2105, 2107
8. Filter Backwash Recycling Rule Violations	2	807	3	807
9. Long Term 1 Enhanced Surface Water Treatment Rule violations	2	2101-2106	3	2104-2105, 2107(A-E)
10. LT2ESWTR violations	2	2409-2419	²² 2,3	2402-2404, Appendix

				G-2401-G - 2402-G, and 2407-2408
11. Ground Water Regulations violations	2	141.404	3	141.402(h). 141.403(d).
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	203(A)	3	405 (A), (B)
2. Arsenic	2	203(A) ¹⁷	3	¹⁸ 405 (A), (B)
3. Asbestos (fibers >10 m)	2	203(A)	3	406
4. Barium	2	203(A)	3	405 (A), (B)
5. Beryllium	2	203(A)	3	405 (A), (B)
6. Cadmium	2	203(A)	3	405 (A), (B)
7. Chromium (total)	2	203(A)	3	405 (A), (B)
8. Cyanide	2	203(A)	3	405 (A), (B)
9. Fluoride	2	203(A)	3	405 (A), (B)
10. Mercury (inorganic)	2	203(A)	3	405 (A), (B)
11. Nitrate	1	203(A)	⁸ 1, 3	407
12. Nitrite	1	203(A)	⁸ 1, 3	408
13. Total Nitrate and Nitrite	1	203(A)	3	407
14. Selenium	2	204(A)	3	405 (A), (B)
15. Thallium	2	204(A)	3	405 (A), (B)
C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, for copper is 1.3 mg/L)				
1. Lead and Copper Rule (TT)	2	701-707	3	708-710, Appendix C
D. Synthetic Organic Chemicals (SOCs)				
1. 2,4-D	2	204(A)(2)	3	410, Appendix A (§404-A)
2. 2,4,5-TP (Silvex)	2	204(A)(2)	3	410, Appendix A (§404-A)
3. Alachlor	2	204(A)(2)	3	410, Appendix A (§404-A)
4. Atrazine	2	204(A)(2)	3	410, Appendix A (§404-A)

5. Benzo(a)pyrene (PAHs)	2	204(A)(2)	3	410, Appendix A (§404-A)
6. Carbofuran	2	204(A)(2)	3	410, Appendix A (§404-A)
7. Chlordane	2	204(A)(2)	3	410, Appendix A (§404-A)
8. Dalapon	2	204(A)(2)	3	410, Appendix A (§404-A)
9. Di(2-ethylhexyl) adipate	2	204(A)(2)	3	410, Appendix A (§404-A)
10. Di(2-ethylhexyl) phthalate	2	204(A)(2)	3	410, Appendix A (§404-A)
11. Dibromochloropropane	2	204(A)(2)	3	410, Appendix A (§404-A)
12. Dinoseb	2	204(A)(2)	3	410, Appendix A (§404-A)
13. Dioxin (2,3,7,8-TCDD)	2	204(A)(2)	3	410, Appendix A (§404-A)
14. Diquat	2	204(A)(2)	3	410, Appendix A (§404-A)
15. Endothall	2	204(A)(2)	3	410, Appendix A (§404-A)
16. Endrin	2	204(A)(2)	3	410, Appendix A (§404-A)
17. Ethylene dibromide	2	204(A)(2)	3	410, Appendix A (§404-A)
18. Glyphosate	2	204(A)(2)	3	410, Appendix A (§404-A)
19. Heptachlor	2	204(A)(2)	3	410, Appendix A (§404-A)
20. Heptachlor epoxide	2	204(A)(2)	3	410, Appendix A (§404-A)
21. Hexachlorobenzene	2	204(A)(2)	3	410, Appendix A (§404-A)
22. Hexachlorocyclopentadiene	2	204(A)(2)	3	410, Appendix A (§404-A)
23. Lindane	2	204(A)(2)	3	410, Appendix A (§404-A)
24. Methoxychlor	2	204(A)(2)	3	410, Appendix A (§404-A)
25. Oxamyl (Vydate)	2	204(A)(2)	3	410, Appendix A (§404-A)
26. Pentachlorophenol	2	204(A)(2)	3	410, Appendix A (§404-A)
27. Picloram	2	204(A)(2)	3	410, Appendix A (§404-A)
28. Polychlorinated biphenyls (PCBs)	2	204(A)(2)	3	410, Appendix A (§404-A)
29. Simazine	2	204(A)(2)	3	410, Appendix A (§404-A)
30. Toxaphene	2	204(A)(2)	3	410, Appendix A (§404-A)

E. Volatile Organic Chemicals (VOCs)				
1. Benzene	2	204(A)(1)	3	409, Appendix A (§404-A)
2. Carbon tetrachloride	2	204(A)(1)	3	409, Appendix A (§404-A)
3. Chlorobenzene (monochlorobenzene)	2	204(A)(1)	3	409, Appendix A (§404-A)
4. o-Dichlorobenzene	2	204(A)(1)	3	409, Appendix A (§404-A)
5. p-Dichlorobenzene	2	204(A)(1)	3	409, Appendix A (§404-A)
6. 1,2-Dichloroethane	2	204(A)(1)	3	409, Appendix A (§404-A)
7. 1,1-Dichloroethylene	2	204(A)(1)	3	409, Appendix A (§404-A)
8. cis-1,2-Dichloroethylene	2	204(A)(1)	3	409, Appendix A (§404-A)
9. trans-1,2-Dichloroethylene	2	204(A)(1)	3	409, Appendix A (§404-A)
10. Dichloromethane	2	204(A)(1)	3	409, Appendix A (§404-A)
11. 1,2-Dichloropropane	2	204(A)(1)	3	409, Appendix A (§404-A)
12. Ethylbenzene	2	204(A)(1)	3	409, Appendix A (§404-A)
13. Styrene	2	204(A)(1)	3	409, Appendix A (§404-A)
14. Tetrachloroethylene	2	204(A)(1)	3	409, Appendix A (§404-A)
15. Toluene	2	204(A)(1)	3	409, Appendix A (§404-A)
16. 1,2,4-Trichlorobenzene	2	204(A)(1)	3	409, Appendix A (§404-A)
17. 1,1,1-Trichloroethane	2	204(A)(1)	3	409, Appendix A (§404-A)
18. 1,1,2-Trichloroethane	2	204(A)(1)	3	409, Appendix A (§404-A)
19. Trichloroethylene	2	204(A)(1)	3	409, Appendix A (§404-A)
20. Vinyl chloride	2	204(A)(1)	3	409, Appendix A (§404-A)
21. Xylenes (total)	2	204(A)(1)	3	409, Appendix A (§404-A)
F. Radioactive Contaminants				
1. Beta/photon emitters	2	209(A)(1)	3	Appendix A (§405-A), 412
2. Alpha emitters	2	209(A)(1)	3	Appendix A (§405-A), 411
3. Combined radium (226&228)	2	209(A)(1)	3	Appendix A (§405-A), 411

4. Uranium	2 ¹⁹	209(A)(1)	3 ²⁰	Appendix A (§405-A), 411
G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs). ⁹				
1. Total trihalomethanes (TTHMs)	2	207(B) ¹⁰	3	1103(a)-(b), 2201-2206, 2301-2310
2. Haloacetic Acids (HAA5)	2	207(B)	3	1103(a)-(b), 2201-2206, 2301-2310
3. Bromate	2	207(A)(1)	3	1103(a)-(b)
4. Chlorite	2	207(A)(1)	3	1103(a)-(b)
5. Chlorine (MRDL)	2	208(A)(1)	3	1104(a), (c)
6. Chloramine (MRDL)	2	208(A)(1)	3	1104(a), (c)
7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2	208(A)(1), 141.133(c)(3)	2 ¹¹ , 3	1104(a), (c), 1105(c)(2)
8. Chlorine dioxide (MRDL), where sample(s) in distribution system the next day are also above MRDL	12 1	208(A)(1), 141.133(c)(3)	1	1104(a), (c), 1105(c)(2)
9. Control of DBP precursors--TOC (TT)	2	1106(a)-(b)	3	1103(a), (d)
10. Bench marking and disinfection profiling	N/A	N/A	3	1304, (reserved)
11. Development of monitoring plan	N/A	N/A	3	1103(f)
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	1002	N/A	N/A
2. Epichlorohydrin (TT)	2	1002	N/A	N/A
II. Public Notification for Variances and Exemptions:				
A. Operation under a variance or exemption	3	13 601, 602, 603	N/A	N/A
B. Violation of conditions of a	2	601, 602, 603	N/A	N/A

variance or exemption		¹⁴ 142.307		
III. Other Situations Requiring Public Notification:				
A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	1803	N/A	N/A
B. Exceedance of nitrate MCL for non community systems, as allowed by primacy agency	1	202(C)	N/A	N/A
C. Waterborne disease outbreak	1	104, 803(c)(2)(ii)	N/A	N/A
D. Other waterborne emergency ¹⁵	1	N/A	N/A	N/A
E. Other situations as determined by primacy agency	²¹ 1, 2, 3	N/A	N/A	N/A
F. Source Water Sample Positive for GWR Fecal indicators: E.coli, enterococci, or coliphage.	1	141.402(g)	N/A	N/A

Appendix B--Endnotes

1. Violations and other situations not listed in this table (e.g., reporting violations and failure to prepare Consumer Confidence Reports), do not require notice, unless otherwise determined by the primary agency. Primacy agencies may, at their option, also require a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2 instead of Tier 3) for specific violations and situations listed in this Appendix, as authorized under § 604(a) and § 605(a).
2. MCL--Maximum contaminant level, MRDL--Maximum residual disinfectant level, TT--Treatment technique.
3. The term Violations of Navajo Nation Primary Drinking Water Regulations (NNPDWR) is used here to include violations of MCL, MRDL, treatment technique, monitoring, and testing procedure requirements.
4. 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.
5. Systems that violate the turbidity MCL of 5 NTU based on an average of measurements over two consecutive days must consult with the primacy agency within 24 hours after learning of the violation. Based on this consultation, the primacy agency may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the primacy agency in the 24-hour period, the violation is automatically elevated to Tier 1.
6. Systems with treatment technique violations involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule (SWTR), the Interim Enhanced Surface Water Treatment Rule (IESWTR) or Long Term 1 Enhanced Surface Water Treatment (LT1ESWTR) are required to consult with the primacy agency within 24 hours after learning of the violation. Based on this consultation, the primacy agency may subsequently decide to elevate the violation to Tier 1. If a system is unable to make contact with the primacy agency in the 24-hour period, the violation is automatically elevated to Tier 1.
7. Most of the requirements of the Interim Enhanced Surface Water Treatment Rule (63 FR 69477) (§§ 1302-1303, 1305-1306) become effective January 1, 2002 for Part VIII (surface water systems and ground water systems under the direct influence of surface water) serving at least 10,000 persons. However, § 1304 has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule remains in effect for systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supercede the SWTR.
8. 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.
9. Part VIII community and non-transient non-community systems serving ≥10,000 must comply with new DBP MCLs, disinfectant MRDLs, and related

- monitoring requirements beginning January 1, 2002. All other community and non-transient non-community systems must meet the MCLs and MRDLs beginning January 1, 2004. Part VIII transient non-community systems serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. Part VIII transient non-community systems serving fewer than 10,000 persons and using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.
10. §§207(B)(1), 1103(A)-(B) apply until §§2301-2310 take effect under the schedule in §2301 (C)
 11. 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.
 12. If any daily sample taken at the entrance to the distribution system exceeds the MRDL for chlorine dioxide and one or more samples taken in the distribution system the next day exceed the MRDL, Tier 1 notification is required. Failure to take the required samples in the distribution system after the MRDL is exceeded at the entry point also triggers Tier 1 notification.
 13. This citation refers to §§ 601, 602 and 603 of the Navajo Nation Safe Drinking Water Act. §§ 601, 602 and 603 require that "a schedule prescribed . . . for a public water system granted a variance [or exemption] shall require compliance by the system . . ."
 14. In addition to §§ 1415 and 1416 of the Safe Drinking Water Act, 40 CFR 142.307 specifies the items and schedule milestones that must be included in a variance for small systems.
 15. Other waterborne emergencies require a Tier 1 public notice under § 604(a) for situations that do not meet the definition of a waterborne disease outbreak given in §104 but that still have the potential to have serious adverse effects on health as a result of short-term exposure. These could include outbreaks not related to treatment deficiencies, as well as situations that have the potential to cause outbreaks, such as failures or significant interruption in water treatment processes, natural disasters that disrupt the water supply or distribution system, chemical spills, or unexpected loading of possible pathogens into the source water.
 16. Primacy agencies may place other situations in any tier they believe appropriate, based on threat to public health.
 17. The arsenic MCL citations are effective January 23, 2006.
 18. The arsenic Tier 3 violation MCL citations are effective January 23, 2006.
 19. The uranium MCL Tier 2 violation citations are effective December 8, 2003 for all community water systems.
 20. The uranium Tier 3 violation citations are effective December 8, 2003 for all community water systems.
 21. Primacy agencies may place other situations in any tier they believe appropriate based on threat to public health.
 22. Failure to collect three or more samples for Cryptosporidium analysis is a Tier 2 violation requiring special notice as specified in §612. All other monitoring and testing procedure violations are Tier 3.

602-B Standard Health Effects Language for Public Notification

Contaminant	MCLG ¹ mg/L	MCL ² mg/L	Standard Health Effects Language for Public Notification
A. Microbiological Contaminants:			
1a. Total Coliform	Zero	See footnote 3	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
1b. Fecal coliform/E. coli	Zero	Zero	Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
1c. Fecal Indicators (GWR) i. E. coli ii. enterococci iii. coliphage	Zero None None	TT TT TT	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.
1d. Ground Water Regulations (GWR) TT violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.
2a. Turbidity (MCL) ⁴	None	1 NTU ⁵ /5 NTU	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.
2b. Turbidity (SWTR TT) ⁶	None	TT ⁷	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
2c. Turbidity (IESWTR TT and LT1ESWTR TT) ⁸	None	TT	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
B. Surface Water Treatment Rule (SWTR) and Interim Enhanced Surface Water Treatment Rule (IESWTR) and Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR) and the Filter Backwash Recycling Rule (FBRR) violations:			
3. Giardia lamblia (SWTR/ IESWTR/ LT1ESWTR).	Zero	TT ¹⁰	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps,

4. Viruses (SWTR/IESWTR/LT1ESWTR). 5. Heterotrophic plate count (HPC) bacteria ⁹ (SWTR/IESWTR/LT1ESWTR). 6. Legionella (SWTR/IESWTR/LT1ESWTR). 7. Cryptosporidium (IESWTR/FBRR/LT1ESWTR).			diarrhea, and associated headaches.
C. Inorganic Chemicals (IOCs)			
8. Antimony	0.006	0.006	Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
9. Arsenic ²²	None	0.010	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
10. Asbestos (10 m)	7 MFL ¹¹	7 MFL	Asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.

19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Requirements:			
23. Lead	Zero	TT ¹²	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.
24. Copper	1.3	TT ¹³	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
E. Synthetic Organic Chemicals (SOCs):			
25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
26. 2,4,5-TP (Silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs)	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years

			could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.
32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
33. Di(2-ethylhexyl)adipate	0.4	0.4	Some people who drink water containing di (2-ethylhexyl) adipate well in excess of the MCL over many years could experience general toxic effects such as weight loss, liver enlargement or possible reproductive difficulties.
34. Di (2-ethylhexyl)phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl) phthalate 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.
35. Dibromochloropropane (DBCP)	Zero	0.0002	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
37. Dioxin (2,3,7,8-TCDD)	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.
39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.
46. Hexachlorocyclopentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.

47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
52. Polychlorinated biphenyls (PCBs)	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCS)			
55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
56. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
57. Chlorobenzene	0.1	0.1	Some people who drink water containing (monochlorobenzene). chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.

61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. cis-1,2- Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
63. trans-1,2- Dichloroethylene	0.1	0.1	Some people who drink water containing Trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
64. Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
65. 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
66. Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
67. Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.
68. Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
69. Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
70. 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
71. 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
72. 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
73. Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
74. Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
75. Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.

G. Radioactive Contaminants:			
76. Beta/photon emitters	Zero	4 mrem/yr ¹⁴	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
77. Alpha emitters	Zero	15 pCi/L ¹⁵	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
78. Combined radium (226 & 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
79. Uranium ²³	Zero	30µg/L	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: Where disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). EPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs): ¹⁶			
80. Total trihalomethanes (TTHMs)	N/A	0.080 ^{17, 18}	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.
81. Haloacetic Acids (HAA)	N/A	0.060 ¹⁹	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
82. Bromate	Zero	0.010	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
83. Chlorite	0.08	1.0	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
84. Chlorine	4 (MRDLG) ²⁰	4 (MRDL) ²¹	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
85. Chloramines	4 (MRDLG)	4 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
86a. Chlorine dioxide, where any 2 consecutive samples taken at the entrance to the distribution system are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Add for public notification only: 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.
86b. Chlorine dioxide, where one or more distribution system samples are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia. Add for public notification only: The chlorine dioxide violations reported today include exceedances of the EPA standard within the distribution system which delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.
87. Control of DBP precursors (TOC)	None	TT	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 (THMs) and haloacetic acids (HAAs). 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.
I. Other Treatment Techniques:			
88. Acrylamide	Zero	TT	Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.
89. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

1. MCLG--Maximum contaminant level goal

2. MCL--Maximum contaminant level

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

4. There are various regulations that set turbidity standards for different types of systems, including §206, the 1989 Surface Water Treatment Rule, and the 1998 Interim Enhanced Surface Water Treatment Rule. The MCL for the monthly turbidity average is 1 NTU; the MCL for the 2-day average is 5 NTU for systems that are required to filter but have not yet installed filtration (§206).

5. NTU--Nephelometric turbidity unit

6. There are various regulations that set turbidity standards for different types of systems, including §206, the 1989 Surface Water Treatment Rule (SWTR), and the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR). Systems subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must not exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the primary agency.

7. TT--Treatment technique

8. There are various regulations that set turbidity standards for different types of systems, including §206, the 1989 Surface Water Treatment Rule (SWTR), and the 1998 Interim Enhanced Surface Water Treatment Rule (IESWTR). For systems subject to the IESWTR (systems serving at least 10,000 people, using surface water or ground water under the direct influence of surface water), that use conventional filtration or direct filtration, after January 1, 2002, the turbidity level of a system's combined filter effluent may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level of a system's combined filter effluent must not exceed 1 NTU at any time. Systems

subject to the IESWTR using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the primacy agency.

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

10. SWTR and IESWTR treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

11. Millions fibers per liter.

12. Action Level = 0.015 mg/L

13. Action Level = 1.3 mg/L

14. Millirems per years

15. Picocuries per liter

16. Surface water systems and ground water systems under the direct influence of surface water are regulated under Part VIII. Part VIII community and non-transient non-community systems serving $\geq 10,000$ must comply with Part XI DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs) beginning January 1, 2002. All other community and non-transient noncommunity systems must comply with Part XI DBP MCLs and disinfectant MRDLs beginning January 1, 2005. Part VIII transient non-community systems serving $\geq 10,000$ that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. All other transient non-community systems that use chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004.

17. Community and non-transient non-community systems must comply with Part XXIII TTHM and HAA5 MCLs of 0.080mg/L and 0.060mg/L respectively (with compliance calculated as a locational running annual average) on the schedule in §2301.

18. The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

19. The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

20. MRDLG--Maximum residual disinfectant level goal.

21. MRDL--Maximum residual disinfectant level.

22. These arsenic values are effective January 23, 2006.

23. The uranium MCL is effective December 8, 2003 for all community water systems.

603-B List of Acronyms Used in Public Notification Regulation

CCR	Consumer Confidence Report	NTNCWS	Non-Transient Non-Community Water System
CWS	Community Water System	NTU	Nephelometric Turbidity Unit
DBP	Disinfection Byproduct	OGWDW	Office of Ground Water and Drinking Water
EPA	Environmental Protection Agency	OW	Office of Water
HPC	Heterotrophic Plate Count	PN	Public Notification
IESWTR	Interim Enhanced Surface Water Treatment Rule	PWS	Public Water System
IOC	Inorganic Chemical	SDWA	Safe Drinking Water Act
GWP	Ground Water Rule	SMCL	Secondary Maximum Contaminant Level
LCR	Lead and Copper Rule	SOC	Synthetic Organic Chemical
MCL	Maximum Contaminant Level	SWTR	Surface Water Treatment Rule
MCLG	Maximum Contaminant Level Goal	TCR	Total Coliform Rule
MRDL	Maximum Residual Disinfectant Level	TT	Treatment Technique
MRDLG	Maximum Residual Disinfectant Level Goal	TWS	Transient Non-Community Water System
NCWS	Non-Community Water System	VOC	Volatile Organic Chemical
NPDWR	National Primary Drinking Water Regulation		

APPENDIX C
SAMPLING AND ANALYTICAL METHODOLOGY
FOR LEAD AND COPPER

701-C ANALYTICAL METHODS

- A. Analyses for lead, copper, pH, conductivity, calcium, alkalinity, orthophosphate, silica, and temperature shall be conducted with the methods in Appendix A § 403-A (A)(1).
1. Analyses for alkalinity, calcium, conductivity, orthophosphate, pH, silica, and temperature may be performed by any person acceptable to the Director. Analyses under this section for lead and copper shall only be conducted by laboratories that have been certified by the EPA. To obtain certification to conduct analyses for lead and copper, laboratories must:
 - a. Analyze performance evaluation samples which include lead and copper provided by EPA at least once a year by each method for which the laboratory desires certification; and
 - b. Achieve quantitative acceptance limits as follows:
 - i. Lead: $\pm 30\%$ of the actual amount in the Performance Evaluation sample when the actual amount is ≥ 0.005 mg/l. The Practical Quantitation Level, or PQL for lead is 0.005 mg/l.
 - ii. Copper: $\pm 10\%$ of the actual amount in the Performance Evaluation sample when the actual amount is ≥ 0.050 mg/l. The Practical Quantitation Level, or PQL for copper is 0.050 mg/l.
 - c. Achieve method detection limits for lead of 0.001 mg/L according to the procedures in Appendix B of 40 CFR Part 136. This need only be accomplished if the laboratory will be processing source water composite samples under § 712 (A)(1)(c).
 - d. Be currently certified by EPA to perform analyses to the specifications described in subsection (A)(2) of this section.
 2. The Director has the authority to allow the use of previously collected sampling data for purposes of sampling, if the data were collected and analyzed in accordance with the requirements of this section.
 3. All lead and copper levels measured between the PQL and the MDL must be either be reported as measured or they can be reported as one-half the PQL specified for lead and copper in subsection (A)(1)(b) of this section. All levels below the lead and copper MDLs must be reported as zero.
 4. All copper levels measured between the PQL and the MDL must be either reported as measured or they can be reported as one-half the PQL (0.025 mg/l). All levels below the copper MDL must be reported as zero.

§702-C SAMPLING FOR CORROSIVITY CHARACTERISTICS

A-C [Reserved]

- D. Community water systems shall identify whether the following construction materials are present in their distribution system and report to the Director:

Lead from piping, solder, caulking, interior lining of distribution mains, alloys and home plumbing.
Copper from piping and alloys, service lines, and home plumbing.
Galvanized piping, service lines, and home plumbing.
Ferrous piping material such as cast iron and steel.
Asbestos cement pipe.

In addition, the Director may require identification and reporting of other materials of construction present in distribution systems that may contribute contaminants to the drinking water, such as:

Vinyl lined asbestos cement pipe.
Coal tar lined pipes and tanks.