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WISCONSIN STATE LEGISLATURE ...
PUBLIC HEARING - COMMITTEE RECORDS

2009-10
(session year)

Joint
(Assembly, Senate or Joint)

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INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt** (w/Record of Comm. Proceedings)
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- Hearing Records ... bills and resolutions (w/Record of Comm. Proceedings)
  (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
  (**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

* Contents organized for archiving by: Stefanie Rose (LRB) (June 2012)

					and coal-burning factories; Discharge from electrical, aerospace, and defense industries.	well in excess of the MCL over many years could develop intestinal lesions.
Bromate (ppb)	.010	1000	10	0	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.
Cadmium (ppb)	.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.
Chloramines (ppm)	MRDL = 4	N/A	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.
Chlorine (ppm)	MRDL = 4	N/A	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 or anemia.
Chlorine dioxide (ppb)	MRDL = .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.
Chlorite (ppm)	1	N/A	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.
Chromium (ppb)	.1	1000	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.	Some people who drink water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper (ppm)	AL = 1.3	N/A	AL = 1.3	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.
Cyanide (ppb)	.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	N/A	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of bones. Fluoride in drinking water at

					aluminum factories.	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.
Lead (ppb)	AL = .015	1000	AL = 15	0	Corrosion of household plumbing system; 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 attentions span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury [inorganic] (ppb)	.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 (ppm)	10	N/A	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 (ppm)	1	N/A	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.
Selenium (ppb)	.05	1000	50	50	Discharge from petroleum and metal refineries; Erosion of	Selenium is an essential nutrient. However, some people who drink water containing selenium in

					natural deposits; Discharge from mines.	excess of the MCL over many years could experience hair or fingernail loss, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	.002	1000	2	0.5	Leaching from ore-processing sites; Discharge from electronic, 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.
Synthetic organic contaminants including pesticides and herbicides:						
2,4-D (ppb)	.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)	.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.
Acrylamide	TT	N/A	TT	0	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.
Alachlor (ppb)	.002	1000	2	0	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)	.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)-	.0002	1,000,000	200	0	Leaching from	Some people who drink

pyrene [PAH] (nanograms/l)					lining of water storage tanks and distribution lines.	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)	.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)	.002	1000	2	0	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)	.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.
Di(2-ethylhexyl) adipate (ppb)	.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)	.006	1000	6	0	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.
Dibromo-chloropropane (ppt)	.0002	1,000,000	200	0	Runoff/leaching from soil fumigant used on soybeans,	Some people who drink water containing DBCP in excess of the MCL over many years could experience

					cotton, pineapples, and orchards.	reproductive problems and may have an increased risk of getting cancer.
Dinoseb (ppb)	.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.
Diquat (ppb)	.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.
Dioxin [2,3,7,8-TCDD] (ppq)	.00000003	1,000,000,000	30	0	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.
Endothall (ppb)	.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)	.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.
Epichloro-hydrin	TT	N/A	TT	0	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.
Ethylene dibromide (ppt)	.00005	1,000,000	50	0	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 systems, or kidneys, and may have an increased risk of getting cancer.

Glyphosate (ppb)	.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)	.0004	1,000,000	400	0	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)	.0002	1,000,000	200	0	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.
Hexachloro-benzene (ppb)	.001	1000	1	0	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.
Hexachloro-cyclopenta-diene (ppb)	.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)	.0002	1,000,000	200	200	Runoff/leaching from insecticide used on cattle, lumber and 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)	.04	1000	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa and livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate] (ppb)	.2	1000	200	200	Runoff/leaching from insecticide used on apples,	Some people who drink water containing oxamyl in excess of the MCL over

					potatoes and tomatoes.	many years could experience slight nervous system effects.
PCBs [Poly-chlorinated-biphenyls] (ppt)	.0005	1,000,000	500	0	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.
Pentachloro-phenol (ppb)	.001	1000	1	0	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)	.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.
Simazine (ppb)	.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)	.003	1000	3	0	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)	.005	1000	5	0	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	.005	1000	5	0	Discharge from chemical plants	Some people who drink water containing carbon

(ppb)					and other industrial activities.	tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chloro-benzene (ppb)	.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.
o-Dichloro-benzene (ppb)	.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-Dichloro-benzene (ppb)	.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-Dichloro-ethane (ppb)	.005	1000	5	0	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-Dichloro-ethylene (ppb)	.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-dichloro-ethylene (ppb)	.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-Dichloro-ethylene (ppb)	.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.
Dichloro-methane (ppb)	.005	1000	5	0	Discharge from pharmaceutical and chemical factories.	Some people who drink water containing dichlorormethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-dichloro-propane (ppb)	.005	1000	5	0	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.
Ethylbenzene (ppb)	.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.
Haloacetic Acids (pbb)	.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.
Styrene (ppb)	.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)	.005	1000	5	0	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.
1,2,4-Trichloro-benzene (ppb)	.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-Trichloro-ethane (ppb)	.2	1000	200	200	Discharge from metal degreasing sites and other	Some people who drink water containing 1,1,1-trichloroethane in excess of

					factories.	the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloro-ethane (ppb)	.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.
Trichloro-ethylene (ppb)	.005	1000	5	0	Discharge from metal degreasing sites and other factories.	Some people who drink water containing trichoroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
TTHMs [Total trihalo-methanes] (ppb)	0.10/0.80	1000	100/80	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 systems, and may have an increased risk of getting cancer.
Toluene (ppm)	1	N/A	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.
Vinyl Chloride (ppb)	.002	1000	2	0	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 (ppm)	10	N/A	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 damages to their nervous system.

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 (□g/l)
ppt = parts per trillion, or nanograms per liter
ppq = parts per quadrillion, or picograms per liter
TT = Treatment Technique

Subchapter VI — Conditional Waivers and Variances

NR 809.90 Conditional waivers. **(1)** GENERAL APPLICATION REQUIREMENTS. A water supplier for a public water system may apply to the department for a conditional waiver for nonmicrobial contaminants respecting compliance with a maximum contaminant level or treatment technique requirement for a period up to 3 years if all of the following apply:

(a) One of the following situations exists:

1. Because of the characteristics of the raw water sources which are reasonably available, the public water system cannot comply with a maximum contaminant level despite application of best technology, treatment techniques or other means generally available, taking costs into consideration.

2. Compelling factors, which may include economic factors, indicate that the public water system cannot comply with a maximum contaminant level or treatment technique requirement for a limited period of time.

(b) The public water system was in operation on the effective date of the maximum contaminant level or treatment technique requirement.

(c) Granting of a conditional waiver will not result in an unreasonable risk to public health.

(d) The public water system shall have entered into a consent order agreement with the department regarding the conditional waiver.

(2) SMALL SYSTEM APPLICATION REQUIREMENTS. Water suppliers for small systems serving less than 3,300 persons, may apply for a conditional waiver for nonmicrobial contaminants only when all of the following conditions are met:

(a) The contaminant or treatment technique to be waived has a maximum contaminant level or treatment technique requirement established in national primary drinking water regulations promulgated on or after January 1, 1986.

(b) The technology used to comply with the maximum contaminant level or treatment technique is approved by the department.

(c) Compliance with maximum contaminant levels or treatment techniques is not reasonably affordable through restructuring or consolidation changes, including ownership change or physical consolidation or both with another public water system, or obtaining financial assistance through the Wisconsin drinking water state revolving loan fund (DWSRF).

(d) The small system is financially and technically capable of installing, operating and maintaining the applicable small system technology under par. (b).

(e) Granting of a conditional waiver will not result in an unreasonable risk to public health.

(f) The public water system shall have entered into a signed consent order agreement with the department regarding the conditional waiver.

(3) GENERAL WAIVER REQUIREMENTS. The department may grant a conditional waiver if the water supplier has established that the criteria of sub. (1) or (2) have been met. Any conditional waiver granted shall require all of the following:

(a) Compliance, including increments of progress, by the water supplier with each maximum contaminant level or treatment technique requirement within the time frame specified by the department in the compliance schedule.

(b) Implementation by the water supplier of control measures the department deems necessary until compliance with the maximum contaminant level or treatment technique requirement is achieved.

(4) BOTTLED WATER USE AS A REQUIREMENT OF A WAIVER. Public water systems that use bottled water as a requirement for receiving a conditional waiver shall meet all of the following requirements:

(a) The department shall require and approve a monitoring program for bottled water. The water supplier shall develop and put in place a monitoring program that provides reasonable assurances that the bottled water meets all MCLs. The water supplier shall monitor a representative sample of the bottled water for all contaminants regulated under ss. NR 809.24 (1) and (2) and 809.11 during the first 3-month period that it supplies the bottled water to the public, and annually thereafter. Results of the monitoring program shall be provided to the department annually.

(b) The water supplier shall receive a certification from the bottled water company that the bottled water supplied meets all requirements of s. 97.34, Stats and s. ATCP 70.26. The water supplier shall provide the certification to the department the first quarter after it supplies bottled water and annually thereafter.

(c) The water supplier= shall be fully responsible for the provision of sufficient quantities of bottled water to every person supplied by the public water system via door-to-door bottled water delivery.

(5) POINT OF ENTRY TREATMENT AS A REQUIREMENT OF A WAIVER. If the department approves the use of a point-of-entry device as a requisite for granting a conditional waiver, the water supplier shall provide documentation that the device will not cause increased corrosion of plumbing materials which could increase contaminant levels at the consumer's tap.

(6) ADDITIONAL WAIVER REQUIREMENTS. Additional requirements for conditional waivers shall include all of the following:

(a) Proof of proper and effective installation, operation and maintenance of any applicable treatment technologies.

(b) Department specified monitoring requirements for the contaminant for which the conditional waiver is sought.

(c) Other terms or conditions specified by the department to ensure adequate public health protection, including but not limited to all of the following:

1. Public education requirements.
2. Source water protection requirements.
3. Quarterly conditional waiver compliance reports to the department.

(7) PUBLIC NOTICE OF WAIVERS. Before the department may grant a conditional waiver under this section, a class 1 public notice under ch. 985, Stats., and opportunity for a public hearing on the proposed conditional waiver shall be provided by the department. A hearing held pursuant to a request under this subsection is a class 1 hearing and shall be conducted in accordance with ch. 227, Stats.

(8) EXTENSION OF WAIVERS. The department may extend a compliance deadline not to exceed 3 years, or 2 years for a small system conditional waiver under sub. (2), beyond the expiration date of the original conditional waiver if the water supplier establishes all of the following:

(a) The public water system cannot meet the maximum contaminant level or treatment technique requirement without capital improvements which cannot be completed within the period of the conditional waiver.

(b) The water supplier has entered into an enforceable agreement to become part of a regional public water system or, if the water supplier needs financial assistance for the necessary capital improvements, the water supplier has entered into an agreement to obtain the financial assistance.

(c) The water supplier is taking all practicable steps to meet the standard.

(9) RENEWAL OF WAIVER EXTENSIONS. The department may renew an extension granted under sub. (8) if the water supplier establishes all of the following:

(a) The public water system does not serve more than 500 service connections.

(b) The public water system cannot meet a maximum contaminant level or treatment technique requirement without financial assistance for the necessary capital improvements.

(c) The public water system is taking all practicable steps to achieve compliance with a maximum contaminant level or treatment technique requirement.

NR 809.905 Conditional waivers from the maximum contaminant levels for uranium. (1) GENERAL REQUIREMENTS FOR URANIUM WAIVERS. The department may grant conditional waivers from the maximum contaminant level for uranium if all of the following occur:

(a) The department has identified the best available technology, treatment techniques, or other means available for achieving compliance with the maximum contaminant levels for the radionuclides listed in ss. NR 809.50 (1) and 809.51, for the purposes of issuing a conditional waiver, as shown in s. NR 809.50 (3), Table B.

(b) The department identifies the best available technology, treatment techniques or other means available for achieving compliance with the maximum contaminant levels for the radionuclides listed in ss. NR 809.50 (1) and 809.51 for the purposes of issuing conditional waivers to small drinking water systems, defined as those serving 10,000 persons or fewer, as shown in s. NR 809.50 (4), Tables K and L.

(c) The water supplier has entered into a signed consent order agreement with the department regarding the conditional waiver.

(2) TREATMENT AS A CONDITION OF UNANIUM WAIVERS. The department shall require community water systems to install or use, or both install and use, any treatment technology identified in s. NR 809.50 (3), Table B, or in the case of community water systems that serve 10,000 persons or fewer, s. NR 809.50 (3), Table C and Table E, as a condition for granting a conditional waiver except as provided in sub. (3).

(3) WAIVER FOR ALTERNATIVE TREATMENT IF BATS ARE NOT EFFECTIVE. If a water supplier for a community water system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment technologies identified in this section would only achieve a de minimus reduction in the contaminant level, the department may issue a schedule for compliance that requires the community water system being granted the conditional waiver to examine other treatment technologies as a condition of obtaining the conditional waiver.

(4) REQUIREMENT TO INSTALL ALTERNATIVE TREATMENT. If the department determines that a treatment technology identified under sub. (3) is technically feasible, the department may require the public water system to install or use, or both install and use, that treatment technology in connection with a compliance schedule issued under s. NR 809.90. The department's determination shall be based upon studies by the water supplier for the public water system and other relevant information.

(5) BOTTLED WATER, POINT OF ENTRY, POINT OF USE OR OTHER MEANS AS A CONDITION OF GRANTING A WAIVER. The department may require a community water system to use bottled water, point-of-use devices, point-of-entry devices or other means as a condition of granting a conditional waiver from the requirements of s. NR 809.50 or 809.51 to avoid an unreasonable risk to health.

(6) REQUIREMENTS FOR BOTTLED WATER USE. Community water systems that use bottled water as a condition for receiving a conditional waiver from s. NR 809.50 or 809.51 shall meet the requirements in either s. NR 809.90 (4) (a) or (b) and (c).

(7) CONDITIONS FOR USING POINT OF USE OR POINT OF ENTRY DEVICES. Community water systems that use point-of-use or point-of-entry devices as a condition for obtaining a conditional waiver from the uranium MCL shall meet the conditions in ss. NR 809.50(4)(b) and 809.90 (3).

NR 809.91 Nitrate variances. (1) VARIANCES FOR NON-COMMUNITY WATER SYSTEMS. A non-community water system is eligible for a variance from the nitrate as nitrogen maximum contaminant level if all of the following are met:

(a) The department determines that because of the characteristics of the raw water sources which are reasonably available, the non-community water system cannot comply with the maximum contaminant level for nitrate as nitrogen.

(b) The non-community water system has not had a nitrate as nitrogen sample which exceeds 20 mg/l, confirmed by a check sample.

(c) The water supplier continuously posts a department approved notice at all water taps supplied with water by the non-community water system. The notice shall state that the nitrate as nitrogen level exceeds 10 mg/l and describe the potential health effects of exposure.

(d) The water supplier ensures that water from their public water system will not be available to children under 6 months of age and provides bottled water which complies with all maximum contaminant levels for such children.

(e) No adverse health effects will result.

(2) VARIANCES FOR COMMUNITY WATER SYSTEMS. A community water system serving a nursing home, prison or mental health care facility, is eligible for a variance from the nitrate as nitrogen maximum contaminant level if all of the following are met:

(a) The water supplier for the institution does not permit infants under 6 months of age as residents.

(b) The community water system has not had a nitrate as nitrogen sample which exceeds 20 mg/l, confirmed by a check sample.

(c) The water supplier for the institution continuously posts a department approved notice at all water taps supplied with water by the community water system. The notice shall state that the nitrate as nitrogen level exceeds 10 mg/l and describe the potential health effects of exposure.

(d) The water supplier for the institution ensures that water from its public water system will not be available to children under 6 months of age and provides bottled water which complies with all maximum contaminant levels for such children.

(e) No adverse health effects will result.

(3) CONTROL MEASURES FOR VARIANCES. The department may condition the issuance of a variance under this section on compliance with such control measures as it deems necessary. Failure to comply with any term or condition of a variance granted by the department under this section voids the variance.

Subchapter VII — Public Notification of Drinking Water Violations

NR 809.950 General public notification requirements. (1) GENERAL REQUIREMENTS. All water suppliers for public water systems shall comply with the requirements in this subchapter.

(2) WHO SHALL GIVE PUBLIC NOTICE. Each water supplier for a public water system including, community water systems, non-transient non-community water systems, and transient non-community water systems, shall give notice for all violations of national primary drinking water regulations (NPDWR) and for other situations, as listed in sub. (3). The term "NPDWR violations" is used in this subchapter to include violations of the maximum contaminant level, maximum residual disinfection level, treatment technique, monitoring requirements, and testing procedures in this chapter. Appendix A to this subchapter identifies the tier assignment for each specific violation or situation requiring a public notice.

(3) VIOLATION CATEGORIES AND OTHER SITUATIONS REQUIRING A PUBLIC NOTICE. (a) All of the following NPDWR violations require a public notice:

1. Failure to comply with an applicable maximum contaminant level or maximum residual disinfectant level.
2. Failure to comply with a treatment technique prescribed by this chapter.
3. Failure to perform water quality monitoring, as required by the drinking water regulations.
4. Failure to comply with testing procedures as prescribed in this chapter or by a drinking water regulation.

(b) Conditional waiver to public notice requirements under subch. VI, including all of the following, require a public notice:

1. Operation under a conditional waiver.
2. Failure to comply with the requirements of any schedule that has been set under a conditional waiver.

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

1. Occurrence of a waterborne disease outbreak or other waterborne emergency.
2. Exceedance of the nitrate MCL by non-community water systems, if granted permission by the department under s. NR 809.11 (3).
3. Exceedance of the secondary maximum contaminant level for fluoride.
4. Availability of unregulated contaminant monitoring data.
5. Other violations and situations determined by the department to require a public notice under this subchapter, not listed in Appendix A.

(4) TYPE OF PUBLIC NOTICE REQUIRED FOR EACH VIOLATION OR SITUATION. (a) *Public notice tiers.* Public notice requirements are divided into 3 tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. The public notice requirements for each violation or situation listed in sub. (3) are determined by the tier to which it is assigned. The definition of each tier is provided in sub. (b). Appendix A identifies the tier assignment for each specific violation or situation.

(b) *Definition of public notice tiers.* 1. Tier 1 public notice is required for NPDWR violations and situations with significant potential to have serious adverse effects on human health as a result of short-term exposure.

2. Tier 2 public notice is required for NPDWR violations and situations with potential to have serious adverse effects on human health.

3. Tier 3 public notice is required for NPDWR violations or situations not included in Tier 1 and Tier 2.

(5) WHO SHALL BE NOTIFIED. (a) Each water supplier for a public water system shall provide public notice to persons served by the public water system, in accordance with this subchapter. All water suppliers for public water systems that sell or otherwise provide drinking water to consecutive systems are required to give public notice to the water supplier for the consecutive system. The water supplier for a consecutive system is responsible for providing public notice to the persons it serves.

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

(c) A copy of the notice shall also be sent to the department, in accordance with the requirements under s. NR 809.80 (5).

NR 809.951 Tier 1 public notice--form, manner, and frequency of notice. (1) VIOLATIONS OR SITUATIONS WHICH REQUIRE A TIER 1 PUBLIC NOTICE. (a) Appendix A identifies the tier assignment for each specific violation or situation requiring a Tier 1 public notice.

(b) Violation categories and other situations requiring a Tier 1 public notice include all of the following:

1. Violation of the MCL for total coliforms when fecal coliform or E. coli is present in the water distribution system, as specified in s. NR 809.30 (2), or when the water supplier for the public water system fails to test for fecal coliforms or E. coli when any repeat sample tests positive for coliform, as specified in s. NR 809.31 (4).

2. Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as defined in s. NR 809.11, or when the water supplier for the public water system fails to take a confirmation sample within 24 hours of the water supplier's receipt of the first sample showing an exceedance of the nitrate or nitrite MCL, as specified in s. NR 809.12 (6) (b).

3. Exceedance of the nitrate MCL by non-community water systems, where permitted to exceed the MCL by the department under s. NR 809.11 (3), as required under s. NR 809.958.

4. Violation of the MRDL for chlorine dioxide, as defined in s. NR 809.561 (2), when one or more samples taken in the distribution system the day following an exceedance of the MRDL at the entrance of the distribution system exceed the MRDL, or when the water supplier for the public water system does not take the required samples in the distribution system, as specified in s. NR 809.566 (3) (b) 1.

5. Violation of the turbidity treatment technique MCL under s. NR 810.29(6), where the department determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the public water system learns of the violation.

6. Violation of the surface water treatment rule (SWTR) or interim enhanced surface water treatment rule (IESWTR) treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit as identified in Appendix A, if the department determines after consultation that a Tier 1 notice is required or if consultation does not take place within 24 hours after the water supplier for the public water supply learns of the violation.

7. Occurrence of a waterborne disease outbreak, as defined in s. NR 809.04(90), or other waterborne emergency, such as a failure or significant interruption in key water treatment processes, a natural disaster that disrupts the water supply or distribution system, or a chemical spill or unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.

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

9. Detection of *E. coli* , enterococci, or coliphage in source water samples as specified under s. NR 809.325(2).

(2) TIMING OF A TIER 1 PUBLIC NOTICE AND ADDITIONAL STEPS. Water suppliers public water systems shall do all of the following if Tier 1 public notice is required:

(a) Provide a public notice as soon as practical but no later than 24 hours after the water supplier learns of the violation.

(b) Initiate consultation with the department as soon as practical, but no later than 24 hours after the public water system learns of the violation or situation, to determine additional public notice requirements.

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

(3) FORM AND MANNER OF THE PUBLIC NOTICE. Water suppliers for public water systems shall provide the Tier 1 public notice within 24 hours in a form and manner reasonably calculated to reach all persons served. The form and manner used by the water supplier shall be designed to fit the specific situation, and to reach residential, transient and non-transient users of the public water system. To reach all persons served, water supplier shall use, at a minimum, one or more of the following forms of delivery:

(a) Appropriate broadcast media, such as radio and television.

(b) Posting of the notice in conspicuous locations throughout the area served by the public water system.

(c) Hand delivery of the notice to persons served by the public water system.

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

NR 809.952 Tier 2 public notice--form, manner, and frequency of notice. (1) VIOLATIONS OR SITUATIONS WHICH REQUIRE A TIER 2 PUBLIC NOTICE. (a) Appendix A identifies the tier assignment for each specific violation or situation requiring a Tier 2 public notice.

(b) Violation categories and other situations requiring a Tier 2 public notice include all of the following:

1. All violations of the MCL, MRDL, and treatment technique requirements, except if a Tier 1 notice is required under s. NR 809.951 (1) or if the department determines that a Tier 1 notice is required.

2. Violations of the monitoring and testing procedure requirements, if the department determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation.

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

(2) TIMING OF A TIER 2 PUBLIC NOTICE. (a) Water suppliers for public water systems shall provide the Tier 2 public notice as soon as practical, but no later than 30 days after the public water system learns of the violation. If the public notice is posted, the notice shall remain in place for as long as the violation or situation persists, but in no case for less than 7 days, even if the violation or situation is resolved. The department may, in appropriate circumstances, allow additional time for the initial notice of up to 3 months from the date the public water system learns of the violation. The department may not grant an extension to the 30-day deadline for any unresolved violation nor allow across-the-board extensions by rule or policy for other violations or situations requiring a Tier 2 public notice. Extensions granted by the department shall be in writing.

(b) The water supplier shall repeat the notice every 3 months as long as the violation or situation persists, unless the department determines that appropriate circumstances warrant a different notice frequency. In no circumstance may the repeat notice be given less frequently than once per year. The department may not allow across-the-board reductions in the repeat notice frequency for other ongoing violations requiring a Tier 2 repeat notice. Department determinations allowing repeat notices to be given less frequently than once every 3 months shall be in writing.

(c) For turbidity violations specified in this paragraph, water supplier shall consult with the department as soon as practical but no later than 24 hours after the public water system learns of the violation, to determine whether a Tier 1 public notice under s. NR 809.951 (1) is required to protect public health. When consultation does not take place within the 24-hour period, the water supplier shall distribute a Tier 1 notice of the violation, no later than 48 hours

after the public water system learns of the violation, following the requirements under s. NR 809.951 (2) and (3). Consultation with the department is required for any of the following:

1. Violation of the turbidity treatment technique MCL under s. NR 810.29(6).

2. Violation of the surface water treatment rule or interim enhanced surface water treatment rule treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

(3) FORM AND MANNER OF THE TIER 2 PUBLIC NOTICE. Water suppliers shall provide the initial Tier 2 public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of public water system, but it shall at a minimum meet all of the following requirements:

(a) *Community water systems.* Unless directed otherwise by the department in writing, water suppliers for community water systems shall provide notice by both of the following:

1. Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

2. Any other method reasonably calculated to reach other persons regularly served by the public water system, if they would not normally be reached by the notice required in subd. 1. Persons may include those who do not pay water bills or do not have service connection addresses, such as house renters, apartment dwellers, university students, nursing home patients and prison inmates. Other methods may include publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers; posting in public places served by the public water system or on the internet; or delivery to community organizations.

(b) *Non-community water systems.* Unless directed otherwise by the department in writing, water supplier for non-community water systems shall provide notice by all of the following:

1. Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the public water system, or by mail or direct delivery to each customer and service connection, if known.

2. Any other method reasonably calculated to reach other persons served by the public water system if they would not normally be reached by the notice required in subd. 1. Other methods may include publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or, delivery of multiple copies in central locations, such as community centers.

NR 809.953 Tier 3 public notice—form, manner, and frequency of notice. (1) VIOLATIONS OR SITUATIONS WHICH REQUIRE A TIER 3 PUBLIC NOTICE. (a) Appendix A identifies the tier assignment for each specific violation or situation requiring a Tier 3 public notice.

(b) Violation categories and other situations requiring a Tier 3 public notice include all of the following:

1. Monitoring violations under ch. NR 809, except if a Tier 1 notice is required under s. NR 809.951 (1) or if the department determines that a Tier 2 notice is required.

2. Failure to comply with a testing procedure established in ch. NR 809, except if a Tier 1 notice is required under s. NR 809.951 (1) or if the department determines that a Tier 2 notice is required.

3. Operation under a conditional waiver or variance, or both, under subch. VIII.

4. Availability of unregulated contaminant monitoring results, as required under s. NR 809.956.

5. Exceedance of the fluoride secondary maximum contaminant level, as required under s. NR 809.957.

(2) TIMING OF A TIER 3 PUBLIC NOTICE. (a) Water suppliers for public water systems shall provide Tier 3 public notice not later than one year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the water supplier shall repeat the Tier 3 public notice annually for as long as the violation, variance, exemption or other situation persists. If the public notice is posted, the notice shall remain in place for as long as the violation, variance, exemption or other situation persists, but in no case less than 7 days, even if the violation or situation is resolved.

(b) Instead of individual Tier 3 public notices, a water supplier may use an annual report detailing all violations and situations that occurred during the previous 12 months, as long as the timing requirements of par. (a) are met.

(3) FORM AND MANNER OF THE TIER 3 PUBLIC NOTICE. Water suppliers for public water systems shall provide the initial Tier 3 public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons

served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of public water system, but it shall at a minimum meet all of the following requirements:

(a) *Community water systems.* Unless directed otherwise by the department in writing, water suppliers for community water systems shall provide notice by both of the following:

1. Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

2. Any other method reasonably calculated to reach other persons regularly served by the public water system, if they would not normally be reached by the notice required in subd. 1. Persons may include those who do not pay water bills or do not have service connection addresses, including, house renters, apartment dwellers, university students, nursing home patients, and prison inmates. Other methods may include publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others, such as apartment building owners or large private employers; posting in public places or on the internet; or delivery to community organizations.

(b) *Non-community water systems.* Unless directed otherwise by the department in writing, water suppliers for non-community water systems shall provide notice by all of the following:

1. Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the public water system, or by mail or direct delivery to each customer and service connection, if known.

2. Any other method reasonably calculated to reach other persons served by the public water system, if they would not normally be reached by the notice required in subd. 1. Other methods may include publication in a local newspaper or newsletter distributed to customers; use of E-mail to notify employees or students; or delivery of multiple copies in central locations, such as community centers.

(4) USE OF CONSUMER CONFIDENCE REPORTS. For community water systems, the consumer confidence report required under this subchapter may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as all of the following occur:

(a) The consumer confidence report is provided to persons served no later than 12 months after the water supplier learns of the violation or situation as required under sub. (2).

(b) The Tier 3 notice contained in the consumer confidence report follows the content requirements under s. NR 809.954.

(c) The consumer confidence report is distributed according to the delivery requirements under sub. (3).

NR 809.954 Public notice content. (1) PUBLIC NOTICE ELEMENTS FOR VIOLATIONS OF NATIONAL PRIMARY DRINKING WATER REGULATIONS (NPDWR) OR OTHER SITUATIONS REQUIRING A PUBLIC NOTICE. When a public water system violates a national primary drinking water regulation or has a situation requiring public notification, each public notice shall include all of the following elements:

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

(b) When the violation or situation occurred.

(c) Any potential adverse health effects from the violation or situation, including the standard language under sub. (4) (a) or (b), whichever is applicable.

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

(e) Whether alternative water supplies should be used.

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

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

(h) When the water supplier expects the public water system to return to compliance or resolve the situation.

(i) The name, business address and phone number of the water supplier or designee of the public water system 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 sub. (4) (c), if applicable.

(2) PUBLIC NOTICE ELEMENTS FOR PUBLIC WATER SYSTEMS OPERATING UNDER A VARIANCE OR EXEMPTION. (a) If a public water system has been granted a variance or an exemption, the public notice shall contain all of the following:

1. An explanation of the reasons for the variance or exemption.
2. The date on which the variance or exemption was issued.
3. A brief status report on the steps the water supplier is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption.
4. A notice of any opportunity for public input in the review of the variance or exemption.

(b) If a public water system violates the conditions of a variance or exemption, the public notice shall contain all of the elements in sub. (1).

(3) PUBLIC NOTICE PRESENTATION. (a) Each public notice required by this subchapter shall meet all of the following requirements:

1. Shall be displayed in a conspicuous way when printed or posted.
2. May not contain overly technical language or very small print.
3. May not be formatted in a way that defeats the purpose of the notice.
4. May not contain language which nullifies the purpose of the notice.

(b) Each public notice required by this subchapter shall comply with multilingual requirements, as follows:

1. For public water systems where 5% or more of the population served consists of non-English speaking consumers, the public notice shall contain information in the appropriate languages regarding the importance of the notice or contain a telephone number or address where persons served may contact the public water system to obtain a translated copy of the notice or to request assistance in the appropriate languages.

2. In cases where the public water system is unable to accurately determine whether non-English speaking consumers constitute 5% of the population served, the department may require that the public notice shall include the same information as in subd. 1., to reach non-English speaking persons served by the public water system.

(4) PUBLIC NOTICE STANDARD LANGUAGE. Water suppliers for public water systems shall include the following standard language in their public notice:

(a) *Standard health effects language for MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption.* Water suppliers shall include in each public notice the health effects language specified in Appendix B corresponding to each MCL, MRDL and treatment technique violation listed in Appendix A, and for each violation of a condition of a variance or exemption.

(b) *Standard language for monitoring and testing procedure violations.* Water suppliers shall include the following language in their notice, including the language necessary to fill in the blanks, for all monitoring and testing procedure violations listed in Appendix A: We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [compliance period], we "did not monitor or test" or "did not complete all monitoring or testing" for [contaminant(s)], and therefore cannot be sure of the quality of your drinking water during that time.

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

NR 809.955 Notice to new billing units or new customers. (1) COMMUNITY WATER SYSTEMS. Water suppliers for community water systems shall give a copy of the most recent public notice for any continuing violation, the existence of a variance or exemption, or other ongoing situations requiring a public notice to all new billing units or new customers prior to or at the time service begins.

(2) NON-COMMUNITY WATER SYSTEMS. Water suppliers for non-community water systems shall continuously post the public notice in conspicuous locations in order to inform new consumers of any continuing violation, variance or exemption, or other situation requiring a public notice for as long as the violation, variance, exemption, or other situation persists.

NR 809.956 Special notice of the availability of unregulated contaminant monitoring results. (1) TIMING OF THE SPECIAL NOTICE. The water supplier for a community water system or non-transient non-community water system required to monitor under 40 CFR 141.401 and s. NR 809.25 shall notify persons served by the public water system of the availability of the results of such sampling no later than 12 months after the monitoring results are known.

(2) FORM AND MANNER OF THE SPECIAL NOTICE. The form and manner of the public notice shall follow the requirements for a Tier 3 public notice prescribed in s. NR 809.953 (3) and (4) (a) and (c). The notice shall also identify a person and provide the telephone number to contact for information on the monitoring results.

NR 809.957 Special notice for exceedance of the secondary maximum contaminant level for fluoride. (1) TIMING OF THE SPECIAL NOTICE. Water suppliers for community water systems that exceed the fluoride secondary maximum contaminant level of 2 mg/l as specified in s. NR 809.70, determined by the last single sample taken in accordance with s. NR 809.12, but that do not exceed the maximum contaminant level (MCL) of 4 mg/l for fluoride, as specified in s. NR 809.11, shall provide the public notice in sub. (3) to persons served. Public notice shall be provided as soon as practical but no later than 12 months from the day the public water system learns of the exceedance. A copy of the notice shall also be sent to all new billing units and new customers at the time service begins and to the state public health officer at the department of health services. The water supplier shall repeat the notice at least annually for as long as the secondary maximum contaminant level is exceeded. If the public notice is posted, the notice shall remain in place for as long as the secondary maximum contaminant level is exceeded, but in no case less than 7 days, even if the exceedance is eliminated. On a case-by-case basis, the department may require an initial notice sooner than 12 months and repeat notices more frequently than annually.

(2) FORM AND MANNER OF THE SPECIAL NOTICE. The form and manner of the public notice, including repeat notices, shall follow the requirements for a Tier 3 public notice in s. NR 809.953 (3) and (4) (a) and (c).

(3) SPECIAL NOTICE STANDARD LANGUAGE. The notice shall contain the following language, including the language necessary to fill in the blanks: This is an alert about your drinking water and a cosmetic dental problem that might affect children under 9 years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic discoloration of their permanent teeth known as dental fluorosis. The drinking water provided by your community water system [name] has a fluoride concentration of [insert value] mg/l. Dental fluorosis, in its moderate or severe forms, may result in a brown staining and/or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Children under 9 should be provided with alternative sources of drinking water or water that has been treated to remove the fluoride to avoid the possibility of staining and pitting of their permanent teeth. You may also want to contact your dentist about proper use by young children of fluoride-containing products. Older children and adults may safely drink the water. Drinking water containing more than 4 mg/L of fluoride, the U.S. Environmental Protection Agency's drinking water standard, can increase your risk of developing bone disease. Your drinking water does not contain more than 4 mg/l of fluoride, but we are required to notify you when we discover that the fluoride levels in your drinking water exceed 2 mg/l because of this cosmetic dental problem. For more information, please call [name of the public water system contact] of [name of community water system] at [phone number]. Some home water treatment units are also available to remove fluoride from drinking water. To learn more about available home water treatment units, you may call NSF International at 1-877-8-NSF-HELP.

NR 809.958 Special notice for nitrate exceedances above MCL by non-community water systems, where granted permission by the department under s. NR 809.11 (3). (1) TIMING OF THE SPECIAL NOTICE. The water supplier for a non-community water system granted permission by the department under s. NR 809.11 (3) to exceed the nitrate MCL shall provide notice to persons served according to the requirements for a Tier 1 public notice under s. NR 809.951 (1) and (2).

(2) FORM AND MANNER OF THE SPECIAL NOTICE. Water suppliers for non-community water systems granted permission by the department to exceed the nitrate MCL under s. NR 809.11 (3) shall provide continuous posting of the fact that nitrate levels exceed 10 mg/l and the potential health effects of exposure, according to the requirements for Tier 1 public notice delivery under s. NR 809.951 (3) and the content requirements under s. NR 809.954.

NR 809.959 Public notice by the department on behalf of the public water system. (1) DEPARTMENT RESPONSIBILITIES. The department may give the notice required by this subchapter on behalf of the water supplier if the department complies with the requirements of this subchapter.

(2) PUBLIC WATER SYSTEM RESPONSIBILITIES WHEN PUBLIC NOTICE IS PROVIDED BY THE DEPARTMENT. The water supplier remains responsible for ensuring that the requirements of this subchapter are met.

NR 809.960 Special notice for significant deficiencies or source groundwater fecal contamination. In addition to public notices required elsewhere in this subchapter, a special notice is required for public water systems with significan deficencies or source water fecal contamination. (1) TIMING AND MANNER OF SPECIAL PUBLIC NOTICE. Timing and manner of the special notice shall be done as follows:

(a) *Community water systems.* In addition to public notification requirements under this subchapter, a water supplier for a community groundwater system that receives notice from the department of a significant deficiency or notification of a fecal indicator-positive groundwater source sample that is not invalidated by the department shall inform the public served by the public water system of the of any uncorrected significant deficiency or fecal indicator-positive source sample. Water suppliers shall provide the special public notice in the Consumer Confidence Report (CCR) required under ss. NR 809.833(7)(f) as soon as practical after the public water system learns of the violation. The water supplier shall continue to inform the public annually in their the CCR, from the date of notification from the department, until the significant deficiency is corrected or the fecal contamination in the groundwater source is determined by the department to be corrected.

(b) *Non-community systems.* In addition to public notification requirements under this subchapter, a water suppliers for a non-community groundwater system that receives notice from the department of a significant deficiency shall inform the public served by the public water system in a manner approved by the department of any significant deficiency that has not been corrected within 12 months of being notified by the department, or earlier if directed by the department. The water supplier must continue to inform the public annually until the significant deficiency is corrected.

(2) CONTENT OF THE SPECIAL NOTICE. The information contained in the special notice required under this section shall include the following:

(a) The nature of the significant deficiency and the date the significant deficiency was identified by the department.

(b) The department-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed.

(c) For public water systems with a large proportion of non-English speaking consumers, as determined by the department, information in the appropriate language or languages regarding the importance of the notice or a telephone number or address consumers may use to contact the water supplier to obtain a translated copy of the notice or assistance in the appropriate language.

(3) NOTICE OF RETURN TO COMPLIANCE. If directed by the department, a water supplier for a non-community water system with significant deficiencies that have been corrected shall inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction.

NR 809.970 Special notice for repeated failure to conduct monitoring of the source water for Cryptosporidium and for failure to determine bin classification or mean Cryptosporidium level. (1) TIMING FOR SPECIAL NOTICE FOR REPEATED FAILURE TO MONITOR. The water supplier for a community or non-community water system that is required to monitor source water under s. NR 809.331(1) (a) and (b) must notify persons served by the public water system that monitoring has not been completed as specified no later than 30 days after the water supplier for the public water system has failed to collect any 3 months of monitoring as specified in s. NR 809.331(3). The notice must be repeated as specified in s. NR 809.952(2).

(2) TIMING FOR SPECIAL NOTICE FOR FAILURE TO DETERMINE BIN CLASSIFICATION OR MEAN CRYPTOSPORIDIUM LEVEL. The water suppliers for a community or non-community water system that is required to determine a bin classification under s. NR 810.34, or to determine mean Cryptosporidium level under s. NR 810.36, must notify persons served by the public water system that the determination has not been made as required no later than 30 days

after the water suppliers for the public water system has failed report the determination as specified in ss. NR 810.34(5)(a) or 810.36(1), respectively. The notice must be repeated as specified in s. NR 809.952(2). The notice is not required if the public water system is complying with a department approved schedule to address the violation.

(3) THE FORM AND MANNER OF THE SPECIAL NOTICE. The form and manner of the public notice must follow the requirements for a Tier 2 public notice prescribed in s. NR 809.952(3). The public notice must be presented as required in s. NR 809.954(3).

(4) MANDATORY LANGUAGE THAT MUST BE CONTAINED IN THE SPECIAL NOTICE. The notice must contain the following language, including the language necessary to fill in the blanks.

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

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

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

Appendix A to Subchapter VII
NPDWR Violations and Other Situations Requiring Public Notice[1]

Contaminant	MCL/MRDL/TT violations[2]		Monitoring & testing procedure violations	
	Tier of public notice required	Citation (Wis. Adm. Code)	Tier of public notice required	Citation (Wis. Adm. Code)
I. Violations of National Primary Drinking Water Regulations:[3]				
A. Microbiological Contaminants				
1. Total coliform	2	NR 809.30(1)	3	NR 809.31(1)-(4)
2. Fecal coliform/E. coli	1	NR 809.30(2)	[4]1, 3	NR 809.31(4)
3. Turbity MCL	2	NR 810.29 (1)	3	NR 810.38(1)b) NR 810.38(2)(a), NR 810.38(2)(b), NR 810.29
4. Turbidity MCL (average 2 days' samples >5 NTU)	[5]2, 1	NR 810.29(2)	3	NR 810.38(1)b) NR 810.38(2)(a), NR 810.38(2)(b), NR810.29
5 Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	[6]2, 1	NR 810.29 (1), NR 810.29 (2), NR 810.29 (3), NR 810.29 (4), NR 810.29 (6) NR 810.30 (1), NR 810.30 (4)(a), NR 810.30 (4)(b)	3	NR 810.38(1)b) NR 810.38(2)(a), NR 810.38(2)(b), NR 810.29
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	NR 810.27 – 810.33	3	NR 810.38
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	2	NR 810 subch. 2	3	NR 810.29, 810.38
8. Filter Backwash Rule (FBWR)	2	NR 809.333(3) NR 811.860 NR 811.862	3	NR 810.29
9. Long Term 2 Enhanced Surface Water Treatment Rule violations	2	NR 810.34- NR 810.45	[16]2,3	NR 809.331- NR 809.335 NR 810.32(1) and (2)
10. Groundwater Rule	2	NR 809.329	3	NR809.325(5)NR 809.327(6)
B. Inorganic Chemicals (IOCs)				
1. Antimony	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)

2. Arsenic	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
3. Asbestos (fibers >10 im)	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
4. Barium	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
5. Beryllium	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
6. Cadmium	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
7. Chromium (total)	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
8. Cyanide	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
9. Fluoride	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
10. Mercury (inorganic)	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
11. Nitrate	1	NR 809.11(2)	[8]1, 3	NR 809.115(4),(5) and (6)(b)
12. Nitrite	1	NR 809.11(2)	[8]1, 3	NR 809.115(4),(5) and (6)(b)
13. Total Nitrate and Nitrite	1	NR 809.11(2)	3	NR 809.115(4) and (5)
14. Selenium	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)
15. Thallium	2	NR 809.11(2)	3	NR 809.115(1) to (3) and (6)(a)and (c)

Appendix A to Subchapter VII - Continued
NPDWR Violations and Other Situations Requiring Public Notice[1]

Contaminant	**MCL/MRDL/TT violations[2]**		**Monitoring & testing procedure violations**	
C. Lead and Copper Rule (Action Level for lead is 0.015 mg/L, copper is 1.3 mg/L) 1. Lead and Copper Rule (TT)	**Tier of public notice required**	**Citation (Wis. Adm. Code)**	**Tier of public notice required**	**Citation (Wis. Adm. Code)**
D. Synthetic Organic Chemicals (SOCs)	2	NR 809.541 – NR 809.55	3	NR 809.541 - NR 809.55
1. 2,4-D	2	NR 809.20(1)	3	NR 809.205
2. 2,4,5-TP (Silvex)	2	NR 809.20(1)	3	NR 809.205
3. Alachlor	2	NR 809.20(1)	3	NR 809.205
4. Atrazine	2	NR 809.20(1)	3	NR 809.205
5. Benzo(a)pyrene (PAHs)	2	NR 809.20(1)	3	NR 809.205
6. Carbofuran	2	NR 809.20(1)	3	NR 809.205
7. Chlordane	2	NR 809.20(1)	3	NR 809.205
8. Dalapon	2	NR 809.20(1)	3	NR 809.205
9. Di (2-ethylhexyl) adipate	2	NR 809.20(1)	3	NR 809.205
10. Di (2-ethylhexyl) phthalate	2	NR 809.20(1)	3	NR 809.205
11. Dibromochloropropane	2	NR 809.20(1)	3	NR809.205

12. Dinoseb	2	NR 809.20(1)	3	NR 809.205
13. Dioxin (2, 3, 7, 8-TCDD)	2	NR 809.20(1)	3	NR809.205
14. Diquat	2	NR 809.20(1)	3	NR 809.205
15. Endothall	2	NR 809.20(1)	3	NR 809.205
16. Endrin	2	NR 809.20(1)	3	NR 809.205
17. Ethylene dibromide	2	NR 809.20(1)	3	NR 809.205
18. Glyphosate	2	NR 809.20(1)	3	NR 809.205
19. Heptachlor	2	NR 809.20(1)	3	NR 809.205
20. Heptachlor epoxide	2	NR 809.20(1)	3	NR 809.205
21. Hexachlorobenzene	2	NR 809.20(1)	3	NR 809.205
22. Hexachlorocyclo-pentadiene	2	NR 809.20(1)	3	NR 809.205
23. Lindane	2	NR 809.20(1)	3	NR 809.205
24. Methoxychlor	2	NR 809.20(1)	3	NR 809.205
25. Oxamyl (Vydate)	2	NR 809.20(1)	3	NR 809.205
26. Pentachlorophenol	2	NR 809.20(1)	3	NR 809.205
27. Picloram	2	NR 809.20(1)	3	NR 809.205
28. Polychlorinated biphenyls	2	NR 809.20(1)	3	NR 809.205
29. Simazine	2	NR 809.20(1)	3	NR 809.205
30. Toxaphene	2	NR 809.20(1)	3	NR 809.205
E. Volatile Organic Chemicals (VOCs)	2	NR 809.24(1)	3	NR 809.245
1. Benzene	2	NR 809.24(1)	3	NR 809.245
2. Carbon tetrachloride	2	NR 809.24(1)	3	NR 809.245
3. Chlorobenzene (monochlorobenzene)	2	NR 809.24(1)	3	NR 809.245
4. o-Dichlorobenzene	2	NR 809.24(1)	3	NR 809.245
5. p-Dichlorobenzene	2	NR 809.24(1)	3	NR 809.245
6. 1,2-Dichloroethane	2	NR 809.24(1)	3	NR 809.245
7. 1,1-Dichloroethylene	2	NR 809.24(1)	3	NR 809.245
8. cis-1,2-Dichloroethylene	2	NR 809.24(1)	3	NR 809.245
9. trans-1,2-Dichloroethylene	2	NR 809.24(1)	3	NR 809.245
10. Dichloromethan	2	NR 809.24(1)	3	NR 809.245
11. 1,2-Dichloropropane	2	NR 809.24(1)	3	NR 809.245
12. Ethylbenzene	2	NR 809.24(1)	3	NR 809.245
13. Styrene	2	NR 809.24(1)	3	NR 809.245
14. Tetrachloroethylene	2	NR 809.24(1)	3	NR 809.245
15. Toluene	2	NR 809.24(1)	3	NR 809.245
16. 1,2,4-Trichlorobenzene	2	NR 809.24(1)	3	NR 809.245
17. 1,1,1-Trichloroethane	2	NR 809.24(1)	3	NR 809.245
18. 1,1,2-Trichloroethane	2	NR 809.24(1)	3	NR 809.245
19. Trichloroethylene	2	NR 809.24(1)	3	NR 809.245
20. Vinyl chloride	2	NR 809.24(1)	3	NR 809.245
21. Xylenes (total)	2	NR 809.24(1)	3	NR 809.245
F. Radioactive Contaminants				
1. Beta/photon emitters	2	NR 809.51	3	NR 809.52(1), NR 809.53(2)
2. Alpha emitters	2	NR 809.50(2)	3	NR 809.52(1), NR 809.53(1)
3. Combined radium (226 & 228)	2	NR 809.50(1)	3	NR 809.52(1), NR 809.53(1)
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. EPA sets standards for controlling the levels of disinfectants and disinfection byproducts in drinking water, including trihalomethanes and haloacetic acids. [9]				
1. Total trihalomethanes	2	NR 809.561(1)	3	NR 809.565(1)-(2)
2. Haloacetic Acids	2	NR 809.561(1)	3	NR 809.565(1)-(2)
3. Bromate	2	NR 809.561(2)	3	NR 809.565(1), (3)
4. Chlorite	2	NR 809.561(2)	3	NR 809.565(1), (3)
5. Chlorine (MRDL)	2	NR 809.561(2) NR 809.566(3)(a)	2, 3	NR 809.565(1), (4) NR 809.566(3)(a)
6. Chloramine (MRDL)	1[10]	NR 809.561(2) NR 809.566(3)(a)	1	NR 809.565(1), (4) NR 809.566(3)(a)
7. Chlorine dioxide (MRDL), where any 2 consecutive daily samples at entrance to distribution system only are above MRDL	2[11]	NR 809.566(1), (3)(b)	3	NR 809.565(1), (4)
8. Chlorine dioxide (MRDL), where samples in distribution system the next day are also above MRDL	2[11]	NR 809.566(1), (3)(b)	3	NR 809.565(1), (4)
9. Control of disinfection byproducts precursors – TOC (TT)	2	NR 809.569	3	NR 809.565(1),(5)
10. Bench marking and disinfection profiling	N/A	N/A	3	NR 810.32
11. Development of monitoring plan	N/A	N/A	3	NR 809.565(6)
H. Other Treatment Techniques				
1. Acrylamide (TT)	2	NR 809.25(4)	N/A	N/A
2. Epichlorohydrin (TT)	2	NR 809.25(4)	N/A	N/A
II. Unregulated Contaminant Monitoring:[12]				
A. Unregulated contaminants	N/A	N/A	3	NR 809.25
B. Nickel	N/A	N/A	3	NR 809.12(4)(c), NR 809.12(4) Table A
III. Public Notification for Conditional Waivers and Variances				
A. Operation under a conditional waiver or variance	3	NR 809.90, NR 809.91	N/A	N/A
B. Violation of a conditional waiver or variance	2	NR 809 Subchapter VI	N/A	N/A
IV. Other Situations Requiring Public Notification:				

A. Fluoride secondary maximum contaminant level exceedance	3	NR 809.70	N/A	N/A
B. Exceedance of nitrate MCL for non-community systems, as allowed by the department	1	NR 809.11(3)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	NR 809.956	N/A	N/A
D. Waterborne disease outbreak	1	NR 809.04(90) NR 809.80(6)(e), NR 809.951(1)(b)7.	N/A	N/A
E. Other waterborne emergency[13]	1	NR 809.951(1)(b)8.	N/A	N/A
F. Other situations as determined by the department	[14]1, 2, 3	N/A	N/A	N/A
G. Source Water Sample Positive for GWR Fecal indicators: E. coli, enterococci, or coliphage	1	NR 809.325(2), (3)	N/A	N/A

Appendix A Footnotes

[1] Violations and other situations not listed in this table, for example, reporting violations and failure to prepare Consumer Confidence Reports, do not require notice, unless otherwise determined by the department. Departments may, at their option, also require a more stringent public notice tier, for example, 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 s. NR 809.951(1) and (2).

[2] MCL--Maximum contaminant level, MRDL—Maximum residual disinfectant level, TT—Treatment technique.

[3] The term Violations of National Primary Drinking Water Regulations is used here to include violations of MCL, MRDL, TT, 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] Water supplier for public water systems that violate the turbidity MCL of 5 NTU based on an average of measurements over 2 consecutive days shall consult with the department within 24 hours after learning of the violation. Based on this consultation, the department may subsequently decide to elevate the violation to Tier 1. If a water supplier is unable to make contact with the department in the 24-hour period, the violation is automatically elevated to Tier 1.

[6] Water supplier for public water systems with a treatment technique violation involving a single exceedance of a maximum turbidity limit under the Surface Water Treatment Rule or the Interim Enhanced Surface Water Treatment Rule are required to consult with the department within 24 hours after learning of the violation. Based on this consultation, the department may subsequently decide to elevate the violation to Tier 1. If a water supplier is unable to make contact with the department 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) become effective January 1, 2002 for public water systems using surface water or groundwater under the direct influence of surface water serving at least 10,000 persons. However, s. NR 809.77 has some requirements that become effective as early as April 16, 1999. The Surface Water Treatment Rule remains in effect for public water systems serving at least 10,000 persons even after 2002; the Interim Enhanced Surface Water Treatment Rule adds additional requirements and does not in many cases supersede the Surface Water Treatment Rule.

[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] Public water water systems using surface water or groundwater under the direct influence of surface water community and non-transient non-community systems serving greater than or equal to 10,000 must comply with the new disinfection byproducts 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. Public water systems using surface water or groundwater under the direct influence of surface water

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. Public water systems using surface water or groundwater under the direct influence of surface water transient non-community systems serving fewer than 10,000 persons and using only groundwater 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] 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.

[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] Some public water systems must monitor for certain unregulated contaminants listed in s. NR 809.25.

[13] Other waterborne emergencies require a Tier 1 public notice under §141.202(a) or s. NR 809.951(1)(b)8. for situations that do not meet the definition of a waterborne disease outbreak given in 40 CFR 141.2 or s. NR 809.04(90) 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 failure or significant interruption in water treatment processes, natural disasters that disrupt the water supply, chemical spills, or unexpected loading of possible pathogens into the source water.

[14] The department may place other situations in any tier they believe appropriate, based on threat to public safety.

[15] Failure to collect three or more samples for *Cryptosporidium* analysis is a Tier 2 violation requiring special notice as specified in §141.211. All other monitoring and testing procedure violations are Tier 3.

Appendix B to Subchapter VII
Standard Health Effects Language for Public Notification

Contaminant	MCLG[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
National Primary Drinking Water Regulations:			
A. Microbiologocial 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 indicate 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.
Fecal indicators (GWR):			Fecal indicators are microbes whose
E. coli	Zero	TT	presence indicates that the water may be
Enterococci,	None	TT	contaminated with human or animal wastes.
coliphage	None	TT	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.
Groundwater Rule (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)[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 and Interim Enhanced Surface Water Treatment Rule violations:			
3. Giardia lamblia	Zero	TT[9]	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.
4. Viruses 5. Heterotrophic plate count bacteria[10] 6. Legionella 7. Cryptosporidium			

Appendix B to Subchapter VII - Continued
Standard Health Effects Language for Public Notification

Contaminant	MCGL[1] mg/L	MCL[2] mg/L	Standard health effects language for public notification
C. Inorganic Chemicals:			
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	0	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 ìm)	7 MFL[11]	7 MFL[11]	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
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 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.
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 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.
19. Nitrite	1	1	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.
20. Total Nitrate and Nitrite	10	10	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.
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 Rule:			
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:			
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 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 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.
35. Dibromochloropropane	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	$3x10^{-8}$	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and many 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 intestine.
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. Hexachlorocyclo-pentadiene	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	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:			
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 (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
58. *o*-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
59. *p*-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
60. 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
61. 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
62. *cis*-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing

			cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
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 getting cancer.
78. Combined radium (226 & 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 and 228 in excess of the MCL over many years may have an increased risk of getting cancer.
H. Disinfection Byproducts, 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. EPA			

sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes and haloacetic acids:[16]			
79. Total trihalomethanes	N/A	0.80[17]	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.
80. Haloacetic Acids	N/A	0.060[18]	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have increased risk of getting cancer.
81. 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.
82. 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.
83. Chlorine	4 (MRDLG)[19]	4.0 (MRDL)[20]	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.
84. Chloramines	4 (MRDLG)	4.0 (MRDL)	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
85a. Chlorine dioxide, where any 2 consecutive daily samples taken at the entrance to the distribution system are above the MRDL.	0.8 (MRDLG)	0.8 (MRDL)	Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water

			containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.
85b. 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.
86. 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 and haloacetic acids. 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:			
87. 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.
88. Epichlorohydrin	Zero	TT	Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.

Appendix B Footnotes:

[1] MCLG--Maximum contaminant level goal.

[2] MCL--Maximum contaminant level.

[3] For public 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 public water 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 public water systems, including 40 CFR 141.13, 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 public water systems that are required to filter but have not yet installed filtration (40 CFR 141.13).

[5] NTU--Nephelometric turbidity unit.

[6] There are various regulations that set turbidity standards for different types of public water systems, including 40 CFR 141.13, the 1989 Surface Water Treatment Rule, and the 1998 Interim Enhanced Surface Water Treatment Rule. Systems subject to the Surface Water Treatment Rule (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month shall not exceed 0.5 NTU in public water systems using conventional or direct filtration and shall not exceed 1 NTU in public water systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the department.

[7] TT--Treatment technique.

[8] There are various regulations that set turbidity standards for different types of public water systems, including 40 CFR 141.13, the 1989 Surface Water Treatment Rule, and the 1998 Interim Enhanced Surface Water Treatment Rule. For public water systems subject to the interim enhanced surface water treatment rule (public water systems serving at least 10,000 people, using surface water or groundwater under the direct influence of surface water), that use conventional filtration or direct filtration, after January 1, 2002, the turbidity level of a public water 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 public water system's combined filter effluent shall not exceed 1 NTU at any time. Public water systems subject to the interim enhanced surface water treatment rule using technologies other than conventional, direct, slow sand, or diatomaceous earth filtration shall meet turbidity limits set by the department.

[9] Surface water treatment rule and interim enhanced surface water treatment rule treatment technique violations that involve turbidity exceedances may use the health effects language for turbidity instead.

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

[11] Million fibers per liter.

[12] Action Level = 0.015 mg/L.

[13] Action Level = 1.3 mg/L.

[14] Millirems per year.

[15] Picocuries per liter.

[16] Surface water systems and groundwater systems under the direct influence of surface water are regulated under Subpart H of 40 CFR part 141. Community and non-transient non-community systems using groundwater under the direct influence of surface water serving 10,000 or more shall comply with DBP MCLs and disinfectant maximum residual disinfectant levels beginning January 1, 2002. All other community and non-transient non-community systems shall meet the MCLs and MRDLs beginning January 1, 2004. Transient non-community systems using groundwater under the direct influence of surface water serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2002. Transient non-community systems using groundwater under the direct influence of surface water serving fewer than 10,000 persons and public water systems using only groundwater not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant shall comply with the chlorine dioxide MRDL beginning January 1, 2004.

[17] The MCL for total trihalomethanes is the sum of the concentrations of the individual trihalomethanes.

[18] The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

[19] MRDLG--Maximum residual disinfectant level goal.

[20] MRDL--Maximum residual disinfectant level.

Appendix C to Subchapter VII
List of Acronyms Used in Public Notification Regulation

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

Subchapter VIII – Initial Distribution System Evaluation

NR 809.97 Initial Distribution System Evaluations. **(1)** GENERAL REQUIREMENTS. The requirements of this subchapter establish monitoring and other requirements for identifying compliance monitoring locations for determining compliance with maximum contaminant levels for total trihalomethanes (TTHM) and haloacetic acids five (HAA5) under ss. NR 809.60 to 809.64 . Public water systems shall use an Initial Distribution System Evaluation (IDSE) to determine locations with representative high TTHM and HAA5 concentrations throughout their distribution system. IDSEs are used in conjunction with, but separate from, compliance monitoring under ss. NR 809.565 and 809.566, to identify and select compliance monitoring locations for Stage 2 DBP.

(2) APPLICABILITY. IDSEs are required for the following public water systems:

(a) A community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(b) A nontransient noncommunity water system that serves at least 10,000 people and uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light.

(c) A community water system that is part of a combined distribution system and receives some or all of its water from a public water system that uses a primary or residual disinfectant other than ultraviolet light.

(3) SCHEDULE. (a) All public water systems identified in sub. (2) shall comply with the requirements of this subchapter on the schedule in the Table BB.

Table BB
IDSE Schedule

Public water system population	Public water systems shall submit a standard monitoring plan or system specific study plan[1] or 40/30 certification[2] to EPA or department by or receive very small system waiver from EPA or the department by	Monitoring shall start for standard monitoring by	Public water systems shall have a completed standard monitoring or system specific study submitted by	Public water systems shall submit their IDSE report to EPA or the department by[3]
Public water systems that are not part of a combined distribution system and public water systems that serve the largest population in the combined distribution system				
≥100,000	October 1, 2006	October 1, 2007	September 30, 2008	January 1, 2009.
50,000–99,999	April 1, 2007	April 1, 2008	March 31, 2009	July 1, 2009.
10,000–49,999	October 1, 2007	October 1, 2008	September 30, 2009	January 1, 2010.
<10,000 (CWS Only)	April 1, 2008	April 1, 2009	March 31, 2010	July 1, 2010.
Public water systems that are part of a combined distribution system				
Wholesale system or consecutive system	—at the same time as the public water system with the earliest compliance date in the combined distribution system	at the same time as the public water system with the earliest compliance date in the combined distribution system	—at the same time as the public water system with the earliest compliance date in the combined distribution system	—at the same time as the public water system with the earliest compliance date in the combined distribution system.

[1]If, within 12 months after the date identified in this column, EPA or the department does not approve the plan or notify the public water system that it has not yet completed its review, the public water system may consider the plan approved. The water supplier for the public water system shall implement that plan and complete standard monitoring or a system specific study no later than the date identified in the third column.

[2] The water supplier shall submit the 40/30 certification under s. NR 809.974 by the date indicated.
[3]If, within three months after the date identified in this column or if the public water system has a population between 10,000 and 49,999 then nine months after the date identified in this column, EPA or the department does not approve the public water system's IDSE report or notify the water supplier that it has not yet completed its review, the public water system may consider the report submitted as approved and the water supplier shall implement the recommended Stage 2 DBP compliance monitoring as required under s. NR 809.61.

(b) For the purpose of the schedule in par. (a) Table BB, EPA or the department may determine that a combined distribution system does not include certain consecutive systems based on factors such as receiving water from a wholesale system only on an emergency basis or receiving only a very small percentage and very small volume of water from a wholesale system. The department may also determine that the combined distribution system does not include certain wholesale systems based on factors such as delivering water to a consecutive system only on an emergency basis or delivering only a small percentage and small volume of water to a consecutive system.

(4) IDSE GENERAL REQUIREMENTS. All public water systems required to perform the IDSE shall meet the requirements of one of the following:

(a) Complete a standard monitoring that meets the requirements under s. NR 809.971.

(b) Complete a system specific study that meets the requirements under s. NR 809.973.

(c) Certify to EPA or the department that you meet 40/30 certification criteria under s. NR 809.974.

(d) Qualify for a very small system waiver under s. NR 809.975.

(5) GENERAL ELIGIBILITY CRITERIA FOR 40/30 CERTIFICATION. To qualify for 40/30 certification the water supplier for a public water system shall have completed the required compliance samples under s. NR 809.565 for the time period specified under s. NR 809.974(1).

(6) GENERAL ELIGIBILITY CRITERIA FOR VERY SMALL SYSTEM WAIVER. To be eligible for the very small system waiver under s. NR 809.974 the water supplier for a public water system shall have taken TTHM and HAA5 samples and completed the required compliance sampling under s. NR 809.565.

(7) PUBLIC WATER SYSTEMS WITH M/R VIOLATIONS UNDER STAGE 1 DBP. Public water systems that have not taken the required samples under s. NR 809.565, shall conduct standard monitoring under s. NR 809.971 or a system specific study under s. NR 809.973.

(8) ANALYTICAL METHODS. To demonstrate compliance with the requirements of this subchapter the analytical methods under s.NR 809.563(2) Table R shall be used for all monitoring required under this subchapter.

(9) IDSE results will not be used for the purpose of determining compliance with MCLs under s. NR 809.566.

NR 809.971 Standard monitoring. (1) STANDARD MONITORING PLAN. (a) Public water systems that choose to complete a standard monitoring plan to fulfill the requirements of this subchapter shall comply with all of the following:

1. The standard monitoring plan shall include a schematic of the distribution system, including distribution system entry points and their sources, and storage facilities, indicating locations and dates of all projected standard monitoring sample locations, and all projected compliance monitoring under s. NR 809.61.

2. The standard monitoring plan shall include justification of standard monitoring location selection and a summary of data relied upon to justify standard monitoring location selection.

3. The standard monitoring plan shall specify the population served and public water system type surface water, groundwater or GWUDI.

4. The public water system shall retain a complete copy of its standard monitoring plan submitted under this paragraph, including any EPA or department modifications of the standard monitoring plan, for as long as the public water system is required to retain the IDSE report under sub. (3)(d).

(b)The water supplier for the public water system shall prepare and submit a standard monitoring plan to the department according to the schedule in s. NR 809.97(3) Table BB

(2) STANDARD MONITORING. Public water systems that choose to complete standard monitoring to fulfill their IDSE requirement under this subchapter shall comply with all of the following:

(a) Standard monitoring shall be conducted as indicated in Table CC.

(b) Dual sample sets shall be collected, at the same time, at each monitoring location identified in the standard monitoring plan. One sample in the dual sample set shall be analyzed for TTHM; the other sample shall be analyzed for HAA5.

(c) One dual sample set shall be collected during the peak historical month for TTHM levels or HAA5 levels or the month of warmest water temperature. Water suppliers shall review an available compliance study, or operational data to determine the peak historical month for TTHM or HAA5 levels or warmest water temperature.

Table CC
Standard monitoring requirements

Source water type	Population size category	Monitoring periods and frequency of sampling	Distribution system monitoring locations[1]				
			Total per monitoring period	Near entry points	Average residence time	High TTHM locations	High HAA5 locations
Surface water or GWUDI							
	<500 consecutive systems	one (during peak historical month)[2]	2	1		1	
	<500 non-consecutive systems		2			1	1
	500–3,300 consecutive systems	four (every 90 days)	2	1		1	
	500–3,300 non-consecutive systems		2			1	1
	3,301–9,999		4		1	2	1
	10,000–49,999	six (every 60 days)	8	1	2	3	2
	50,000–249,999		16	3	4	5	4
	250,000–999,999		24	4	6	8	6
	1,000,000–4,999,999		32	6	8	10	8
	≥5,000,000		40	8	10	12	10
Ground-water							
	<500 consecutive systems	one (during peak historical month)[2]	2	1		1	
	<500 non-consecutive systems		2			1	1
	500–9,999	four (every 90 days)	2			1	1
	10,000–99,999		6	1	1	2	2

	100,000–499,999		8	1	1	3	3
	≥500,000		12	2	2	4	4

[1]A dual sample set shall be taken at each monitoring location during each monitoring period.

[2]The peak historical month is the month with the highest TTHM or HAA5 levels or the warmest water temperature.

(d) Samples shall be collected at locations other than the existing monitoring locations under s. NR 809.566. These monitoring locations shall be distributed throughout the distribution system.

(e) If the number of entry points to the distribution system is fewer than the specified number of entry point monitoring locations, excess entry point samples shall be replaced equally at high TTHM and HAA5 locations. If there is an odd extra location number, the public water system shall take a sample at a high TTHM location. If the number of entry points to the distribution system is more than the specified number of entry point monitoring locations, the public water system shall take samples at entry points to the distribution system having the highest annual water flows.

(f) Monitoring under this subchapter may not be reduced by EPA or the department.

(3) IDSE REPORT FOR THE STANDARD MONITORING. IDSE reports shall include all of the following elements: (a) The IDSE report shall include all TTHM and HAA5 analytical results from Stage 1 DBP compliance monitoring taken under s. NR 809.565 and all standard monitoring conducted during the period of the IDSE as individual analytical results and as locational running annual averages presented in a tabular or spreadsheet format acceptable to the EPA or the department.

(b) The IDSE report shall include an explanation of any deviations from the standard monitoring plan approved by EPA or the department.

(c) The IDSE report shall provide recommendations and justifications of compliance monitoring locations and timing based on the protocol under s. NR 809.976.

(d) A complete copy of the IDSE report submitted under this subchapter shall be retained for 10 years after the date of submittal of the report to EPA or the department. If the EPA or the department modifies the monitoring requirements recommended in the IDSE report or if the EPA or the department approves alternative monitoring locations, a copy of the EPA's or the department's notification shall remain on file for 10 years after the date of that notification. A copy of the IDSE report and any EPA or department notification shall be available for review by the EPA, the department or the public.

(e) The IDSE report shall be submitted to EPA or the department according to the schedule under s. NR 809.97(3) Table BB.

NR 809.973 System specific studies. (1) SYSTEM SPECIFIC STUDY PLAN. Public water systems that choose to complete a system specific study plan to fulfill the requirements of the IDSE report shall base that plan on either existing monitoring results as required under par. (a) or modeling as required under par. (b).

(a) *Use of existing monitoring results.* Existing monitoring results may only be used to complete the system specific study plan if all the monitoring results were collected before the date the public water system was required to begin monitoring under s. NR 809.97(3). The monitoring results and analysis shall meet the criteria in subd. 1. and 2.

1. *Minimum requirements.* a. TTHM and HAA5 results shall be based on samples collected and analyzed in accordance with ss. NR 809.563 and 809.565. Samples shall be collected no earlier than five years prior to the system specific study plan submission date under s. NR 809.97(3) Table BB.

b. The monitoring locations and frequency shall meet the conditions identified in Table Y. Each location shall have been sampled once during the peak historical month for TTHM levels or HAA5 levels or in the month of warmest water temperature for every 12 months of data submitted for that location. Monitoring results shall include all compliance monitoring results collected under s. NR 809.565 plus additional monitoring results as necessary to meet minimum sample requirements.

Table DD
Minimum requirements for existing monitoring results

Public water system Type	Population size category	Number of monitoring locations	Number of samples	
			TTHM	HAA5
Subpart H:				
	<500	3	3	3
	500–3,300	3	9	9
	3,301–9,999	6	36	36
	10,000–49,999	12	72	72
	50,000–249,999	24	144	144
	250,000–999,999	36	216	216
	1,000,000–4,999,999	48	288	288
	≥ 5,000,000	60	360	360
Groundwater:				
	<500	3	3	3
	500–9,999	3	9	9
	10,000–99,999	12	48	48
	100,000–499,999	18	72	72
	≥ 500,000	24	96	96

2. *Reporting monitoring results for the site specific study plan.* The site specific study plan report shall include all of the following information:

a. All previously collected monitoring results with a written certification from the water supplier for the public water system that the reported monitoring results include all compliance and non-compliance results generated during the time period beginning with the first reported result and ending with the most recent results required under s. NR 809.565.

b. A certification from the water supplier that the samples were representative of the entire distribution system and that treatment, and the distribution system has not changed significantly since the samples were collected.

c. A schematic of the public water system's distribution system including distribution system entry points and their sources, and storage facilities, indicating the locations and dates of all completed system specific study monitoring.

d. A specification of the population served and the public water system's source water type: surface water, GWUDI or groundwater.

3. The water supplier shall retain a complete copy of the system specific study plan submitted under this subchapter for 10 years after the date of submittal of the report to EPA or the department, including any EPA or department modification of the system specific study plan.

4. The EPA or the department may reject some of the data; if this occurs the water supplier, with the approval of the EPA or the department, shall either conduct additional monitoring to replace rejected data on a schedule that EPA or the department approves or shall conduct standard monitoring under s. NR 809.971.

(b) *Use of modeling.* Public water systems may comply with the IDSE requirements through the analysis of an extended period simulation hydraulic model. The extended period simulation hydraulic model and analysis shall meet all of the following criteria:

1. *Simulation time.* The model shall simulate 24 hour variation in demand and show a consistently repeating 24 hour pattern of residence time.

2. *Model criteria.* The model shall represent all of the following criteria:

a. 75% of pipe volume.

b. 50% of pipe length.

c. All pressure zones.

d. All 12-inch diameter and larger pipes.

e. All 8-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves, or are known or expected to be significant conveyors of water.

f. All 6-inch and larger pipes that connect remote areas of a distribution system to the main portion of the public water system.

g. All storage facilities with standard operations represented in the model.

h. All active pump stations with controls represented in the model.

i. All active control valves.

3. *Model calibration.* The model shall be calibrated, or have calibration plans, for the current configuration of the distribution system during the period of high TTHM formation potential. All storage facilities shall be evaluated as part of the calibration process. All required calibration shall be completed no later than 12 months after plan submission.

4. *Reporting modeling for the site specific study plan.* The water supplier shall include all of the following information in the specific study plan submitted to EPA or the department:

a. A table or spreadsheet of the data demonstrating that the model meets requirements in subds. 1., 2. and 3.

b. A description of all calibration activities undertaken, and if calibration is complete, a graph of predicted tank levels versus measured tank levels for the storage facility with the highest residence time in each pressure zone, and a time series graph of the residence time at the longest residence time storage facility in the distribution system showing the predictions for the entire simulation period, from time zero until the time it takes to for the model to reach a consistently repeating pattern of residence time.

c. The model output showing preliminary 24 hour average residence time predictions throughout the distribution system.

d. The timing and number of samples representative of the distribution system planned for at least one monitoring period of TTHM and HAA5 dual sample monitoring at a number of locations no less than would be required for the public water system under standard monitoring in s. NR 809.971(2)(c) Table CC during the historical month of high TTHM. These samples shall be taken at locations other than existing compliance monitoring locations required under s. NR 809.565.

e. A description of how all requirements will be completed no later than 12 months after the public water system submits its system specific study plan.

f. A schematic of the distribution system, including distribution system entry points and their sources, and storage facilities, with notes indicating the locations and dates of all completed system specific study monitoring if calibration is complete and all compliance monitoring under s. NR 809.565.

g. The population served and system source water type: surface water, GWUDI or groundwater.

5. The water supplier shall retain a complete copy of the system specific study plan submitted under par. (b), including any EPA or department modification of the system specific study plan, for as long the IDSE report under sub. (2)(b) is required to be retained.

6. *Failure to complete modeling.* If a water supplier for a public water system submits a model that does not meet all of the requirements under par. (b) as determined by EPA or the department, the deficiencies shall be corrected and submitted to EPA or the department. If the water supplier fails to correct deficiencies or to submit the corrections to EPA or the department, the water supplier shall conduct standard monitoring for the public water system under s. NR 809.971.

(2) IDSE REPORT FOR THE SITE SPECIFIC STUDIES. (a) The IDSE report shall include the elements required in sub. (1)(a) and (b). The water supplier for the public water system shall submit IDSE reports according to the schedule in s. NR 809.97(2) and shall include all of the following applicable information in the IDSE report:

1. All TTHM and HAA5 analytical results from Stage 1 DBP compliance monitoring taken under s. NR 809.565 and all system specific study monitoring conducted during the period of the system specific study presented in a tabular or spreadsheet format acceptable to EPA or the department. The IDSE report shall include an explanation of any deviations from the system specific study plan approved by EPA or the department and include a schematic of the distribution system, the population served, and public water system type.

2. All of the completed elements described in sub. (1) (b)1. and 2., and a 24-hour time series graph of residence time for each compliance monitoring location selected, if the water supplier chooses the modeling provision under par. (b).

3. Recommendations and justifications of compliance monitoring locations and timing based on the protocol under s. NR 809.976.

4. An explanation of any deviations from the approved system specific study plan.

5. The basis for either the analytical or modeling results and the justification used to select the recommended monitoring locations for use under s. NR 809.61.

(b) The water supplier shall retain a complete copy of the IDSE report submitted under this subchapter for 10 years after the date of submittal of the report to EPA or the department. If the EPA or the department modifies the monitoring requirements recommended in the IDSE report or if the EPA or the department approves alternative monitoring locations, a copy of the EPA's or the department's notification shall remain on file for 10 years after the date of that notification. A copy of the IDSE report and any EPA or department notification shall be available for review by the EPA, the department or the public.

(c) The IDSE report shall be submitted to EPA or the department according to the schedule under s. NR 809.97(3) Table W.

NR 809.974 40/30 certification. **(1)** ELIGIBILITY. Public water systems are eligible for 40/30 certification by the EPA or the department if the public water system had no TTHM or HAA5 monitoring violations under ss. NR 809.565 and 809.567 and no individual sample, collected under s. NR 809.565, exceeded 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during the eight consecutive calendar quarter period beginning no earlier than the date the 40/30 certification was due under s. NR 809.97(3):

Table EE

40/30 certification was due under s. NR 809.97(3) Table W	**Eligibility for 40/30 certification is based on eight consecutive calendar quarters of compliance monitoring results under s. NR 809.565 beginning no earlier than[1]**
October 1, 2006	January 2004.
(2) April 1, 2007	January 2004.
(3) October 1, 2007	January 2005.
(4) April 1, 2008	January 2005.

[1]Unless the public water system was on reduced monitoring under s. NR 809.565 and was not required to monitor during the specified period, then eligibility is based on compliance samples taken during the 12 months proceeding the specified period.

(2) 40/30 CERTIFICATION. (a) Water suppliers for public water systems shall certify to EPA or the department that every individual compliance sample taken under s. NR 809.565 during the periods specified in sub. (1) was $\leq$0.040 mg/L for TTHM and $\leq$0.030 mg/L for HAA5, and that the public water system did not have any TTHM or HAA5 monitoring violations during the period specified in sub. (1).

(b) EPA or the department may, at their discretion, require a public water system to complete standard monitoring under s. NR 809.971 or a system specific study under s. NR 809.973 even if the public water system meets the criteria in sub. (1).

(c) Water suppliers shall retain a complete copy of the certification submitted to EPA or the department for 10 years after the date the certification was submitted.

(d) Water suppliers shall make the certification, all data upon which the certification is based, and any related EPA or department notification available for review by the EPA, the department or the public.

NR 809.975 Very small system waivers.

(1) Public water systems that serve fewer than 500 people and have taken TTHM and HAA5 samples under s. NR 809.565, are not required to comply with this subchapter unless the EPA or the department notifies them that they shall conduct standard monitoring under s. NR 809.971 or a system specific study under s. NR 809.973.