2019 Consumer Confidence Report

Water System Name: **Monterey Mushrooms WS** Report Date: 05/07/20

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 to December 31, 2019 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [*Enter Water System's Name Here*] a [*Enter Water System's Address or Phone Number Here*] para asistirlo en español.

这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [*Enter Water System's Name Here*]以获得中文的帮助:[*Enter Water System's Address Here*][*Enter Water System's Phone Number Here*]

Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [*Enter Water System's Name and Address Here*] o tumawag sa [*Enter Water System's Phone Number Here*] para matulungan sa wikang Tagalog.

Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [*Enter Water System's Name Here*] tại [*Enter Water System's Address or Phone Number Here*] để được hỗ trợ giúp bằng tiếng Việt.

Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [*Enter Water System's Name Here*] ntawm [*Enter Water System's Address or Phone Number Here*] rau kev pab hauv lus Askiv.

Type of water source(s) in use: Ground water , Wells

Name & general location of source(s): Well#5 potable source. Well #4 standby. Well #3 irrigation. Well #2 irrigation

Drinking Water Source Assessment information: All wells are treated with sodium hypo chloride. Monitored daily. Monthly routine water test for coliform and E.coli by Soil Control Lab.

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

For more information, contact: Dennis Powell Phone: (831) 274-5543

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 (U.S. EPA).

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

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: Permissions from the State Water Resources Control Board (State Board) to exceed an MCL or not comply with a treatment technique under certain conditions.

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

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

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)

monitoring and reporting requirements, and water treatment requirements.

Wells are monitored daily for chlorine residual level.

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 byproducts 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 U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 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. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

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 (state Total Coliform Rule)	(In a month)	0	1 positive monthly sample[a]	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year)	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive		Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year)	0	(b)	0	Human and animal fecal waste

(a) Two or more positive monthly samples is a violation of the MCL
(b) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

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	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	09/11/19	10	ND		15	0.2		Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	09/11/19	10	ND		1.3	0.3	Not applicable	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)	10/09/14	48		None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	12/21/11	106		None	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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**
Nitrate as N	01/07/16	1.2				Run off and leaching from fertilizer use. Leaching from septic tanks and sewage erosion of natural deposits
Fluoride	04/29/14	0.15				Erosion of natural deposits water additive which promotes strong teeth. Discharge from fertilizer and aluminum factories

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD						
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**SMCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Chromium Hexachrome	03/15/17	15				Discharge from electro plating factories, leather tanneries, wood preservation chemical synthesis refractory production facilities erosion of natural deposits

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS					
Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	**Health Effects Language**
Chromium Hexachrome	06/19/17	15			Some people who drink water containing haxalvalent chromium in excess of the MCL over many years may have an increase risk of cancer

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 U.S. EPA'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. U.S. EPA/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: 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. [***ENTER WATER SYSTEM'S NAME HERE***] 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. [***OPTIONAL:*** If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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 (1-800-426-4791) or at http://www.epa.gov/lead.

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**
0				
0				

For Water Systems Providing Groundwater as a Source of Drinking Water

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUNDWATER 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 Groundwater Source Samples, Uncorrected Significant Deficiencies, or Groundwater TT

SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUNDWATER SOURCE SAMPLE
SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES

APPENDIX F: Certification Form (Suggested Format)

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 Water Board's website at http://www.swrcb.ca.gov/drinking_water/certlic/drinkingwater/CCR.shtml**)**

Water System Name: Monterey Mushrooms WS

Water System Number: 2701940

The water system named above hereby certifies that its Consumer Confidence Report was distributed on 05/11/2020 *(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: Dennis Powell

Signature: Dennis Powell

Title: Chief operator T-2 D-2

Phone Number: (831) 274-5543 Date: 05/11/20

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: Hand delivered to residents. Posted a copy at Human Resources Department. _____

☐ "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

This form is provided as a convenience for use to meet the certification requirement of the California Code of Regulations, section 64483(c).

APPENDIX A: Regulated Contaminants with Primary Drinking Water Standards

Microbiological Contaminants

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Total Coliform Bacteria (state Total Coliform Rule)	**MCL:** **Systems that collect 40 or more samples per month:** 5.0% of monthly samples are positive **Systems that collect less than 40 samples per month:** 1 positive monthly sample		(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* (state 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.
Total Coliform Bacteria (federal Revised Total Coliform Rule)		TT	N/A	Naturally present in the environment	Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
E. coli (federal Revised Total Coliform Rule)		Footnote[1]	(0)	Human and animal fecal waste	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems. *For the consumer confidence report, if a water system detects* E. coli *and has violated the* E. coli *MCL, the water system shall include the following statements, as appropriate.* • We had an *E. coli*-positive repeat sample following a total coliform-positive routine sample. • We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample. • We failed to take all required repeat samples following an *E. coli*-positive routine sample. • We failed to test for *E. coli* when any re repeat sample tests positive for total coliform. *If the E. coli MCL was not violated, the water system may include a statement that explains that although* E. coli *was detected, the water system is not in violation of the* E. coli *MCL.*
E. coli (federal Revised Total Coliform Rule)		TT	N/A	Human and animal fecal waste	*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems.
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.

[1] Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	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 lamblia, 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

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Gross Beta Particle Activity	pCi/L	50[2]	(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.
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.

[2] Effective June 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.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Combined Radium 226 & 228	pCi/L	5	(0)[3]	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.
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

Contaminant	Unit Measure-ment	MCL (AL) TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Aluminum	mg/L	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	µg/L	6	1	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	µg/L	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	mg/L	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	µg/L	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.

[3] 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.

Contaminant	Unit Measure-ment	MCL (AL) TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Cadmium	µg/L	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 (Total)	µg/L	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	mg/L	(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	µg/L	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	mg/L	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.
Lead	µg/L	(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.
Mercury (Inorganic)	µg/L	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	µg/L	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.

Contaminant	Unit Measure-ment	MCL (AL) TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Nitrate (as Nitrogen, N)	mg/L	10	10	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)	mg/L	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	µg/L	6	1	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	µg/L	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.
Thallium	µg/L	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

Contaminant	Unit Measure -ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
2,4-D	µg/L	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)	µg/L	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	µg/L	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	µg/L	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	µg/L	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)	ng/L	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	µg/L	18	0.7	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.
Chlordane	ng/L	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	µg/L	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.

Contaminant	Unit Measure -ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Di(2-ethylhexyl) adipate	µg/L	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	µg/L	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)	ng/L	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	µg/L	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)	pg/L	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	µg/L	20	6	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	µg/L	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	µg/L	2	0.3	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.
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)	ng/L	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.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Glyphosate	µg/L	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	ng/L	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	ng/L	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	µg/L	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	µg/L	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	ng/L	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	µg/L	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.
Molinate (Ordram)	µg/L	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)	µg/L	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)	ng/L	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	µg/L	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.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Picloram	µg/L	500	166	Herbicide runoff	Some people who drink water containing picloram in excess of the MCL over many years may experience liver problems.
Simazine	µg/L	4	4	Herbicide runoff	Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.
Thiobencarb	µg/L	70	42	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	µg/L	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.
1,2,3-Trichloropropane	ng/L	5	0.7	Discharge from industrial and agricultural chemical factories; leaching from hazardous waste sites; used as cleaning and maintenance solvent, paint and varnish remover, and cleaning and degreasing agent; byproduct during the production of other compounds and pesticides.	Some people who drink water containing 1,2,3-trichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.

Volatile Organic Contaminants

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Benzene	µg/L	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.
Carbon tetrachloride	ng/L	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	µg/L	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.

Contaminant	Unit Measure -ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
1,4-Dichlorobenzene	µg/L	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	µg/L	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	ng/L	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	µg/L	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	µg/L	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	µg/L	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	µg/L	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	µg/L	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.
1,3-Dichloropropene	ng/L	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	µg/L	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	µg/L	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.

Contaminant	Unit Measure -ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Monochlorobenzene	µg/L	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	µg/L	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, and may have an increased risk of getting cancer.
1,1,2,2-Tetrachloroethane	µg/L	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)	µg/L	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	µg/L	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	µg/L	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	µg/L	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)	µg/L	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.
Toluene	µg/L	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	µg/L	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	mg/L	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.

Contaminant	Unit Measure-ment	MCL TT, as noted	PHG (MCLG)	Major Sources of Contamination	Health Effects Language
Vinyl chloride	ng/L	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	mg/L	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

Contaminant	Unit Measure-ment	MCL [MRDL] TT, as noted	PHG (MCLG) [MRDLG]	Major Sources of Contamination	Health Effects Language
TTHMs (Total Trihalomethanes)	µg/L	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 liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
HAA5 (Sum of 5 Haloacetic Acids)	µg/L	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	µg/L	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	mg/L	[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.
Chlorine	mg/L	[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.

Contaminant	Unit Measure-ment	MCL [MRDL] TT, as noted	PHG (MCLG) [MRDLG]	Major Sources of Contamination	Health Effects Language
Chlorite	mg/L	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	µg/L	[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.

APPENDIX B: Regulated Contaminants with Secondary Drinking Water Standards

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

Contaminant	Unit Measurement	MCL	Typical Source of Contaminant
Aluminum	µg/L	200	Erosion of natural deposits; residual from some surface water treatment processes
Color	Units	15	Naturally-occurring organic materials
Copper	mg/L	1.0	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents (MBAS)	µg/L	500	Municipal and industrial waste discharges
Iron	µg/L	300	Leaching from natural deposits; industrial wastes
Manganese	µg/L	50	Leaching from natural deposits
Methyl-tert-butyl ether (MTBE)	µg/L	5	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor--Threshold	Units	3	Naturally-occurring organic materials
Silver	µg/L	100	Industrial discharges
Thiobencarb	µg/L	1	Runoff/leaching from rice herbicide
Turbidity	Units	5	Soil runoff
Zinc	mg/L	5.0	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (TDS)	mg/L	1,000	Runoff/leaching from natural deposits
Specific Conductance	µS/cm	1,600	Substances that form ions when in water; seawater influence
Chloride	mg/L	500	Runoff/leaching from natural deposits; seawater influence
Sulfate	mg/L	500	Runoff/leaching from natural deposits; industrial wastes

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

APPENDIX C: Monitored Contaminants with No MCLs

Background

The 1996 Amendments to the SDWA required the U.S. EPA to establish criteria for a monitoring program for unregulated contaminants, and to publish, once every five years, a list of no more than 30 contaminants to be monitored by public water systems (PWS).

Section 64450 of the California Code of Regulations also required certain water systems to monitor a number of unregulated contaminants, with contaminant lists that were published or revised in 1990, 1996, 2000, and 2003. This section of the California Code of Regulations was repealed effective October 18, 2007. Water systems that continued to monitor for state unregulated contaminants are encouraged, but not required, to include the information regarding detected contaminants in the CCR.

Although Section 64450 of the California Code of Regulations was repealed, the State Water Board may request water systems to monitor for specific contaminants per HSC section 116375(b).

Federal UCMR 1 (2001 – 2003 Monitoring)

The U.S. EPA published the first list of contaminants to monitor as part of the UCMR in September 1999. Contaminants were divided into two lists: Assessment Monitoring (List 1), and Screening Survey (List 2).

Assessment Monitoring of List 1 contaminants was conducted by large PWS serving more than 10,000 people and 800 representative small PWS serving 10,000 or fewer people. Assessment Monitoring was conducted by each PWS over a 12-month period between 2001 and 2003.

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

UCMR 1	
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 Hexahydro-1,3,5-trinitro-1-3-5-triazine [RDX] Terbufos

Federal UCMR 2 (2008 – 2010 Monitoring)

The U.S. EPA published the second list of contaminants to monitor as part of the UCMR in January 2007.

Assessment Monitoring was 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 was required of each PWS during a 12-month period from January 2008 to December 2010.

Screening Survey was 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 Survey was required of each PWS during a 12-month period from January 2008 to December 2010.

UCMR 2	
List 1 – Assessment Monitoring	**List 2 – Screening Survey**
Dimethoate Terbufos sulfone 2,2',4,4'-tetrabromodiphenyl ether 2,2',4,4',5-pentabromodiphenyl ether 2,2',4,4',5,5'-hexabromobiphenyl 2,2',4,4',5,5'-hexabromodiphenyl ether 2,2',4,4',6-pentabromodiphenyl ether 1,3-dinitrobenzene 2,4,6-trinitrotoluene (TNT) Hexahydro-1,3,5-trinitro-1,3,5-trazine (RDX)	Acetochlor ethane sulfonic acid Acetochlor oxanilic acid Alachlor ethane sulfonic acid Alachlor oxanilic acid Metolachlor ethane sulfonic acid Metolachlor oxanilic acid Acetochlor Alachlor 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)

Federal UCMR 3 (2013 – 2015 Monitoring)

The third UCMR list of contaminants was published in May 2012.

Assessment Monitoring (List 1 Contaminants) was required of all PWS serving more than 10,000 people and 800 representative PWS serving 10,000 or fewer people. Assessment

Monitoring was required of each PWS during a 12-month period from January 2013 to December 2015.

Screening Survey (List 2 Contaminants) was 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 Survey was required of each PWS during a 12-month period from January 2013 to December 2015.

Pre-screen Testing (List 3 Contaminants) was required from a selection of 800 representative PWS serving 1,000 or fewer people that do not disinfect. These PWS were selected because they have groundwater wells that were located in areas of karst or fractured bedrock. Monitored lasted 12 months between January 2013 and December 2015.

<table>
<tr><th colspan="2">UCMR 3</th></tr>
<tr><td>List 1 – Assessment Monitoring
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)</td><td>List 2 – Screening Survey
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</td></tr>
</table>

Federal UCMR 4 (2018 – 2020 Monitoring)

The fourth list of contaminants to monitor as part of the UCMR was published by the U.S. EPA in December 2016.

PWSs are required to monitor for 10 cyanotoxins at the entry point to the distribution system during a 4-consecutive month period from March 2018 through November 2020, according to the table

below. PWSs are also required to monitor for 20 additional chemical contaminants and indicators during a 12-month period from January 2018 through December 2020. The sampling site for these additional chemicals is the entry point to the distribution system, except for HAAs that need to be monitored at the Stage 2 D/DBPR sampling sites. The two indicators, *i.e.*, TOC and bromide, need to be monitored at source water intakes.

System Size (Population Served)	10 Cyanotoxins	20 Chemicals
Small Systems (25 – 10,000)	800 randomly selected surface water or ground water under the direct influence of surface water (GWUDI) systems	A different group of 800 randomly selected surface water systems, GWUDI and groundwater systems
Large Systems (10,001 or more)	All surface water and GWUDI systems	All surface water, groundwater and GWUDI systems

The 10 cyanotoxins and 20 additional chemical contaminants and indicators are listed in the table below.

UCMR 4	
Cyanotoxins	**Minimum Reporting Level**
Total Microcystin	0.3 µg/L
Microcystin-LA	0.008 µg/L
Microcystin-LF	0.006 µg/L
Microcystin-LR	0.02 µg/L
Microcystin-LY	0.009 µg/L
Microcystin-RR	0.006 µg/L
Microcystin-YR	0.02 µg/L
Nodularin	0.005 µg/L
Anatoxin-a	0.03 µg/L
Cylindrospermopsin	0.09 µg/L
Additional Chemicals	**Minimum Reporting Level**
Germanium	0.3 µg/L
Manganese	0.4 µg/L
Alpha-hexachlorocyclohexane	0.01 µg/L
Chlorpyrifos	0.03 µg/L
Dimethipin	0.2 µg/L
Ethoprop	0.03 µg/L
Oxyfluorfen	0.05 µg/L
Profenofos	0.3 µg/L
Tebuconazole	0.2 µg/L
Total Permethrin (cis- & trans-)	0.04 µg/L
Tribufos	0.07 µg/L
HAA5	N/A
HAA6Br[1]	N/A

HAA9[2]	N/A
1-butanol	2.0 µg/L
2-methoxyethanol	0.4 µg/L
2-propen-1-ol	0.5 µg/L
butylated hydroxyanisole	0.03 µg/L
o-toluidine	0.007 µg/L
quinoline	0.02 µg/L
Total Organic Carbon (TOC)	N/A
Bromide	N/A

[1] HAA6Br: Bromochloroacetic acid, bromodichloroacetic acid, dibromoacetic acid, dibromochloroacetic acid, monobromoacetic acid, and tribromoacetic acid.

[2] HAA9: Bromochloroacetic acid, bromodichloroacetic acid, chlorodibromoacetic acid, dibromoacetic acid, dichloroacetic acid, monobromoacetic acid, monochloroacetic acid, tribromoacetic acid, and trichloroacetic acid.

Reporting

U.S. EPA is essentially silent on the issue of reporting federal UCMR contaminants beyond the previous calendar year's detections, other than to say it is not required and that data older than five years need not be reported. As a result, the State Water Board recommends systems to report data for five years from the date of the last sampling.

APPENDIX D: State Contaminants with Notification Levels

Inclusion of the Notification Level (NL) and health effects language for contaminant concentrations detected above the NL is recommended, but not required.

Chemical	Notification Level	Health Effects Language (Optional)
Boron	1 mg/L	Boron exposures resulted in decreased fetal weight (developmental effects) in newborn rats.
n-Butylbenzene	260 µg/L	Exposures to cumene (isopropylbenzene), a surrogate for n-, sec-, and tert-butylbenzene, resulted in increased kidney weight in rats.
sec-Butylbenzene	260 µg/L	
tert-Butylbenzene	260 µg/L	
Carbon Disulfide	160 µg/L	Carbon disulfide exposures resulted in decreased motor conduction velocity in people.
Chlorate	800 µg/L	Animal studies demonstrated that chlorate exposure in rats caused adverse effects to the pituitary and thyroid glands.
2-Chlorotoluene	140 µg/L	2-Chlorotoluene exposures resulted in decrease in body weight gain in rats. 4-Chlorotoluene is expected to have health effects similar to those of 2-chlorotoluene.
4-Chlorotoluene	140 µg/L	
Diazinon	1.2 µg/L	Diazinon exposures may result in neurotoxic effects.
Dichlodifluoromethane [Freon 12]	1 mg/L	Dichlorodifluoromethane exposures resulted in reduced body weight in rats.
1,4-Dioxane	1 µg/L	1,4-Dioxane exposures resulted in cancer, based on studies in laboratory animals.
Ethylene Glycol	14 mg/L	Ethylene glycol exposures resulted in kidney toxicity in rats.
Formaldehyde	100 µg/L	Formaldehyde exposures resulted in reduced weight gain and histopathology in rats.
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine [HMX]	350 µg/L	Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine exposures resulted in liver lesions in rats.
Isopropylbenzene	770 µg/L	Isopropylbenzene exposures resulted in increased kidney weight in rats.
Manganese	500 µg/L	Manganese exposures resulted in neurological effects. High levels of manganese in people have been shown to result in adverse effects to the nervous system.
Methyl Isobutyl Ketone [MIBK]	120 µg/L	Methyl isobutyl ketone exposures resulted in increased kidney and liver weight, and kidney pathology in rats.
Naphthalene	17 µg/L	Naphthalene exposures resulted in decreased body weight in rats.
N-Nitrosodiethylamine [NDEA]	10 ng/L	N-nitrosodiethylamine exposures resulted in cancer in a variety of laboratory animals.

Chemical	Notification Level	Health Effects Language (Optional)
N-Nitrosodimethylamine [NDMA]	10 ng/L	N-nitrosodimethylamine exposures resulted in cancer in a variety of laboratory animals.
N-Nitrosodi-n-propylamine [NDPA]	10 ng/L	N-nitrosodi-n-propylamine exposures resulted in cancer in a variety of laboratory animals.
Perfluorooctanoic Acid [PFOA]	5.1 ng/L**	Perfluorooctanoic acid exposures resulted in increased liver weight in laboratory animals.
Perfluorooctanesulfonic Acid [PFOS]	6.5 ng/L**	Perfluorooctanesulfonic acid exposures resulted in immune suppression, specifically, a decrease in antibody response to an exogenous antigen challenge.
Propachlor	90 µg/L	Propachlor exposures resulted in decrease in weight gain, decrease in food intake, and relative liver weight increase in rats.
n-Propylbenzene	260 µg/L	Exposures to cumene (isopropylene), a surrogate for n-propylbenzene, resulted in increased kidney weight in rats.
Hexahydro-1,3,5-trinitro-1-3-5-triazine [RDX]	300 ng/L	Hexahydro-1,3,5-trinitro-1-3-5-triazine exposures resulted in liver carcinomas and adenomas in female mice.
Tertiary Butyl Alcohol [TBA]	12 µg/L	Tert-butyl alcohol exposures resulted in cancer in laboratory animals.
1,2,4-Trimethylbenzene	330 µg/L	1,2,4-Trimethylbenzene exposures resulted in increased serum phosphorus levels in rats.
1,3,5-Trimethylbenzene	330 µg/L	1,3,5-Trimethylbenzene exposures resulted in increased serum phosphorus levels in rats.
2,4,6-Trinitrotoluene [TNT]	1 µg/L	2,4,6-Trinitrotoluene exposures resulted in urinary bladder transitional cell papillomas and squamous cell carcinomas in female rats.
Vanadium	50 µg/L	Vanadium exposures resulted in developmental and reproductive effects in rats.

** The July 2018 notification levels for PFOA of 14 ng/L and PFOS of 13 ng/L were superseded on August 22, 2019 by new notification levels of 5.1 ng/L for PFOA and 6.5 ng/L for PFOS.

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

(A) Nitrate: For systems that detect nitrate **above 5 mg/L as nitrogen, but below 10 mg/L as nitrogen**, the following language is REQUIRED:

> *Nitrate in drinking water at levels above 10 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 10 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 Water 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 µg/L, but below or equal to 10 µg/L**, 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[1]: Consistent with 40 CFR section 141.154(d)(1), every Consumer Confidence Report (CCR) must include the lead-specific language shown below. A water system may provide its own educational statement, but only after consulting with the State Water Board.

[1] All water systems are required to comply with the state Lead and Copper Rule (LCR). Water systems are also required to comply with the federal LCR, and its revisions and corrections. The 2007 Short-term Revisions of the LCR included mandatory language requirements that have not yet been adopted by the State Water Board.

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 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. [Optional: *If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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/lead.*

Consistent with the California Code of Regulations, section 64482(c), systems that detect lead above 15 µg/L in more than 5 percent, and up to and including 10 percent, of sites sampled (or if your system samples fewer than 20 sites and has even one sample above the Action Level [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 U.S. EPA 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 U.S. EPA 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 *Cryptosporidium* 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) **Groundwater Systems:** For ground water systems that had a treatment technique (TT) violation described in Item S of the document titled *"Instructions for Completing the 2018 CCR for Small Water Systems"*, the following language MAY be used to describe the potential health effects. The U.S. Environmental Protection Agency (EPA) did not provide standard health effect language for these TT violations in the Ground Water Rule; U.S. EPA 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.

(G) **Surface Water Systems:** For surface water systems that had a TT violation under the **Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Filter Backwash Recycling Rule (FBRR), or Long-term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR)**, as described in Item U of the document titled *"Instructions for Completing the 2018 CCR for Small Water Systems"*, 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 **Long-term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR)**, as described in Item U of the document titled *"Instructions for Completing the 2018 CCR for Small Water Systems"*, the following language MAY be used to describe the potential health effects. U.S. EPA did not provide standard health effect language for these TT violations in the LT2ESWTR; U.S. EPA 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.*