Consumer Confidence Report
Certification Form
(to be submitted with a copy of the CCR)

(to certify electronic delivery of the CCR, use the certification form on the State Board's website at http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml)

Water System Name: Monsanto

Water System Number: W1057

The water system named above hereby certifies that its Consumer Confidence Report was distributed on 6-29-15 (*date*) to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the State Water Resources Control Board, Division of Drinking Water.

Certified by:
Name: Michael J Beeler
Signature: [signature]
Title: Facilities Operations Lead
Phone Number: (530) 669-6243 **Date:** 6-29-15

To summarize report delivery used and good-faith efforts taken, please complete the below by checking all items that apply and fill-in where appropriate:

☒ CCR was distributed by mail or other direct delivery methods. Specify other direct delivery methods used: _____
Emailed to all employees with a Monsanto email account and posted in Safety Binders throughout the site.

☐ "Good faith" efforts were used to reach non-bill paying consumers. Those efforts included the following methods:

- ☐ Posting the CCR on the Internet at www._____
- ☐ Mailing the CCR to postal patrons within the service area (attach zip codes used)
- ☐ Advertising the availability of the CCR in news media (attach copy of press release)
- ☐ Publication of the CCR in a local newspaper of general circulation (attach a copy of the published notice, including name of newspaper and date published)
- ☐ Posted the CCR in public places (attach a list of locations)
- ☐ Delivery of multiple copies of CCR to single-billed addresses serving several persons, such as apartments, businesses, and schools
- ☐ Delivery to community organizations (attach a list of organizations)
- ☐ Other (attach a list of other methods used)

☐ *For systems serving at least 100,000 persons*: Posted CCR on a publicly-accessible internet site at the following address: www._____

☐ *For investor-owned utilities*: Delivered the CCR to the California Public Utilities Commission

2014 Consumer Confidence Report

Water System Name: **Monsanto** Report Date: June 22, 2015

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2014 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua potable. Tradúzcalo ó hable con alguien que lo entienda bien.

Type of water source(s) in use: Domestic Well – 25 HP Well #01

Name & general location of source(s): 37437 State Highway 16, Woodland, CA 95695

The domestic well is located south of State Highway 16, east of Building 4

Drinking Water Source Assessment information: Completed 12/2002, self assessment completed 03/2003

Time and place of regularly scheduled board meetings for public participation: n/a

For more information, contact: Michael J Beeler Phone: (530) 669-6243

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency (USEPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (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.

Primary Drinking Water Standards (PDWS): MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Regulatory Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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.

Contaminants that may be present in source water include:

- *Microbial contaminants*, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- *Inorganic contaminants*, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the USEPA and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, 7, and 8 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	3	1	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	0	0	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER

Lead and Copper (complete if lead or copper detected in the last sample set)	Sample Date	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	6/19/2013	5	0.03	0	15	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	6/19/2013	1	ND	0	1.3	0.3	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	7/21/11	58000		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	7/21/11	470		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MCL or AL is asterisked. Additional information regarding the violation is provided later in this report.*

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Nitrates	8/4/14	38	37-45	45	45	Run off and leaching from fertilizer use and leaching from septic tanks, sewage and erosion of natural deposits

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**

**Any violation of an MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.*

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

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. USEPA/Centers for Disease Control (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 (1-800-426-4791).

Lead-Specific Language for Community Water Systems: 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. Monsanto 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.

Nitrates: Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.

Nitratos: Los bebes menores de seis meses que beben agua que contiene nitratos en exceso del nivel máximo de contaminante pueden rápidamente enfermarse gravemente, y, si no se tratan, pueden morir por que los altos niveles de nitratos pueden interferir con la capacidad de que la sangre del bebe trasporte oxígeno. Los síntomas incluyen dificultad para respirar y coloración azul de la piel. Los niveles altos de nitratos también pueden afectar la capacidad de transporte de oxígeno de la sangre de las mujeres embarazadas.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
Presence of Coliform bacteria	On 12/17/14, the drinking water dispenser in the lunchroom in Building 2 tested positive for coliform bacteria. On 12/19/14 the well was tested and the drinking water dispenser was retested and both tested positive for coliform bacteria. Once confirmed, public notices were posted and an alternate water supply for drinking and washing was put into place at the impacted locations.	12/17/14 through 1/6/2015	Disinfection of the entire water distribution system was performed by chlorination on 12/30/15. The system was then flushed at every service location until there was no presence of chlorine. All drinking water dispensers were removed and disinfected prior to replacement. Actions taken to correct the violation included a review of operating procedures and cross connections, a cross connection survey and a physical inspection of the well area to look for breaches that would allow contamination. A replacement of a broken electrical fitting at the well casing was corrected.	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.

For Water Systems Providing Ground Water as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES					
Microbiological Contaminants (complete if fecal-indicator detected)	**Total No. of Detections**	**Sample Dates**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
E. coli	(In the year)		0	(0)	Human and animal fecal waste
Enterococci	(In the year)		TT	n/a	Human and animal fecal waste
Coliphage	(In the year)		TT	n/a	Human and animal fecal waste

Summary Information for Fecal Indicator-Positive Ground Water Source Samples, Uncorrected Significant Deficiencies, or Ground Water TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLE

SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES

VIOLATION OF GROUND WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [(a)] (Type of approved filtration technology used)	
Turbidity Performance Standards [(b)] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to _____ NTU in 95% of measurements in a month. 2 – Not exceed _____ NTU for more than eight consecutive hours. 3 – Not exceed ____ NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	
Highest single turbidity measurement during the year	
Number of violations of any surface water treatment requirements	

(a) A required process intended to reduce the level of a contaminant in drinking water.

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

** Any violation of a TT is marked with an asterisk. Additional information regarding the violation is provided below.*

Summary Information for Violation of a Surface Water TT

VIOLATION OF A SURFACE WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**

Summary Information for Operating Under a Variance or Exemption

ATTACHMENT 1

Regulated Contaminants with PRIMARY DRINKING WATER STANDARDS

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Microbiological Contaminants					
Total Coliform Bacteria (Total Coliform Rule)	**MCL:** **For systems that collect less than 40 samples per month:** No more than 1 positive monthly sample **For systems that collect 40 or more samples per month:** More than 5.0% of monthly samples are positive		(0)	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.
Fecal coliform and *E. coli* (Total Coliform Rule)	**MCL:** A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive		(0)	Human and animal fecal waste	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
Fecal Indicator *(E. coli)* (Ground Water Rule)	0		(0)	Human and animal fecal waste	Fecal coliforms and *E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Fecal Indicators (enterococci or coliphage) (Ground Water Rule)		TT	N/A	Human and animal fecal waste	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term 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, high levels of 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.
Giardia lambia, viruses, heterotrophic plate count bacteria, *Legionella*, *Cryptosporidium*		TT	HPC = N/A; Others = (0)	Naturally present in the environment	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Radioactive Contaminants					
Gross Beta Particle Activity	pCi/L	50 [(a)]	(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.
(a) Effective 6/11/2006, the gross beta particle activity MCL is 4 millirems/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.					
Strontium-90	pCi/L	8	0.35	Decay of natural and man-made deposit	Some people who drink water containing strontium-90 in excess of the MCL over many years may have an increased risk of getting cancer.
Tritium	pCi/L	20,000	400	Decay of natural and man-made deposits	Some people who drink water containing tritium in excess of the MCL over many years may have an increased risk of getting cancer.
Gross Alpha Particle Activity	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.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Combined Radium 226 & 228	pCi/L	5	(0)[b]	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.
Total Radium (for nontransient-noncommunity water systems)	pCi/L	5	n/a	Erosion of natural deposits	Some people who drink water containing radium 223, 224, or 226 in excess of the MCL over many years may have an increased risk of getting cancer.
(b) If reporting results for Ra-226 and Ra-228 as individual constituents, the PHG is 0.05 pCi/L for Ra-226 and 0.019 pCi/L for Ra-228.					
Uranium	pCi/L	20	0.43	Erosion of natural deposits	Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.
Inorganic Contaminants					
Aluminum	ppm	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes	Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.
Antimony	ppb	6	20	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar.
Arsenic	ppb	10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Asbestos	MFL	7	7	Internal corrosion 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	1	2	Discharge of oil drilling wastes and from metal refineries; erosion of natural deposits	Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.
Beryllium	ppb	4	1	Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries	Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Cadmium	ppb	5	0.04	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years may experience kidney damage.
Chromium	ppb	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Copper	ppm	(AL=1.3)	0.3	Internal 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 may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide	ppb	150	150	Discharge from steel/metal, plastic and fertilizer factories	Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.
Fluoride	ppm	2.0	1	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 federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.
Hexavalent Chromium	ppb	10	0.02	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits	Some people who drinking water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer.
Lead	ppb	(AL=15)	0.2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits	Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Mercury (inorganic)	ppb	2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland	Some people who drink water containing mercury in excess of the MCL over many years may experience mental disturbances, or impaired physical coordination, speech and hearing.
Nickel	ppb	100	12	Erosion of natural deposits; discharge from metal factories	Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.
Nitrate (as nitrate, NO_3)	ppm	45	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.
Nitrite (as nitrogen, N)	ppm	1	1	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	Infants below the age of six months who drink water containing nitrite in excess of the MCL may quickly become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin.
Perchlorate	ppb	6	6	Perchlorate is an inorganic chemical used in solid rocket propellant, fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.	Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse affects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.
Selenium	ppb	50	30	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years may experience hair or fingernail losses, numbness in fingers or toes, or circulation system problems.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Thallium	ppb	2	0.1	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 may experience hair loss, changes in their blood, or kidney, intestinal, or liver problems.
Synthetic Organic Contaminants including Pesticides and Herbicides					
2,4-D	ppb	70	20	Runoff from herbicide used on row crops, range land, lawns, and aquatic weeds	Some people who use water containing the weed killer 2,4-D in excess of the MCL over many years may experience kidney, liver, or adrenal gland problems.
2,4,5-TP (Silvex}	ppb	50	3	Residue of banned herbicide	Some people who drink water containing Silvex in excess of the MCL over many years may 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 may experience nervous system or blood problems, and may have an increased risk of getting cancer.
Alachlor	ppb	2	4	Runoff from herbicide used on row crops	Some people who use water containing alachlor in excess of the MCL over many years may experience eye, liver, kidney, or spleen problems, or experience anemia, and may have an increased risk of getting cancer.
Atrazine	ppb	1	0.15	Runoff from herbicide used on row crops and along railroad and highway right-of-ways	Some people who use water containing atrazine in excess of the MCL over many years may experience cardiovascular system problems or reproductive difficulties.
Bentazon	ppb	18	200	Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses	Some people who drink water containing bentazon in excess of the MCL over many year may experience prostate and gastrointestinal effects.
Benzo(a)pyrene (PAH)	ppt	200	7	Leaching from linings of water storage tanks and distribution mains	Some people who use 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	18	1.7	Leaching of soil fumigant used on rice and alfalfa, and grape vineyards	Some people who use water containing carbofuran in excess of the MCL over many years may experience problems with their blood, or nervous or reproductive system problems.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Chlordane	ppt	100	30	Residue of banned insecticide	Some people who use water containing chlordane in excess of the MCL over many years may experience liver or nervous system problems, and may have an increased risk of getting cancer.
Dalapon	ppb	200	790	Runoff from herbicide used on rights-of-ways, and crops and landscape maintenance	Some people who drink water containing dalapon in excess of the MCL over many years may experience minor kidney changes.
Di(2-ethylhexyl) adipate	ppb	400	200	Discharge from chemical factories	Some people who drink water containing di(2-ethylhexyl) adipate in excess of the MCL over many years may experience weight loss, liver enlargement, or possible reproductive difficulties.
Di(2-ethylhexyl) phthalate	ppb	4	12	Discharge from rubber and chemical factories; inert ingredient in pesticides	Some people who use water containing di(2-ethylhexyl) phthalate in excess of the MCL over many years may experience liver problems or reproductive difficulties, and may have an increased risk of getting cancer.
Dibromochloropropane (DBCP)	ppt	200	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit	Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Dinoseb	ppb	7	14	Runoff from herbicide used on soybeans, vegetables, and fruits	Some people who drink water containing dinoseb in excess of the MCL over many years may experience reproductive difficulties.
Dioxin (2,3,7,8-TCDD)	ppq (parts per quadrillion)	30	0.05	Emissions from waste incineration and other combustion; discharge from chemical factories	Some people who use water containing dioxin in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
Diquat	ppb	20	15	Runoff from herbicide use for terrestrial and aquatic weeds	Some people who drink water containing diquat in excess of the MCL over many years may get cataracts.
Endothall	ppb	100	94	Runoff from herbicide use for terrestrial and aquatic weeds; defoliant	Some people who drink water containing endothall in excess of the MCL over many years may experience stomach or intestinal problems.
Endrin	ppb	2	1.8	Residue of banned insecticide and rodenticide	Some people who drink water containing endrin in excess of the MCL over many years may experience liver problems.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Epichlorohydrin		TT	(0)	Discharge from industrial chemical factories; impurity of some water treatment chemicals	Some people who drink water containing high levels of epichlorohydrin over a long period of time may experience stomach problems, and may have an increased risk of getting cancer.
Ethylene dibromide (EDB)	ppt	50	10	Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops	Some people who use water containing ethylene dibromide in excess of the MCL over many years may experience liver, stomach, reproductive system, or kidney problems, and may have an increased risk of getting cancer.
Glyphosate	ppb	700	900	Runoff from herbicide use	Some people who drink water containing glyphosate in excess of the MCL over many years may experience kidney problems or reproductive difficulties.
Heptachlor	ppt	10	8	Residue of banned insecticide	Some people who use water containing heptachlor in excess of the MCL over many years may experience liver damage and may have an increased risk of getting cancer.
Heptachlor epoxide	ppt	10	6	Breakdown of heptachlor	Some people who use water containing heptachlor epoxide in excess of the MCL over many years may experience liver damage, and may have an increased risk of getting cancer.
Hexachlorobenzene	ppb	1	0.03	Discharge from metal refineries and agricultural chemical factories; byproduct of chlorination reactions in wastewater	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years may experience liver or kidney problems, or adverse reproductive effects, and may have an increased risk of getting cancer.
Hexachlorocyclopentadiene	ppb	50	2	Discharge from chemical factories	Some people who use water containing hexachlorocyclopentadiene in excess of the MCL over many years may experience kidney or stomach problems.
Lindane	ppt	200	32	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 may experience kidney or liver problems.
Methoxychlor	ppb	30	0.09	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 may experience reproductive difficulties.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Molinate (Ordram)	ppb	20	1	Runoff/leaching from herbicide used on rice	Some people who use water containing molinate in excess of the MCL over many years may experience reproductive effects.
Oxamyl (Vydate)	ppb	50	26	Runoff/leaching from insecticide used on field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes	Some people who drink water containing oxamyl in excess of the MCL over many years may experience slight nervous system effects.
PCBs (Polychlorinated biphenyls)	ppt	500	90	Runoff from landfills; discharge of waste chemicals	Some people who drink water containing PCBs in excess of the MCL over many years may experience changes in their skin, thymus gland problems, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.
Pentachlorophenol	ppb	1	0.3	Discharge from wood preserving factories, cotton and other insecticidal/herbicidal uses	Some people who use water containing pentachlorophenol in excess of the MCL over many years may experience liver or kidney problems, 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 may experience liver problems.
Simazine	ppb	4	4	Herbicide runoff	Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.
Thiobencarb	ppb	70	70	Runoff/leaching from herbicide used on rice	Some people who use water containing thiobencarb in excess of the MCL over many years may experience body weight and blood effects.
Toxaphene	ppb	3	0.03	Runoff/leaching from insecticide used on cotton and cattle	Some people who use water containing toxaphene in excess of the MCL over many years may experience kidney, liver, or thyroid problems, and may have an increased risk of getting cancer.
Volatile Organic Contaminants					
Benzene	ppb	1	0.15	Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills	Some people who use water containing benzene in excess of the MCL over many years may experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Carbon tetrachloride	ppt	500	100	Discharge from chemical plants and other industrial activities	Some people who use water containing carbon tetrachloride in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.
1,2-Dichlorobenzene	ppb	600	600	Discharge from industrial chemical factories	Some people who drink water containing 1,2-dichlorobenzene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.
1,4-Dichlorobenzene	ppb	5	6	Discharge from industrial chemical factories	Some people who use water containing 1.4-dichlorobenzene in excess of the MCL over many years may experience anemia, liver, kidney, or spleen damage, or changes in their blood.
1,1-Dichloroethane	ppb	5	3	Extraction and degreasing solvent; used in the manufacture of pharmaceuticals, stone, clay, and glass products; fumigant	Some people who use water containing 1,1-dichloroethane in excess of the MCL over many years may experience nervous system or respiratory problems.
1,2-Dichloroethane	ppt	500	400	Discharge from industrial chemical factories	Some people who use 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	6	10	Discharge from industrial chemical factories	Some people who use water containing 1,1-dichloroethylene in excess of the MCL over many years may experience liver problems.
cis-1,2-Dichloroethylene	ppb	6	100	Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination	Some people who use water containing cis-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.
trans-1,2-Dichloroethylene	ppb	10	60	Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE groundwater contamination	Some people who drink water containing trans-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.
Dichloromethane	ppb	5	4	Discharge from pharmaceutical and chemical factories; insecticide	Some people who drink water containing dichloromethane in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.
1,2-Dichloropropane	ppb	5	0.5	Discharge from industrial chemical factories; primary component of some fumigants	Some people who use water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
1,3-Dichloropropene	ppt	500	200	Runoff/leaching from nematocide used on croplands	Some people who use water containing 1,3-dichloropropene in excess of the MCL over many years may have an increased risk of getting cancer.
Ethylbenzene	ppb	300	300	Discharge from petroleum refineries; industrial chemical factories	Some people who use water containing ethylbenzene in excess of the MCL over many years may experience liver or kidney problems.
Methyl-*tert*-butyl ether	ppb	13	13	Leaking underground storage tanks; discharges from petroleum and chemical factories	Some people who use water containing methyl-*tert*-butyl ether in excess of the MCL over many years may have an increased risk of getting cancer.
Monochlorobenzene	ppb	70	70	Discharge from industrial and agricultural chemical factories and drycleaning facilities	Some people who use water containing monochlorobenzene in excess of the MCL over many years may experience liver or kidney problems.
Styrene	ppb	100	0.5	Discharge from rubber and plastic factories; leaching from landfills	Some people who drink water containing styrene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.
1,1,2,2-Tetrachloroethane	ppb	1	0.1	Discharge from industrial and agricultural chemical factories; solvent used in production of TCE, pesticides, varnish and lacquers	Some people who drink water containing 1,1,2,2-tetrachloroethane in excess of the MCL over many years may experience liver or nervous system problems.
Tetrachloroethylene (PCE)	ppb	5	0.06	Discharge from factories, dry cleaners, and auto shops (metal degreaser)	Some people who use water containing tetrachloroethylene in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.
1,2,4-Trichlorobenzene	ppb	5	5	Discharge from textile-finishing factories	Some people who use water containing 1,2,4-trichlorobenzene in excess of the MCL over many years may experience adrenal gland changes.
1,1,1-Trichloroethane	ppb	200	1000	Discharge from metal degreasing sites and other factories; manufacture of food wrappings	Some people who use water containing 1,1,1-trichloroethane in excess of the MCL over many years may experience liver, nervous system, or circulatory system problems.
1,1,2-Trichloroethane	ppb	5	0.3	Discharge from industrial chemical factories	Some people who use water containing 1,1,2-trichloroethane in excess of the MCL over many years may experience liver, kidney, or immune system problems.
Trichloroethylene (TCE)	ppb	5	1.7	Discharge from metal degreasing sites and other factories	Some people who use water containing trichloroethylene in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Toluene	ppb	150	150	Discharge from petroleum and chemical factories; underground gas tank leaks	Some people who use water containing toluene in excess of the MCL over many years may experience nervous system, kidney, or liver problems.
Trichlorofluoromethane	ppb	150	1300	Discharge from industrial factories; degreasing solvent; propellant and refrigerant	Some people who use water containing trichlorofluoromethane in excess of the MCL over many years may experience liver problems.
1,1,2-Trichloro-1,2,2-trifluoroethane	ppm	1.2	4	Discharge from metal degreasing sites and other factories; drycleaning solvent; refrigerant	Some people who use water containing 1,1,2-trichloro-1,2,2-trifloroethane in excess of the MCL over many years may experience liver problems.
Vinyl chloride	ppt	500	50	Leaching from PVC piping; discharge from plastics factories; biodegradation byproduct of TCE and PCE groundwater contamination	Some people who use water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.
Xylenes	ppm	1.750	1.8	Discharge from petroleum and chemical factories; fuel solvent	Some people who use water containing xylenes in excess of the MCL over many years may experience nervous system damage.
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors					
TTHMs (Total Trihalomethanes)	ppb	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 liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
Haloacetic Acids	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	0.1	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.
Chloramines	ppm	[MRDL = 4.0 (as Cl_2)]	[MRDLG = 4 (as Cl_2)]	Drinking water disinfectant added for treatment	Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Contaminant	Unit Measure -ment	MCL (AL) [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant	Health Effects Language
Chlorine	ppm	[MRDL = 4.0 (as Cl_2)]	[MRDLG = 4 (as Cl_2)	Drinking water disinfectant added for treatment	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite	ppm	1.0	0.05	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 Dioxide	ppb	[MRDL = 800 (as ClO_2)]	[MRDLG = 800 (as ClO_2)]	Drinking water disinfectant added for treatment	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.
Control of DBP precursors (TOC)		TT	N/A	Various natural and man-made sources	Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of cancer.

ATTACHMENT 2

Regulated Contaminants with SECONDARY DRINKING WATER STANDARDS [a]

Monitoring Required by Section 64449, Chapter 15, Title 22, California Code of Regulations

Contaminant	Unit Measurement	MCL	Typical Source of Contaminant
Aluminum	ppb	200	Erosion of natural deposits; residual from some surface water treatment processes
Color	Units	15	Naturally-occurring organic materials
Copper	ppm	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents (MBAS)	ppb	500	Municipal and industrial waste discharges
Iron	ppb	300	Leaching from natural deposits; industrial wastes
Manganese	ppb	50	Leaching from natural deposits
Methyl-tert-butyl ether (MTBE)	ppb	5	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor--Threshold	Units	3	Naturally-occurring organic materials
Silver	ppb	100	Industrial discharges
Thiobencarb	ppb	1	Runoff/leaching from rice herbicide
Turbidity	Units	5	Soil runoff
Zinc	ppm	5.0	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	ppm	1000	Runoff/leaching from natural deposits
Specific Conductance	µS/cm	1600	Substances that form ions when in water; seawater influence
Chloride	ppm	500	Runoff/leaching from natural deposits; seawater influence
Sulfate	ppm	500	Runoff/leaching from natural deposits; industrial wastes

(a) There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetics.

ATTACHMENT 3

State Regulated Contaminants with No Maximum Contaminant Levels (i.e., Unregulated Chemicals)

Monitoring Formerly Required by Repealed Section 64450, Chapter 15, Title 22, California Code of Regulations

Results of monitoring under former section 64450 (UCMR) need only be included for five years from the date of the last required sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirement, whichever comes first. Water systems that continue to monitor for UCMR contaminants are encouraged to include the information in the CCR to keep their customers informed. Section 64450 was repealed effective October 18, 2007.

Inclusion of the notification level and health effects language for levels above the notification level is only recommended, not required.

Chemicals	Notification Level	Health Effects Language *(Optional)*
Boron	1 ppm	The babies of some pregnant women who drink water containing boron in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.
Dichlorodifluoromethane (Freon 12)	1 ppm	Some people who drink water containing dichlorodifluoromethane far in excess of the notification level may experience neurological and cardiac effects. Long- term exposures to dichlorodifluoromethane resulted in smaller body weight in laboratory animals.
Ethyl-tert-butyl ether (ETBE)	n/a	n/a
tert-Amyl-methyl ether (TAME)	n/a	n/a
tert-Butyl alcohol (TBA)	12 ppb	Some people who use water containing tert-butyl alcohol in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.
Trichloropropane (1,2,3-TCP)	5 ppt	Some people who use water containing 1,2,3-trichloropropane in excess of the notification level over many years may have an increased risk of getting cancer, based on studies in laboratory animals.
Vanadium	50 ppb	The babies of some pregnant women who drink water containing vanadium in excess of the notification level may have an increased risk of developmental effects, based on studies in laboratory animals.

ATTACHMENT 4

Federal Regulated Contaminants with No Maximum Contaminants Levels (i.e., Federal UCMR 1, UCMR 2, and UCMR 3)

Background

The 1996 Amendments to the Safe Drinking Water Act required the USEPA to establish criteria for a monitoring program for unregulated contaminants and to publish a list of contaminants to be monitored.

UCMR 1 (2001 – 2003 Monitoring)

In 1999, USEPA revised the Unregulated Contaminant Monitoring Rule to incorporate a tiered monitoring approach. UCMR 1 had assessment monitoring (List 1) and screening survey (List 2) components.

Assessment monitoring was conducted by large public water systems (PWS) serving more than 10,000 people and 800 representative small PWS serving 10,000 or fewer people for List 1 contaminants. Assessment monitoring was conducted by each PWS over a 12-month period between 2001 and 2003.

Screening monitoring was conducted by a randomly selected set of 300 large and small PWSs for List 2 contaminants. Screening monitoring for chemical contaminants was conducted in 2001 and 2002 for small and large PWS, respectively. Screening monitoring for *Aeromonas* was conducted in 2003 for small and large PWS.

List 1 **Assessment Monitoring**	**List 2** **Screening Survey**
2,4-dinitrotoluene	1,2-diphenylhydrazine
2,6-dinitrotoluene	2-methyl-phenol
Acetochlor	2,4-dichlorophenol
DCPA mono-acid degradate	2,4-dinitrophenol
DCPA di-acid degradate	2,4,6-trichlorophenol
4,4' – DDE	*Aeromonas*
EPTC	Alachlor ESA
Molinate	Diazinon
MTBE	Disulfoton
Nitrobenzene	Diuron
Perchlorate	Fonofos
Terbacil	Linuron
	Nitrobenzene
	Prometon
	RDX
	Terbufos

UCMR 2 (2008 – 2010 Monitoring)

In 2007, USEPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants.

Assessment monitoring is required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people for List 1 contaminants. Assessment monitoring is required of each PWS during a 12-month period from January 2008 – December 2010.

Screening monitoring is required of all PWS serving more than 100,000 people, 320 representative PWS serving 10,001 to 100,000 people, and 480 representative PWS serving 10,000 or fewer people for List 2 contaminants. Screening monitoring is required of each PWS during a 12-month period from January 2008 – December 2010.

List 1 **Assessment Monitoring**	**List 2** **Screening Survey**
Dimethoate	Acetochlor ethane sulfonic acid
Terbufos sulfone	Acetochlor oxanilic acid
2,2',4,4'-tetrabromodiphenyl ether	Alachlor ethane sulfonic acid
2,2',4,4',5-pentabromodiphenyl ether	Alachlor oxanilic acid
2,2',4,4',5,5'-hexabromobiphenyl	Metolachlor ethane sulfonic acid
2,2',4,4',5,5'-hexabromodiphenyl ether	Metolachlor oxanilic acid
2,2',4,4',6-pentabromodiphenyl ether	
1,3-dinitrobenzene	Acetochlor
2,4,6-trinitrotoluene (TNT)	Alachlor
Hexahydro-1,3,5-trinitro-1,3,5-trazine (RDX)	Metolachlor
	N-nitrosodiethylamine (NDEA)
	N-nitrosodimethylamine (NDMA)
	N-nitroso-di-n-butylamine (NDBA)
	N-nitroso-di-n-propylamine (NDPA)
	N-nitrosomethylethylamine (NMEA)
	N-nitrosopyrrolidine (NPYR)

UCMR 3 (2008 – 2010 Monitoring)

In 2012, USEPA revised the Unregulated Contaminant Monitoring Rule to establish a new set of unregulated contaminants.

Assessment monitoring (List 1 Contaminants) is required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people. Assessment monitoring is required of each PWS during a 12-month period from January 2013 – December 2015.

Screening monitoring (List 2 Contaminants) is required of all PWS serving more than 100,000 people, 320 representative PWS serving 10,001 to 100,000 people, and 480 representative PWS serving 10,000 or fewer people. Screening monitoring is required of each PWS during a 12-month period from January 2013 – December 2015.

Pre-screen testing (List 3 Contaminants) is required of select 800 representative PWS serving 1,000 or fewer people that do not disinfect. These PWS with wells that are located in areas of karst or fractured bedrock will monitor during a 12-month period from January 2013 – December 2015.

List 1 **Assessment Monitoring**	**List 2** **Screening Survey**
1,2,3-trichloropropane 1,3-butadiene Chloromethane (methyl chloride) 1,2-dichloroethane Bromomethane (methyl bromide) Chlorodifluoromethane (HCFC-22) Bromochloromethane (halon 1011) 1,4-dioxane Vanadium Molybdenum Cobalt Strontium Chromium (total) Chromium-6 Chlorate Perfluorooctanesulfonate acid (PFOS) Perfluorooctanoic acid (PFOA) Perfluorononanoic acid (PFNA) Perfluorohexanesulfonic acid (PFHxS) Perfluoroheptanoic acid (PFHpA) Perfluorobutanesulfonic acid (PFBS)	17-β-estradiol 17-α-ethynylestradiol (ethinyl estradiol) 16-α-hydroxyestradiol (estriol) Equilin Estrone Testosterone 4-anderostene-3,17-dione **List 3** **Pre-Screen Testing** Enteroviruses Noroviruses

ATTACHMENT 5

State Contaminants with Notification Levels

Inclusion of the notification level and health effects language for levels above the notification level is only recommended, not required.

Chemical	Notification Level	Health Effects Language (Optional)
Boron	1 ppm	See Attachment 3
n-Butylbenzene	260 ppb	n/a
sec-Butylbenzene	260 ppb	n/a
tert-Butylbenzene	260 ppb	n/a
Carbon disulfide	160 ppb	n/a
Chlorate	800 ppb	n/a
2-Chlorotoluene	140 ppb	n/a
4-Chlorotoluene	140 ppb	n/a
Diazinon	1.2 ppb	n/a
Dichlodifluoromethane (Freon 12)	1 ppm	See Attachment 3
1,4-Dioxane	1 ppb	Some people who use water containing 1,4-dioxane in excess of the Notification Level over many years may experience liver or kidney problems and may have an increased risk of getting cancer, based on studies in laboratory animals.
Ethylene glycol	14 ppm	n/a
Formaldehyde	100 ppb	n/a
HMX	350 ppb	n/a
Isopropylbenzene	770 ppb	n/a
Manganese	500 ppb	The notification level for manganese is used to protect consumers from neurological effects. High levels of manganese in people have been shown to result in effects of the nervous system.
Methyl isobutyl ketone (MIBK)	120 ppb	n/a
Naphthalene	17 ppb	n/a
N-Nitrosodiethylamine (NDEA)	10 ppt	n/a
N-Nitrosodimethylamine (NDMA)	10 ppt	n/a
N-Nitrosodi-n-propylamine (NDPA)	10 ppt	n/a
Propachlor	90 ppb	n/a
n-Propylbenzene	260 ppb	n/a
RDX	300 ppt	n/a
Tertiary butyl alcohol (TBA)	12 ppb	See Attachment 3
1,2,3-Trichloropropane (1,2,3-TCP)	5 ppt	See Attachment 3
1,2,4-Trimethylbenzene	330 ppb	n/a
1,3,5-Trimethylbenzene	330 ppb	n/a
2,4,6-Trinitrotoluene (TNT)	1 ppb	n/a
Vanadium	50 ppb	See Attachment 3

ATTACHMENT 6

Special Language for Nitrate, Arsenic, Lead, Radon, *Cryptosporidium*, Ground Water Systems, and Surface Water Systems

(A) Nitrate: For systems that detect nitrate (as NO_3) **above 23 mg/L, but below 45 mg/L**, the following language is REQUIRED:

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

If a utility cannot demonstrate to the State Board with at least five years of the most current monitoring data that its nitrate levels are stable, it must also add the following language to the preceding statement on nitrate:

Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity.

(B) Arsenic: For systems that detect arsenic **above 5 ppb, but below or equal to 10 ppb**, the following language is REQUIRED:

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

(C) Lead: For systems that detect lead above 15 ppb in more than 5%, and up to and including 10%, of sites sampled (or if your system samples fewer than 20 sites and has even one sample above the AL), the following language is REQUIRED:

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791).

(D) Radon: Systems that performed monitoring that indicates the presence of radon in the finished water MUST include the results of the monitoring and an explanation of the significance of the results. The following language MAY be used:

We constantly monitor the water supply for various contaminants. We have detected radon in the finished water supply in _____ out of _____ samples tested. There is no federal regulation for radon levels in drinking water. Exposure over a long period of time to air transmitting radon may cause adverse health effects.

The language below MAY be included if the level of information is helpful.

Radon is a radioactive gas that you cannot see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. You should pursue radon removal for your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that are not too costly. For additional information, call your State radon program (1-800-745-7236, the USEPA Safe Drinking Water Act Hotline (1-800-426-4791), or the National Safe Council Radon Hotline (1-800-767-7236).

(E) *Cryptosporidium*: Systems that have performed any monitoring for *Cryptosposidium* that indicates that *Cryptosporidium* may be present in the source water or finished water MUST include the results of the monitoring and an explanation of the significance of the results. The following language MAY be used:

Cryptosporidium is a microbial pathogen found in surface water throughout the U.S. Although filtration removes Cryptosporidium, the most commonly-used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of Cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people, infants, small children, and the elderly are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

(F) Additional Special Language for Lead: For community water systems, the following language is REQUIRED:

> *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.* [INSERT NAME OF 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.*

(G) Ground Water Systems: For ground water systems that had a TT violation described in Item S of the SWS CCR Form Instructions, the following language MAY be used to describe the potential health effects. USEPA did not provide standard health effect language for these TT violations in the Ground Water Rule; USEPA provided the language in their guidance to water systems.

> *Inadequately protected or treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.*

(H) Surface Water Systems: For surface water systems that had a TT violation under the **SWTR, IESWTR, FBRR,** or **LT1ESWTR** , the following language is REQUIRED to describe the potential health effects:

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

For surface water systems that had a TT violation under the **LT2ESWTR**, the following language MAY be used to describe the potential health effects. USEPA did not provide standard health effect language for these TT violations in the LT2ESWTR; USEPA provided the language in their guidance to water systems.

LT2ESWTR TT Violation	Health Effect Language
Uncovered and Untreated Finished Water Reservoir	*Inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.*
Determine and Report Bin Classification	*Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.*
Provide or Install an Additional Level of Treatment	*Inadequately treated water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.*