

333-061-0043

Consumer Confidence Reports

This rule establishes the minimum requirements for the content of annual reports that community water systems must deliver to their customers. These reports must contain information on the quality of the water delivered by the systems and characterize the risks (if any) from exposure to contaminants detected in the drinking water in an accurate and understandable manner. For the purpose of this rule, customers are defined as billing units or service connections to which water is delivered by a Community Water System.

(1) Delivery deadlines:

- (a) Community water systems must deliver their reports by July 1, annually. The report must contain data collected during, or prior to, the previous calendar year;
- (b) A new community water system must deliver its first report by July 1 of the year after its first full calendar year in operation and annually thereafter;
- (c) A community water system that sells water to another community water system must deliver the applicable information to the buyer system:
 - (A) No later than April 1, annually; or
 - (B) On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

(2) Content of the Reports:

- (a) Each community water system must provide to its customers an annual report that contains the information specified in sections (2),(3), (4), and (5) of this rule;
- (b) Each report must identify the source(s) of the water delivered by the community water system by providing information on:
 - (A) The type of water: e.g., surface water, ground water; and
 - (B) The commonly used name (if any) and location of the body (or bodies) of water.
- (c) If a source water assessment has been completed, the report must notify consumers of the availability of this information and the means to obtain it. In addition, systems are encouraged to highlight in the report significant potential sources of contamination in the drinking water protection area if they have readily available information. Where a system has received a source water assessment from the Department, the report must include a brief summary of the system's susceptibility to potential sources of contamination, using language provided by the Department or written by the operator;
- (d) Each report must contain the following definitions:
 - (A) Maximum Contaminant Level Goal or MCLG: The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety;

- (B) Maximum Contaminant Level or MCL: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
 - (C) Variance: A system operating under a variance as prescribed in OAR 333-061-0045 must include the following definition in its report: Variances: State permission not to meet an MCL or a treatment technique under certain conditions;
 - (D) Treatment Technique or Action Level: A system which has a detection for a contaminant for which EPA has set a treatment technique or an action level must include one or both of the following definitions as applicable:
 - (i) Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water;
 - (ii) Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
 - (E) Maximum Residual Disinfectant Level Goal or MRDLG: The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
 - (F) Maximum Residual Disinfectant Level or MRDL: The highest level of disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- (3) Detected Contaminants:
- (a) The following information must be included in each report for contaminants subject to mandatory monitoring (except *Cryptosporidium*). Detected means at or above the detection level prescribed by each EPA approved analytical method set forth in 40 CFR 141:
 - (A) Contaminants and disinfection by-products subject to an MCL, action level, MRDL, or treatment technique (regulated contaminants);
 - (B) Unregulated contaminants for which monitoring is required; and
 - (b) The data relating to these contaminants must be displayed in one table or in several adjacent tables. Any additional monitoring results which a community water system chooses to include in its report must be displayed separately.
 - (c) The data must be derived from data collected to comply with state monitoring and analytical requirements during the calendar year except that:

- (A) Where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in accordance with the regulation. No data older than 5 years need be included.
- (d) For detected regulated contaminants (listed in Table 45 of this rule), the table(s) in the report must contain:
 - (A) The MCL for that contaminant expressed as a number equal to or greater than 1.0 (as provided in Table 45);
 - (B) The MCLG for that contaminant expressed in the same units as the MCL;
 - (C) If there is no MCL for a detected contaminant, the table must indicate that there is a treatment technique, or specify the action level, applicable to that contaminant, and the report must include the definitions for treatment technique and/or action level, as appropriate, specified in paragraph (2)(d)(D) of this rule;
 - (D) For contaminants subject to an MCL, except turbidity and total coliforms, the highest contaminant level used to determine compliance with OAR 333-061 and the range of detected levels, as follows:
 - (i) When compliance with the MCL is determined annually or less frequently: the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL;
 - (ii) When compliance with the MCL is determined by calculating a running annual average of all samples taken at a monitoring location: the highest average at any of the monitoring location and the range of all monitoring location must be expressed in the same unit of measure as the MCL. For the MCL for TTHM and HAA5 as specified by OAR 333-061-0030(2)(b), water systems must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same unit of measure as the MCL. If more than one location exceeds the MCL for TTHM or HAA5, the water system must include the locational running annual averages for all locations that exceed the MCL;
 - (iii) When compliance with the MCL is determined on a system wide basis by calculating a running annual

average of all samples at all monitoring locations: the average and range of detections must be expressed in the same units as the MCL. The water system is required to include individual sample results for an IDSE conducted in accordance with OAR 333-061-0036(4)(b) of this rule when determining the range of TTHM and HAA5 results to be reported in the annual consumer confidence report for the calendar year that the IDSE samples were taken;

(iv) When rounding of results to determine compliance with the MCL is allowed by the regulations, rounding should be done prior to multiplying the results by the factor listed in Table 45 of this rule.

TABLE 45
CONVERTING MCL COMPLIANCE VALUES FOR CCRs

Contaminant	MCL in Compliance units (mg/L)	Multiply by	MCL CCR units	MCLG in CCR units
Microbiological Contaminants				
Total Coliform bacteria	-----	-----	(systems that collect 40 or more samples per month)5% of monthly samples are positive; (systems that collect fewer than 40 samples per month)1 positive monthly sample	0
Fecal coliform and <i>E. coli</i>	-----	-----	a routine sample and a repeat sample are total coli-form positive, and one is also fecal coliform or <i>E. coli</i> positive	0
Turbidity	-----	-----	TT (NTU)	n/a
Radioactive Contaminants				
Beta/photon emitters	4 mrem/yr	-----	4 mrem/yr	0
Alpha emitters	15 pCi/l	-----	15 pCi/l	0
Combined radium	5 pCi/l	-----	5 pCi/l	0

Uranium	30 ug/l	-----	30 ug/l	0
Inorganic Contaminants				
Antimony	0.006	1,000	6ppb	6
Arsenic	0.010	1,000	10 ppb	0
Asbestos	7 MFL	-----	7 MFL	7
Barium	2	-----	2 ppm	2
Beryllium	0.004	1,000	4 ppb	4
Cadmium	0.005	1,000	5 ppb	5
Chromium	0.1	1,000	100 ppb	100
Copper	AL = 1.3	-----	AL = 1.3ppm	1.3
Cyanide	0.2	1,000	200 ppb	200
Fluoride	4	-----	4 ppm	4
Lead	AL = 0.015	1,000	AL = 15 ppb	0
Mercury (inorganic)	0.002	1,000	2 ppb	2
Nitrate (as Nitrogen)	10	-----	10 ppm	10
Nitrite (as Nitrogen)	1	-----	1ppm	1
Selenium	0.05	1,000	50 ppb	50
Thallium	0.002	1,000	2 ppb	0.5
Synthetic Organic Contaminants including Pesticides and Herbicides				
2,4-D	0.07	1,000	70 ppb	70
2,4,5-TP (Silvex)	0.05	1,000	50 ppb	50
Acrylamide	-----	-----	TT	0
Alachlor	0.002	1,000	2 ppb	0
Atrazine	0.003	1,000	3 ppb	3
Benzo(a) pyrene (PAH)	0.0002	1,000,000	200 ppt	0
Carbofuran	0.04	1,000	40 ppb	40
Chlordane	0.002	1,000	2 ppb	0
Dalapon	0.2	1,000	200 ppb	200
Di(2-ethylhexyl) adipate	0.4	1,000	400 ppb	400
Di(2-ethylhexyl) phthalate	0.006	1,000	6 ppb	0

Dibromochloropropane	0.0002	1,000,000	200 ppt	0
Dinoseb	0.007	1,000	7 ppb	7
Diquat	0.02	1,000	20 ppb	20
Dioxin (2,3,7,8-TCDD)	0.00000003	1,000,000,000	30 ppq	0
Endothall	0.1	1,000	100 ppb	100
Endrin	0.002	1,000	2 ppb	2
Epichlorohydrin	-----	-----	TT	0
Ethylene dibromide	0.00005	1,000,000	50 ppt	0
Glyphosate	0.7	1,000	700 ppb	700
Heptachlor	0.0004	1,000,000	400 ppt	0
Heptachlor epoxide	0.0002	1,000,000	200 ppt	0
Hexachlorobenzene	0.001	1,000	1 ppb	0
Hexachlorocyclopentadiene	0.05	1,000	50 ppb	50
Lindane	0.0002	1,000,000	200 ppt	200
Methoxychlor	0.04	1,000	40 ppb	40
Oxamyl (Vydate)	0.2	1,000	200 ppb	200
PCBs (polychlorinated biphenyls)	0.0005	1,000,000	500 ppt	0
Pentachlorophenol	0.001	1,000	1 ppb	0
Picloram	0.5	1,000	500 ppb	500
Simazine	0.004	1,000	4 ppb	4
Toxaphene	0.003	1,000	3 ppb	0
Volatile Organic Contaminants				
Benzene	0.005	1,000	5 ppb	0
Carbon Tetrachloride	0.005	1,000	5 ppb	0
Chlorobenzene	0.1	1,000	100 ppb	100
o-Dichlorobenzene	0.6	1,000	600 ppb	600
p-Dichlorobenzene	0.075	1,000	75 ppb	75
1,2-Dichloroethane	0.005	1,000	5 ppb	0
1,1-Dichloroethylene	0.007	1,000	7 ppb	7

cis-1,2-Dichloroethylene	0.07	1,000	70 ppb	70
trans-1,2-Dichloroethylene	0.1	1,000	100 ppb	100
Dichloromethane	0.005	1,000	5 ppb	0
1,2-Dichloropropane	0.005	1,000	5 ppb	0
Ethylbenzene	0.7	1,000	700 ppb	700
Styrene	0.1	1,000	100 ppb	100
Tetrachloroethylene	0.005	1,000	5 ppb	0
1,2,4-Trichlorobenzene	0.07	1,000	70 ppb	70
1,1,1-Trichloroethane	0.2	1,000	200 ppb	200
1,1,2-Trichloroethane	0.005	1,000	5 ppb	3
Trichloroethylene	0.005	1,000	5 ppb	0
Toluene	1	-----	1 ppm	1
Vinyl Chloride	0.002	1,000	2 ppb	0
Xylenes	10	-----	10 ppm	10
Disinfection Byproducts, Byproduct Precursors, and Disinfectant Residuals				
TTHMs (Total Trihalomethanes)	.080	1,000	80 ppb	NA
Haloacetic Acids (HAA)	060	1,000	60 ppb	NA
Bromate	010	1,000	10 ppb	0
Chlorite	1	-----	1 ppm	0.8
Chlorine	MRDL= 4.0	-----	MRDL= 4.0 ppm	4 (MRDLG)
Chloramines	MRDL= 4.0	-----	MRDL= 4.0 ppm	4 (MRDLG)
Chlorine Dioxide	MRDL =0.8	1,000	MRDL= 800 ppb	800(MRDLG)
Total Organic Carbon (TOC)	TT	-----	TT	NA

Key:

AL=Action Level

GWR=Ground Water Rule

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

MFL=million fibers per liter

mrem/year=Millirems per year (a measure of the radiation absorbed by the body)

NTU=Nephelometric Turbidity Units

pCi/l=picocuries per liter (a measure of radioactivity)

ppm=parts per million or milligrams/liter (mg/l)

ppb=parts per billion or micrograms/liter (ug/l)

ppt=parts per trillion or nanograms/liter

ppq=parts per quadrillion, or picograms/liter

- (e) Turbidity:
 - (A) When it is reported pursuant to OAR 333-061-0030(3)(a), 333-061-0032(2), and 333-061-0036(5)(a): the highest monthly value. The report should include an explanation of the reasons for measuring turbidity. This includes water systems currently without filtration treatment, but required to install filtration through a Notice of Violation and Remedial Order.
 - (B) When it is reported pursuant to OAR 333-061-0030(3): The highest single measurement and the lowest monthly percentage of samples meeting the turbidity limits specified in 333-061-0030(3) for the filtration technology being used. The report should include an explanation of the reasons for measuring turbidity.
- (f) Lead and copper: the 90th percentile value of the most recent round of sampling and the number of sampling sites exceeding the action level and the lead-specific information as prescribed in (4)(c) of this rule.
- (g) Total coliform:
 - (A) The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or
 - (B) The highest monthly percentage of positive samples for systems collecting at least 40 samples per month.
- (h) Fecal coliform: the total number of positive samples.
- (i) The likely source(s) of detected contaminants to the best of the operator's knowledge. Specific information regarding contaminants may be available in sanitary surveys and source water assessments, and should be used when available to the operator. If the operator lacks specific information on the likely source, the report must include one or more of the typical sources for that contaminant listed in Table 46 which are most applicable to the system.
- (j) If a community water system distributes water to its customers from multiple hydraulically independent distribution systems that are fed by different raw water sources, the table should contain a separate column for each service area and the report should identify each separate distribution system. Alternatively, systems could produce separate reports tailored to include data for each service area.
- (k) The table(s) must clearly identify any data indicating violations of MCLs, MRDLs, or treatment techniques and the report must contain a clear and readily understandable explanation of the violation, the length of the violation, the potential adverse health effects, and actions taken by the system to address the violation. To describe the potential health effects, the system must use the relevant language in Table 46 of this rule.

- (l) For detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), the table(s) must contain the average and range at which the contaminant was detected. The report may include a brief explanation of the reasons for monitoring for unregulated contaminants.
- (m) Information on *Cryptosporidium*, radon, and other contaminants:
 - (A) If the system has performed any monitoring for *Cryptosporidium*, which indicates that *Cryptosporidium* may be present in the source water or the finished water, the report must include:
 - (i) A summary of the results of the monitoring, and
 - (ii) An explanation of the significance of the results.
 - (B) If the system has performed any monitoring for radon which indicates that radon may be present in the finished water, the report must include:
 - (i) The results of the monitoring; and
 - (ii) An explanation of the significance of the results.
 - (C) If the system has performed additional monitoring which indicates the presence of other contaminants in the finished water, the system is strongly encouraged to report any results which may indicate a health concern. To determine if results may indicate a health concern, EPA recommends that systems find out if EPA has proposed a National Primary Drinking Water Regulation or issued a health advisory for that contaminant by calling the Safe Drinking Water Hotline (800-426-4791). EPA considers detects above a proposed MCL or health advisory level to indicate possible health concerns. For such contaminants, EPA recommends that the report include:
 - (i) The results of the monitoring; and
 - (ii) An explanation of the significance of the results noting the existence of a health advisory or a proposed regulation.

Table 46-- Regulated Contaminant Information				
Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants				
Total Coliform Bacteria	(Systems that collect 40 or more samples per	0	Naturally present in the environment.	Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful,

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
	month)5 % of monthly samples are positive; (systems that collect fewer than 40 samples per month)1 positive monthly sample			bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and <i>E. coli</i>	A routine sample and a repeat sample are total coliform positive, and one is also fecal coliform or <i>E. coli</i> positive	0	Human and animal fecal waste.	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Turbidity	TT	n/a	Soil runoff.	Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				parasites which can cause symptoms such as nausea, cramps, diarrhea and associated headaches.
Radioactive Contaminants				
Beta/photon emitters (mrem/yr)	4	0	Decay of natural and man-made deposits.	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Alpha emitters (pCi/l)	15	0	Erosion of natural deposits.	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/l)	5	0	Erosion of natural deposits.	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
Uranium (ug/l)	30	0	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
Inorganic Contaminants				
Antimony (ppb)	6	6	Discharge from petroleum	Some people who drink water containing antimony

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
			refineries; fire retardants; ceramics; electronics; solder.	well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	10	0	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes.	Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.
Asbestos (MFL)	7	7	Decay of asbestos cement water mains; Erosion of natural deposits.	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
Beryllium (ppb)	4	4	Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries.	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium (ppb)	5	5	Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
			metal refineries; runoff from waste batteries and paints.	
Chromium (ppb)	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Copper (ppm)	AL=1.3	1.3	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives.	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)	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	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.
Lead (ppb)	AL=15	0	Corrosion of household plumbing systems; Erosion of natural deposits.	Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.
Mercury (inorganic)(ppb)	2	2	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland.	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
Nitrate (as Nitrogen)(ppm)	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits.	Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Nitrite (as Nitrogen)(ppm)	1	1	Runoff from fertilizer use; Leaching from	Infants below the age of 6 months who drink water containing nitrite in excess of the MCL could become

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
			septic tanks, sewage; Erosion of natural deposits.	seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
Selenium (ppb)	50	50	Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines.	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
Thallium (ppb)	2	0.5	Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories.	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
Synthetic Organic Contaminants including Pesticides and Herbicides				
2,4-D (ppb)	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)	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	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

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				their nervous system or blood, and may have an increased risk of getting cancer.
Alachlor (ppb)	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)	3	3	Runoff from herbicide used on row crops.	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
Benzo(a) pyrene [PAH] (nanograms/l)	200	0	Leaching from linings of water storage tanks and distribution lines.	Some people who drink water containing benzo(a) pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Carbofuran (ppb)	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)	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

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				cancer.
Dalapon (ppb)	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)	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)	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.
Dibromochloro-propane (DBCP)(ppt)	200	0	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards.	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
Dinoseb (ppb)	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)	20	20	Runoff from herbicide use.	Some people who drink water containing diquat in excess of the MCL over many years could get

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				cataracts.
Dioxin [2,3,7,8-TCDD] (ppq)	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)	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)	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.
Epichlorohydrin	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)	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 system, or kidneys, and may have an increased risk of getting cancer.
Glyphosate (ppb)	700	700	Runoff from herbicide use.	Some people who drink water containing glyphosate in excess of the

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				MCL over many years could experience problems with their kidneys or reproductive difficulties.
Heptachlor (ppt)	400	0	Residue of banned termiticide.	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)	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.
Hexachlorobenzene (ppb)	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.
Hexachlorocyclopentadiene (ppb)	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 stomach or kidneys.
Lindane (ppt)	200	200	Runoff/leaching from insecticide used on cattle, lumber, gardens.	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				their kidneys or liver.
Methoxychlor (ppb)	40	40	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock.	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
Oxamyl [Vydate](ppb)	200	200	Runoff/leaching from insecticide used on apples, potatoes and tomatoes.	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
PCBs [Polychlorinated biphenyls] (ppt)	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.
Pentachlorophenol (ppb)	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)	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)	4	4	Herbicide runoff.	Some people who drink water containing simazine in excess of the MCL over many years could

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				experience problems with their blood.
Toxaphene (ppb)	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 thyroid, kidneys, or liver and may have an increased risk of getting cancer.
Volatile Organic Contaminants				
Benzene (ppb)	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 (ppb)	5	0	Discharge from chemical plants and other industrial activities.	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Chlorobenzene (ppb)	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 kidneys or liver.
o-Dichlorobenzene (ppb)	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.
				Some people who drink

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
p-Dichlorobenzene (ppb)	75	75	Discharge from industrial chemical factories.	water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.
1,2-Dichloroethane (ppb)	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-Dichloroethylene (ppb)	7	7	Discharge from industrial chemical factories.	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
cis-1,2-Dichloroethylene (ppb)	70	70	Discharge from industrial chemical factories.	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
trans-1,2-Dichloroethylene (ppb)	100	100	Discharge from industrial chemical factories.	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
Dichloromethane (ppb)	5	0	Discharge from pharmaceutical and chemical factories.	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane (ppb)	5	0	Discharge from industrial chemical	Some people who drink water containing 1,2-dichloropropane in excess

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
			factories.	of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene (ppb)	700	700	Discharge from petroleum refineries.	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
Styrene (ppb)	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.
Tetrachloroethylene (ppb)	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-Trichlorobenzene (ppb)	70	70	Discharge from textile-finishing factories.	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
1,1,1-Trichloroethane (ppb)	200	200	Discharge from metal degreasing sites and other factories.	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
1,1,2-Trichloroethane (ppb)	5	3	Discharge from industrial chemical	Some people who drink water containing 1,1,2-trichloroethane well in

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
			factories.	excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
Trichloroethylene (ppb)	5	0	Discharge from metal degreasing sites and other factories.	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
Toluene (ppm)	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)	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	10	Discharge from petroleum factories; Discharge from chemical factories.	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
Disinfection Byproducts, Byproduct Precursors, and Disinfectant Residuals				
Total trihalomethanes (TTHMs)(ppb)	80	N/A	Byproduct of drinking water disinfection	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				have an increased risk of getting cancer
Haloacetic Acids (HAA) (ppb)	60	N/A	Byproduct 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.
Bromate (ppb)	10	0	Byproduct 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.
Chlorite (ppm)	1	0.8	Byproduct of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.
Chlorine (ppm)	MRDL =4.0	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.
Chloramines (ppm)	MRDL =4.0	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

Table 46-- Regulated Contaminant Information

Contaminant (units)	MCL	MCLG	Major Sources in Drinking Water	Health Effects Language
				nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine dioxide (ppb)	MRDL=8 00	MRDLG=8 00	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.
Total Organic Carbon (TOC) (ppm)	TT	None	Naturally present in the environment	Total Organic Carbon (TOC) has no health effects, however, TOC provides a medium for the formation of disinfection byproducts (DBPs). These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Key:

AL=Action Level

MCL=Maximum Contaminant Level

MCLG=Maximum Contaminant Level Goal

MFL=million fibers per liter

mrem/year=millirems per year (a measure of radiation absorbed by the body)

NTU=Nephelometric Turbidity Units

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 (ug/l)

ppt=parts per trillion, or nanograms per liter

ppq=parts per quadrillion, or picograms per liter

TT=Treatment Technique

- (n) Compliance with OAR 333-061: In addition to subsection (3)(k) of this rule, the report must note any violation that occurred during the year covered by the report of a requirement listed below, and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the system has taken to correct the violation.
 - (A) Monitoring and reporting of compliance data;
 - (B) Filtration and disinfection prescribed by OAR 333-061-0032: For systems which have failed to install adequate filtration or disinfection equipment or processes which constitutes a violation or have an equipment failure constituting a violation, the report must include the following language as part of the explanation of potential adverse health effects: Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches;
 - (C) Lead and copper control requirements: For systems which fail to take one or more actions prescribed by OAR 333-061-0034 the report must include the applicable language in Table 46 of this rule for lead, copper, or both;
 - (D) Treatment techniques for Acrylamide and Epichlorohydrin: For systems which violate the requirements of OAR 333-061-0030(7), the report must include the relevant health effects language in Table 46 of this rule.
 - (E) Recordkeeping of compliance data;
 - (F) Special monitoring requirements prescribed by OAR 333-061-0036(2)(g) and for unregulated contaminants as required by EPA;
 - (G) Violation of the terms of a variance, administrative order or judicial order.
- (o) Variances: If a system is operating under the terms of a variance as prescribed in OAR 333-061-0045, the report must contain:
 - (A) An explanation of the reasons for the variance;
 - (B) The date on which the variance was issued;

- (C) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance; and
 - (D) A notice of any opportunity for public input in the review, or renewal, of the variance.
- (p) Additional information:
- (A) The report must contain a brief explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water. This explanation may include the language in paragraphs (3)(p)(A)(i), (ii) and (iii) of this rule, or systems may use their own comparable language. The report also must include the language of paragraph (3)(p)(A)(iv) of this rule.
 - (i) The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity;
 - (ii) Contaminants that may be present in source water include:
 - (I) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
 - (II) Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;
 - (III) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;
 - (IV) Organic chemical contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems;
 - (V) Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.
 - (iii) In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain

contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health;

- (iv) Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).
 - (B) The report must include the telephone number of the owner, operator, or designee of the community water system as a source of additional information concerning the report;
 - (C) In communities with a large proportion of non-English speaking residents the report must contain information in the appropriate language(s) regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language;
 - (D) The report must include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water;
 - (E) The systems may include such additional information as they deem necessary for public education consistent with, and not detracting from, the purpose of the report.
- (4) Required additional health information:
- (a) All reports must prominently display the following language: Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).
 - (b) A system which detects nitrate at levels above 5 mg/l, but does not exceed the MCL:
 - (A) Must include a short informational statement about the impacts of nitrate on children using language such as: Nitrate in

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

- (B) May write its own educational statement, but only in consultation with the Department.
- (c) Every report must include the following lead-specific information:
 - (A) A short informational statement about the lead in drinking water and its effects on children. The statement must include the following information: If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. {NAME OF WATER UTILITY} is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.
 - (B) The water system may write its own educational statement, but only in consultation with the Department.
- (5) Special requirements for groundwater systems:
 - (a) Any groundwater system that receives notification of a significant deficiency that is not corrected at the time of the next report, or of an *E. coli*-positive groundwater source sample that was not invalidated in accordance OAR 333-061-0036(6)(x) must inform its customers in the next report. The water system must continue to inform the public annually until the Department determines that the particular significant deficiency is corrected or that the fecal contamination in the groundwater source is addressed in accordance with OAR 333-061-0032(6). Each report must include the following elements:
 - (A) The nature of the particular significant deficiency or the source of the fecal contamination (if the source is known), and the date the significant deficiency was identified by the Department or the dates of the *E. coli*-positive groundwater source samples;

- (B) If the fecal contamination in the groundwater source has been addressed as prescribed by OAR 333-061-0032(6) and the date of such action;
 - (C) The Department-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures completed for any significant deficiency or fecal contamination in the groundwater source that has not been addressed as prescribed by OAR 333-061-0032(6); and
 - (D) The potential health effects language specified in OAR 333-061-0097(4)(b) if the system received notice of a *E. coli*-positive groundwater source sample that was not invalidated by the Department in accordance with OAR 333-061-0036(6)(x).
- (b) The Department may require a water system with significant deficiencies that have been corrected before the next report is issued to inform its customers of the significant deficiency, how the deficiency was corrected, and the date of correction in accordance with subsection (5)(a) of this rule.
- (6) Report delivery and recordkeeping:
- (a) Except as provided in subsection (5)(g) of this rule, each community water system must mail or otherwise directly deliver one copy of the report to each customer.
 - (b) The system must make a good faith effort to reach consumers who do not get water bills, using means recommended by the Department. EPA expects that an adequate good faith effort will be tailored to the consumers who are served by the system but are not bill-paying customers, such as renters or workers. A good faith effort to reach consumers would include a mix of methods appropriate to the particular system such as: Posting the reports on the Internet; mailing to postal patrons in metropolitan areas; advertising the availability of the report in the news media; publication in a local newspaper; posting in public places such as cafeterias or lunch rooms of public buildings; delivery of multiple copies for distribution by singularly-billed customers such as apartment buildings or large private employers; delivery to community organizations.
 - (c) No later than the date the system is required to distribute the report to its customers, each community water system must mail a copy of the report to the Department, followed within 3 months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Department.
 - (d) No later than the date the system is required to distribute the report to its customers, each community water system must deliver the report to any other agency or clearinghouse identified by the Department.

- (e) Each community water system must make its reports available to the public upon request.
- (f) Each community water system serving 100,000 or more persons must post its current year's report to a publicly-accessible site on the Internet.
- (g) The Governor of a State or his designee, can waive the requirement of subsection (5)(a) of this rule for community water systems serving fewer than 10,000 persons.
 - (A) Such systems must:
 - (i) Publish the reports in one or more local newspapers serving the area in which the system is located;
 - (ii) Inform the customers that the reports will not be mailed, either in the newspapers in which the reports are published or by other means approved by the State; and
 - (iii) Make the reports available to the public upon request.
 - (B) Systems serving 500 or fewer persons may forego the requirements of paragraphs (5)(g)(A)(i) and (ii) of this rule if they provide notice at least once per year to their customers by mail, door-to-door delivery or by posting in an appropriate location that the report is available upon request.
- (h) Any system subject to this rule must retain copies of its consumer confidence report for no less than 5 years.