CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Memorandum

TO: HONORABLE MAYOR AND CITY COUNCIL

FROM: Kerrie Romanow

SUBJECT: SEE BELOW

DATE: July 29, 2019

Approved D. DSyC

Date 8/8/19

COUNCIL DISTRICT: 2, 7, 8

SUBJECT: SAN JOSE MUNICIPAL WATER SYSTEM'S 2019 PUBLIC HEALTH GOALS REPORT ON WATER QUALITY

RECOMMENDATION

(a) Conduct a Public Hearing for the purpose of accepting and responding to public comment regarding the San José Municipal Water System's 2019 Public Health Goals Report on water quality as required by the California Health and Safety Code; and

(b) Approve the San José Municipal Water System's 2019 Public Health Goals Report and direct staff to file the report with the State Water Resources Control Board.

OUTCOME

Approval of the recommendation will fulfill the requirements of the California Health and Safety Code.

BACKGROUND

California Health and Safety Code (Health and Safety Code), Section 116470[1], requires that all California water retailers who provide more than 10,000 service connections prepare a report every three years informing consumers of water quality constituents that exceeded State-adopted Public Health Goals (PHG). PHGs are non-enforceable water quality goals established by the California Office of Environmental Health Hazard Assessment and are based solely on public health risk considerations. Where there is no PHG for a specific contaminant, retailers are required to use Maximum Contaminant Level Goals (MCLG), established by the U.S. Environmental Protection Agency (EPA) for reporting purposes.

[1] Chapter 4 of the H&SC beginning with Section 116450 and including Section 116470 is known as the "California Safe Drinking Water Act."

In setting the PHGs/MCLGs, California Office of Environmental Health Hazard Assessment and EPA do not take into account any of the practical risk-management factors which are considered by the EPA and the State Water Resources Control Board when setting drinking water standards such as Maximum Contaminant Levels. Maximum Contaminant Levels are the highest level of a contaminant that is allowed in drinking water. When setting a Maximum Contaminant Level, the EPA and the State Water Resources Control Board consider factors such as analytical detection capability, available treatment technologies, benefits and costs. PHG/MCLGs are typically set at values lower than the corresponding Maximum Contaminant Levels.

The Health and Safety Code also requires that public water systems hold a public hearing for the purpose of accepting and responding to public comment on the report, which may be done as part of a regularly scheduled meeting. The PHG report is now being presented to Council to satisfy the public hearing requirements and to obtain Council approval of the report before submitting to the State Water Resources Control Board.

ANALYSIS

The San José Municipal Water System has prepared a PHG report (*Attachment A*) in compliance with the three-year reporting deadline. The report represents an analysis of drinking water quality data that has been collected over the past three years. The 2019 report covers data collected from 2016 through 2018 in the Evergreen, Edenvale, and Coyote Valley service areas. Since the North San Jose/Alviso service area has less than 10,000 service connections and is individually permitted by the State, a PHG report is not required for this service area. The San José Municipal Water System reports that at this time its water supply meets all primary drinking water standards set by the state and federal governments to protect public health.

The PHG report satisfies the Health and Safety Code requirements by presenting the following information:

- Contaminants identified in the local water supply that exceeded the PHG or MCLG during the past three years;
- Numerical public health risk associated with the maximum contaminant level and the PHG for each contaminant identified in exceedance;
- Public health risk categories and definitions of these categories for the contaminants identified in excess of the PHG or MCLG;
- The Best Available Technology to remove or reduce the concentration of the identified contaminants, if any;
- Recommended action for reduction of contaminants exceeding PHGs and basis for that decision.

Four contaminants were detected at levels above the applicable PHG/MCLG between 2016 and 2018: aluminum, arsenic, bromate, and total coliform. Although no follow up action is required for these readings, further information is provided.

Aluminum, a naturally occurring metal found in the earth's crust, was detected in 2016 and 2017. Aluminum levels were detected above the PHG, but still below the Maximum Contaminant Level, and required no follow up action.

Arsenic is a naturally occurring metallic element found in water due to the erosion of mineral deposits. The PHG for arsenic is 0.004 micrograms per liter (ug/L), and at the present time there are no laboratory methods available that can reliably measure arsenic as low as the PHG. One sample in 2017 showed detection of arsenic at a level of 2.1 ug/L, which is less than half the Maximum Contaminant Level of 10 ug/L, and therefore required no follow up action.

Bromate is formed when naturally-occurring bromide reacts with ozone during the disinfection process of surface water supplies. This disinfection is done by the wholesale water provider, Santa Clara Valley Water District (Valley Water). In 2018, bromate was detected at the two Valley Water treatment plants that supply the Evergreen service area. Valley Water staff monitors its raw and treated water supply and continues to optimize treatment for disinfection byproduct control. Detected values were above the PHG, but still below the Maximum Contaminant Level, and required no follow up action.

Total Coliform, a non-harmful indicator organism that triggers follow-up testing for the presence of any pathogens, was detected above the federal MCLG in 2016 and 2018 (there is no established PHG). After total coliform was detected, follow up actions were taken including thorough flushing and additional sampling. The subsequent check samples tested absent for total coliform. The Maximum Contaminant Level was never exceeded during the three-year reporting period.

To protect public health, the San José Municipal Water System implements a vigilant monitoring and maintenance program intended to meet state and federal requirements. A complete summary of the detected contaminants and the associated data can be found in the 2019 PHG report. No other contaminants were detected at levels above their PHG and/or federal MCLG during this reporting period.

EVALUATION AND FOLLOW-UP

This report is required to be completed every three years. No additional follow up actions with Council are expected at this time.

PUBLIC OUTREACH

A public meeting was held on August 5, 2019 at the San José Municipal Water System's office to receive public input and comments on the proposed report. A notice of the public meeting was published in the Evergreen Times and San José Post Record. A notice was also posted on the City's website. Notice of the public hearing was published in the San José Post Record and on the City's website.

COORDINATION

This report was coordinated with the City Attorney's Office.

COMMISSION RECOMMENDATION/INPUT

There is no board or commission recommendation or input for this action.

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

/s/
KERRIE ROMANOW
Director, Environmental Services

For questions please contact Jeffrey Provenzano, Deputy Director, at (408) 277-3671.

Attachment A – 2019 Public Health Goals Report on Water Quality

Attachment A

CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

PUBLIC HEALTH GOALS
REPORT ON WATER QUALITY

CITY OF SAN JOSE
MUNICIPAL WATER SYSTEM
(EVERGREEN, EDENVALE, AND COYOTE)
System No. 4310020

JUNE 2019

City of San Jose
Environmental Services Department

SAN JOSE MUNICIPAL WATER SYSTEM
PUBLIC HEALTH GOALS REPORT ON WATER QUALITY

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SECTION 1: BACKGROUND INFORMATION

WHAT ARE PUBLIC HEALTH GOALS (PHGS)?

PHGs are water quality goals established by the California Office of Environmental Health Hazard Assessment (OEHHA) and are based solely on public health risk considerations. In setting the PHGs, OEHHA does not take into account any of the practical risk-management factors which are considered by the United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (SWRCB) when setting drinking water standards such as Maximum Contaminant Levels (MCLs), including factors such as analytical detection capability, treatment technology available, benefits and costs. PHGs are typically set at values lower than the corresponding MCLs. PHGs are non-enforceable and are not required to be met by public water systems under the California Health and Safety Code. Maximum Contaminant Level Goals (MCLGs), established by USEPA, are the federal equivalent to PHGs.

REPORTING REQUIREMENTS:

Provisions of the California Health and Safety Code §116470(b) (see Attachment 1) specify that public water systems serving more than 10,000 service connections must prepare a special report if their water quality measurements have exceeded any PHGs. Reporting must be done every three years. The law also requires that where OEHHA has not adopted a PHG for a contaminant, the water suppliers are to use the MCLGs adopted by USEPA.

The purpose of this report is to inform consumers of contaminants in San José Municipal Water System's (SJMWS) drinking water that exceeded the PHGs or MCLGs during 2016, 2017, and 2018. Included in PHG report is the numerical public health risk associated with the Maximum Contaminant Level (MCL) and the PHG or MCLG, the category or type of risk to health that could be associated with each contaminant, the best treatment technology available that could be used to reduce the contaminant level, and an estimate of the cost to install that treatment if it is appropriate and feasible. For general information about the quality of the water delivered by SJMWS, please refer to the latest Annual Water Quality Report that was prepared in June 2019. The report can be found online at www.sjenvironment.org/waterquality.

WATER QUALITY DATA CONSIDERED:

The water quality data collected by SJMWS and by SJMWS's water suppliers between 2016 and 2018 were considered for the purpose of determining compliance with drinking water standards and PHG reporting requirements (see Attachment 2). This data was all summarized in SJMWS's Annual Water Quality Report, which is currently available to customers online at www.sjenvironment.org/waterquality. For each regulated contaminant, SWRCB establishes Detection Limits for Purposes of Reporting (DLR). DLRs are the minimum levels at which any analytical result must be reported to SWRCB. Analytical results below the DLRs cannot be quantified with any certainty. A constituent is "detected" when measured concentrations are above the DLR. In some cases, PHGs are set below the DLR.

GUIDELINES FOLLOWED:

The Association of California Water Agencies (ACWA) formed a workgroup which prepared guidelines for water utilities to use in preparing these PHG reports. ACWA guidelines were used in the preparation of this report. No guidance was available from state regulatory agencies.

BEST AVAILABLE TREATMENT TECHNOLOGY AND COST ESTIMATES:

Both USEPA and SWRCB adopted Best Available Technologies (BATs), which are the best known methods of reducing contaminant levels to the MCL. However, since many PHGs and MCLGs are set much lower than the MCL, it is not always possible or feasible to determine what treatment is needed to further reduce a contaminant to or below the PHG or MCLG. Where the MCLG or PHG is set at zero, there may not be commercially available technology available to reach that level. Estimating the costs to reduce a contaminant to zero is difficult, if not impossible because it is not possible to verify by analytical means that the level has been lowered to zero. In some cases, installing treatment to try and further reduce very low levels of one contaminant may have adverse effects on other aspects of water quality.

SECTION 2: CONTAMINANTS DETECTED THAT EXCEED PHGS OR MCLGS

The following is a discussion of the constituents that were detected in one or more of our drinking water sources at levels above the PHG, or if no PHG, above the MCLG. The four contaminants that were detected at levels above the applicable PHGs or MCLGs between 2016 and 2018 are:

Table 1: Constituents Detected Above PHG or MCLG (2016-2018)

Contaminant	Unit	CA MCL	DLR	PHG	MCLG	SJMWS Levels
Aluminum	mg/L	1	0.05	0.6	n/a	ND – 0.8
Arsenic	ug/L	10	2	0.004	0	ND – 2.1
Bromate	ug/L	10	1	0.1	0	ND – 4*
Total Coliform	P/A	5.0%	n/a	n/a	0	0 – 2.9%

* 2018 Valley Water treated surface water data
mg/L = milligrams per liter
ug/L = micrograms per liter
P/A = presence/absence
ND = Not Detected

A. ALUMINUM

Aluminum is a naturally occurring metal found in the earth's crust and is the most abundant metallic element in the environment. It can leach from rock and soil and is known to exist in groundwater. In its pure form, it is a soft, gray, shiny metal that is mined. Metallic aluminum is used as a structural material in the construction, automotive and aircraft industries, as well as in cookware, soft drink cans and aluminum foil. Aluminum salts are used as coagulants to purify municipal water that is drawn from lakes or reservoirs.

Although considered as a secondary standard under the USEPA, aluminum is categorized as a primary standard under the inorganic chemical category by the SWRCB. In 1989, the SWRCB established a primary MCL of 1.0 mg/L for aluminum in drinking water. Unless directed otherwise by the SWRCB, water systems monitor its water sources for inorganic chemicals once every three years.

The PHG value of 0.6 mg/L was established in 2001 after OEHHA concluded that this value provides a sufficient margin of safety for the large majority of the population who may be exposed to residual aluminum in drinking water.

SJMWS Results

As part of SJMWS routine monitoring, several groundwater samples taken in 2016 and 2017 had detections of aluminum, but only one sample had a value over the PHG. Test results ranged from non-detect levels to a high of 0.82 mg/L, which is still below the MCL of 1.0 mg/L. Results for the three years covered by this report (2016-2018) are summarized by year below:

- **2016:** One groundwater source sample in SJMWS' Coyote service area had aluminum detected at a level of 0.43 mg/L

- **2017:** Eight groundwater sources from the Evergreen, Edenvale and Coyote service areas were tested for inorganic chemicals. Of the eight, only three sources had detected levels of aluminum ranging from 0.48 mg/L to 0.82 mg/L

- **2018:** Inorganic chemical compliance sampling was not required in 2018

Health Risk Category and Level

Aluminum compounds are also found in some antacids, food additives, and antiperspirants. Because of the prevalence of aluminum in foods, consumer products, pharmaceuticals, and the environment, it is impossible for humans to avoid exposure to aluminum compounds. Aluminum in potable drinking water constitutes a small fraction of the total daily intake. According to OEHHA, the health risk category for aluminum is neurotoxicity and immunotoxicity, which means long-term exposure can potentially harm the nervous and immune systems. Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects. Colored water is another noticeable effect of aluminum when above the SMCL.

Best Available Technology

As a naturally occurring element, aluminum is released to the environment mainly by natural processes. There is currently no technology available that is approved by the SWRCB that will reduce aluminum levels below the PHG.

Both the City of San José and the wholesale water provider, Valley Water, have a watershed management/protection program to identify and reduce potential contamination sources to groundwater. These efforts, together with a proactive water quality monitoring program, are significantly more efficient mechanisms for reducing contaminants, including aluminum, than constructing an expensive treatment facility with no assurance of meeting the performance goal. SJMWS does not own or operate a water treatment facility and therefore cannot provide an exact cost estimate to treat aluminum to levels below the PHG.

Recommendations

SJMWS will continue to monitor and protect water sources, as required by state and federal regulations. In the event that aluminum exceeds the MCL, SJMWS will coordinate with the SWRCB to identify solutions for removing or reducing aluminum in the water to levels below the MCL. No further action is proposed at this time.

B. ARSENIC

Arsenic is a naturally occurring metallic element found in water due to the erosion of mineral deposits. It can also enter water supplies from runoff from agricultural and industrial activities. Arsenic, categorized as an inorganic chemical, is a toxic chemical element that is unevenly distributed in the Earth's crust in soil, rocks, and minerals. According to the SWRCB, arsenic is ubiquitous in nature and is commonly found in drinking water sources in California.

The PHG for arsenic is 0.004 ug/L. The federal and state MCL for arsenic is 10 ug/L (the federal MCLG is 0 ug/L). The DLR for arsenic is 2 ug/L, and at the present time there are no laboratory methods available that can reliably measure arsenic to levels as low as the PHG.

SJMWS Results

Arsenic was below the MCL in all of SJMWS's water sources at all times during the period covered in this report. Several inorganic chemical analyses were performed between 2016-2018 as part of routine monitoring, and only one groundwater well source in the Evergreen service area exceeded the arsenic PHG. The detected level was 2.1 ug/L, which is less than half the MCL of 10 ug/L.

Health Risk Category and Level

According to OEHHA, ingestion of arsenic can pose a risk of cancer. The health risk category associated with arsenic is carcinogenicity. The PHG is based on a level that will result in not more than 1 excess cancer in 1 million people who drink 2 liters daily for 70 years.

Arsenic can also result in a number of non-cancer effects at higher levels of exposure (e.g., vascular effects or skin effects), but the cancer risk is the most sensitive endpoint, and the basis of the PHG. Although short-term exposures to high doses cause adverse effects in people, such exposures do not occur from public water supplies in the U.S. that comply with the arsenic MCL.

Best Available Technology

The SWRCB has identified the following treatment technologies as Best Available Technology, treatment techniques, or other means available for achieving compliance with the MCL:

- Activated Alumina
- Coagulation/Filtration
- Ion Exchange
- Lime Softening
- Reverse Osmosis
- Electrodialysis
- Oxidation/Filtration

Note that BATs are designed for treatment to achieve compliance with the corresponding MCL only, and not PHGs. It is unlikely that arsenic will be removed to a level lower than the PHG. The PHG level is lower than laboratory tests can detect, so it would be impossible to confirm if any source water has actually

reached levels below the PHG after treatment. SJMWS does not own or operate a water treatment facility and therefore cannot provide an exact cost estimate to treat arsenic.

Recommendation

SJMWS will continue to monitor and protect water sources, as required by state and federal regulations. In the event that arsenic levels exceed the MCL, SJMWS will coordinate with the SWRCB to identify solutions for removing or reducing arsenic levels in the water. No further action is proposed at this time.

C. BROMATE

Bromate is not commonly found in water, but it can be formed as a byproduct of ozonation disinfection of drinking water, or as a byproduct from treatment of water with concentrated hypochlorite. It is formed when naturally occurring bromide reacts with ozone during the disinfection process. SJMWS purchases treated surface water from Valley Water and delivers it to its Evergreen customers. Since 2006, Valley Water has used ozone as the primary disinfectant. Ozone disinfection is highly effective at inactivating microbial contamination and creates fewer disinfection by-products than chlorine.

The MCL for bromate is 10 ug/L, with a PHG of 0.1 ug/L. The DLR for bromate is 1 ug/L, and at the present time there are no laboratory methods available that can reliably measure bromate to levels as low as the PHG.

SJMWS Results

The reported bromate data found in Table 1 is from the 2018 water quality data from Valley Water's two water treatment plants that serve the Evergreen service area. Valley Water had detected levels of bromate ranging from non-detected to 4 ug/L.

Health Risk Category and Level

The category of health risk for bromate is carcinogenicity as it is capable of producing cancer. OEHHA has determined that the numerical health risk associated with concentrations at the PHG is equivalent to one excess case of cancer in 1,000,000 people.

Best Available Technology

The BAT for bromate reduction is reverse osmosis (RO). RO treatment reduces the naturally-occurring bromide in source water by reducing the natural organic matter in water. When this is reduced, the demand for ozone decreases, therefore reducing bromate formation. Because the DLR for bromate (1 ug/L) is greater than the PHG, it would be difficult to assess the effectiveness of RO treatment on reaching the PHG level. SJMWS does not own or operate a water treatment facility and therefore cannot provide an exact cost estimate to treat bromate.

Recommendation

Valley Water staff monitors its raw and treated water supply and continues to optimize treatment for disinfection byproduct control. Detected bromate levels are well below the state and federal MCL. However, if an MCL violation occurs, SJMWS will coordinate with Valley Water and the SWRCB to

identify solutions for removing or reducing bromate in the water. No further action is proposed at this time.

D. COLIFORM BACTERIA

The MCL for coliform is more than 5.0% of samples testing positive for the presence of coliforms per month, and the MCLG is zero samples with presence of coliform per month. Coliform bacteria are an indicator organism that are common in nature and are not generally considered harmful. They are used as an indicator because of the ease of monitoring and analysis.

The reason for the coliform drinking water standard is to minimize the possibility that the water contains pathogens, which are organisms that cause waterborne disease. If a positive sample is found, it indicates a potential problem that needs to be investigated and follow up sampling is required. It is not unusual for a system to have an occasional positive sample. It is difficult, if not impossible, to ensure that a system will never get a positive sample. Additionally, due to the sensitive nature of the laboratory analysis method used throughout the time period, some positive results may be caused by sample contamination.

Because coliform is only an indicator of the potential presence of pathogens, it is not possible to state a specific numerical health risk or public health risk category.

SJMWS Results

Between 2016 and 2018, SJMWS collected between 100 and 125 samples each month for coliform analysis. Coliform bacteria exceeded the MCLG of zero in 6 of the 36 months. Of these six, none exceeded the MCL of 5.0% in any one month. Results for the three years covered by this report (2016-2018) are summarized by year below:

- **2016**: Four months with total coliform positive samples; the highest monthly percentage of positives was 2.7%
- **2017**: There was no total coliform detected in any of the samples in 2017
- **2018**: Two months with total coliform positive samples; the highest monthly percentage of positives was 2.9%

Health Risk Category and Level

Because coliform is only an indicator organism for pathogens in drinking water, its numerical health risk cannot be determined. While MCLGs are normally set at a level where no known or anticipated adverse effects on health would occur, the USEPA has indicated that it is not possible to do so with coliform, since the actual pathogens are not being measured.

Best Available Technology

As part of routine operations, SJMWS takes steps described by SWRCB as "best available technology" for coliform bacteria in Section 64447, Title 22, CCR, including protection of wells from contamination and proper maintenance of the distribution system. Some steps are implemented from the wholesale agencies who supply water to SJMWS, such as the filtration and/or disinfection of surface water supplies. Some

steps are implemented in a modified way following coordination with and approval by SWRCB, such as biannual temporary disinfection of groundwater supplies in lieu of constant disinfection.

Other equally important measures that have been implemented to protect drinking water include an effective cross-connection control program, an effective monitoring and surveillance program, flushing of mains and hydrants, and maintaining positive pressures in the distribution system.

There is one method that could potentially further reduce the presence of total coliform, which is to increase the amount of disinfectant residual in the distribution system and/or the regularity of disinfection of groundwater supplies. The tradeoffs include increased chemical usage and storage, a change in the taste and odor of the drinking water, and increased potential for the presence of cancer-causing disinfection byproducts. Additionally, there are limits for the maximum amount of disinfectant residual allowed in the distribution system as set by SWRCB and USEPA.

Recommendations

SWRCB and USEPA set primary drinking water standards to protect public health, which are met by SJMWS. There is no known treatment technology that can be added which could ensure complete absence of coliform bacteria in all water samples; therefore, the costs associated with incorporating any additional technology may be better utilized to provide greater public health protection benefits if spent in other aspects, such as operations, maintenance, and water quality monitoring programs. SJMWS will continue to coordinate with SWRCB to identify any additional measures that will improve operations and water quality in the distribution system. No further action is proposed at this time.

For more information on health risks: The adverse health effects for each chemical with a PHG are summarized in a PHG technical support document. These documents are available on the OEHHA web site (http://www.oehha.ca.gov). Also, technical fact sheets on most of the chemicals having federal MCLs can be found at http://www.epa.gov/your-drinking-water/table-regulated-drinking-water-contaminants.

ATTACHMENT 1

EXERPT FROM CALIFORNIA HEALTH & SAFETY CODE SECTION 116470

(b) On or before July 1, 1998, and every three years thereafter, public water systems serving more than 10,000 service connections that detect one or more contaminants in drinking water that exceed the applicable public health goal, shall prepare a brief written report in plain language that does all of the following:

(1) Identifies each contaminant detected in drinking water that exceeds the applicable public health goal.

(2) Discloses the numerical public health risk, determined by the office, associated with the maximum contaminant level for each contaminant identified in paragraph (1) and the numerical public health risk determined by the office associated with the public health goal for that contaminant.

(3) Identifies the category of risk to public health, including, but not limited to, carcinogenic, mutagenic, teratogenic, and acute toxicity, associated with exposure to the contaminant in drinking water, and includes a brief plainly worded description of these terms.

(4) Describes the best available technology, if any is then available on a commercial basis, to remove the contaminant or reduce the concentration of the contaminant. The public water system may, solely at its own discretion, briefly describe actions that have been taken on its own, or by other entities, to prevent the introduction of the contaminant into drinking water supplies.

(5) Estimates the aggregate cost and the cost per customer of utilizing the technology described in paragraph (4), if any, to reduce the concentration of that contaminant in drinking water to a level at or below the public health goal.

(6) Briefly describes what action, if any, the local water purveyor intends to take to reduce the concentration of the contaminant in public drinking water supplies and the basis for that decision.

...

(f) Pending adoption of a public health goal by the Office of Environmental Health hazard Assessment pursuant to subdivision (c) of Section 116365, and in lieu thereof, public water systems shall use the national maximum contaminant level goal adopted by the United States Environmental Protection Agency for the corresponding contaminant for purposes of complying with the notice and hearing requirements of this section.

ATTACHMENT 2

CALIFORNIA MCLS & PHGS AND FEDERAL MCLGS

PARAMETERS/CONTAMINANTS	Units	State MCL	DLR	PHG or (MCLG)	PHG EXCEEDED?
INORGANICS					
ALUMINUM	mg/L	1	0.05	0.6	YES
ANTIMONY	mg/L	0.006	0.006	0.02	NO
ARSENIC	ug/L	10	2	0.004	YES
ASBESTOS	million fibers/L	7	0.2	7	NO
BARIUM	mg/L	1	0.1	2	NO
BERYLLIUM	mg/L	0.004	0.001	0.001	NO
CADMIUM	mg/L	0.005	0.001	0.00004	NO
CHROMIUM	mg/L	0.05	0.01	withdrawn	NO
COPPER (at-the-tap; 90th percentile)	mg/L	1.3	0.05	0.3	NO
CYANIDE	mg/L	0.15	0.1	0.15	NO
FLUORIDE	mg/L	2	0.1	1	NO
LEAD (at-the-tap; 90th percentile)	mg/L	0.015	0.005	0.0002	NO
MERCURY	mg/L	0.002	0.001	0.0012	NO
NICKEL	mg/L	0.1	0.01	0.012	NO
NITRATE [as N03]	mg/L	45	2	45	NO
NITRATE + NITRITE [as N]	mg/L	10	--	10	NO
NITRITE [as N]	mg/L	1	0.4	1	NO
PERCHLORATE	mg/L	0.006	0.004	0.006	NO
SELENIUM	mg/L	0.05	0.005	(0.05)	NO
THALLIUM	mg/L	0.002	0.001	0.0001	NO
ORGANIC CHEMICALS					
ALACHLOR	mg/L	0.002	0.001	0.004	NO
ATRAZINE	mg/L	0.001	0.0005	0.00015	NO
BENTAZON	mg/L	0.018	0.002	0.2	NO
BENZO (a) PYRENE	mg/L	0.0002	0.0001	0.000004	NO
BROMATE	mg/L	10	1	0.0001	YES
CARBOFURAN	mg/L	0.018	0.005	0.0017	NO
CHLORDANE	mg/L	0.0001	0.0001	0.00003	NO
CHLORITE	ug/L	1	0.02	0.05	NO
2,4-DICHLOROPHENOXYACETIC ACID	mg/L	0.07	0.01	0.02	NO
DALAPON	mg/L	0.2	0.01	0.79	NO
DIBROMOCHLOROPROPANE [DBCP]	mg/L	0.0002	0.00001	0.0000017	NO
DI (2-ETHYLHEXYL) ADIPATE	mg/L	0.4	0.005	0.2	NO
DI (2-ETHYLHEXYL) PHTHALATE	mg/L	0.004	0.003	0.012	NO
DINOSEB	mg/L	0.007	0.002	0.014	NO
DIOXIN [2,3,7,8 - TCDD]	mg/L	3x10-8	5x10-9	(0)	NO
DIQUAT	mg/L	0.02	0.004	0.015	NO
ENDOTHALL	mg/L	0.1	0.045	0.58	NO
ENDRIN	mg/L	0.002	0.0001	0.0018	NO
ETHYLENE DIBROMIDE [EDB]	mg/L	0.00005	0.00002	0.00001	NO
GLYPHOSATE	mg/L	0.7	0.025	0.9	NO
HEPTACHLOR	mg/L	0.00001	0.00001	0.000008	NO
HEPTACHLOR EPOXIDE	mg/L	0.00001	0.00001	0.000006	NO
HEXACHLOROBENZENE	mg/L	0.001	0.0005	0.00003	NO
HEXACHLOROCYCLOPENTADIENE	mg/L	0.05	0.001	0.05	NO
LINDANE	mg/L	0.0002	0.0002	0.000032	NO
METHOXYCHLOR	mg/L	0.03	0.01	0.03	NO

PARAMETERS/CONTAMINANTS	Units	State MCL	DLR	PHG or (MCLG)	PHG EXCEEDED?
MOLINATE	mg/L	0.02	0.002	0.001	NO
OXAMYL	mg/L	0.05	0.02	0.026	NO
PENTACHLOROPHENOL	mg/L	0.001	0.0002	0.0003	NO
PICLORAM	mg/L	0.5	0.001	0.5	NO
POLYCHLORINATED BIPHENYLS [PCBs]	mg/L	0.0005	0.0005	0.00009	NO
SILVEX [2,4,5-TP]	mg/L	0.05	0.001	0.025	NO
SIMAZINE	mg/L	0.004	0.004	0.004	NO
THIOBENCARB	mg/L	0.07	0.001	0.07	NO
TOXAPHENE	mg/L	0.003	0.001	0.00003	NO
BENZENE	mg/L	0.001	0.0005	0.00015	NO
CARBON TETRACHLORIDE	mg/L	0.0005	0.0005	0.0001	NO
1,2-DICHLOROBENZENE [ORTHO]	mg/L	0.6	0.0005	0.6	NO
1,4-DICHLOROBENZENE [PARA]	mg/L	0.005	0.0005	0.006	NO
1,1-DICHLOROETHANE [1,1-DCA]	mg/L	0.005	0.0005	0.003	NO
1,2-DICHLOROETHANE [1,2-DCA]	mg/L	0.0005	0.0005	0.0004	NO
1,1-DICHLOROETHENE [1,1-DCE]	mg/L	0.006	0.0005	0.01	NO
CIS-1,2-DICHLOROETHYLENE	mg/L	0.006	0.0005	0.1	NO
TRANS-1,2-DICHLOROETHYLENE	mg/L	0.01	0.0005	0.06	NO
DICHLOROMETHANE (METHYLENE CHLORIDE)	mg/L	0.005	0.0005	0.004	NO
1,2-DICHLOROPROPANE	mg/L	0.005	0.0005	0.0005	NO
1,3-DICHLOROPROPENE	mg/L	0.0005	0.0005	0.0002	NO
ETHYLBENZENE	mg/L	0.3	0.0005	0.3	NO
METHYL TERT BUTYL ETHER (MTBE)	mg/l	0.013	0.003	0.013	NO
MONOCHLOROBENZENE	mg/L	0.07	0.0005	0.2	NO
STYRENE	mg/L	0.1	0.0005	(0.1)	NO
1,1,2,2-TETRACHLOROETHANE	mg/L	0.001	0.0005	0.0001	NO
TETRACHLOROETHYLENE [PCE]	mg/L	0.005	0.0005	0.00006	NO
TOLUENE	mg/L	0.15	0.0005	0.15	NO
1,2,4-TRICHLOROBENZENE	mg/L	0.005	0.0005	0.005	NO
1,1,1-TRICHLOROETHANE [1,1,1-TCA]	mg/L	0.2	0.0005	1	NO
1,1,2-TRICHLOROETHANE [1,1,2-TCA]	mg/L	0.005	0.0005	0.0003	NO
TRICHLOROETHYLENE [TCE]	mg/L	0.005	0.0005	0.0017	NO
TRICHLOROFLUOROMETHANE (FREON 11)	mg/L	0.15	0.005	0.7	NO
TRICHLOROTRIFUOROETHANE (FREON 113)	mg/L	1.2	0.01	4	NO
VINYL CHLORIDE	mg/L	0.0005	0.0005	0.00005	NO
XYLENES [SUM OF ISOMERS]	mg/L	1.75	0.0005	1.8	NO
MICROBIOLOGICAL					
COLIFORM % POSITIVE SAMPLES	%	5	n/a	(zero)	YES
CRYPTOSPORIDIUM*		TT		(zero)	NO
GIARDIA LAMBLIA		TT		(zero)	NO
LEGIONELLA		TT		(zero)	NO
VIRUSES		TT		(zero)	NO
RADIOLOGICAL					
ALPHA ACTIVITY, GROSS	pCi/L	15	3	(zero)	NO
BETA ACTIVITY, GROSS	pCi/L	4 mrem/yr	4	(zero)	NO
RADIUM 226	pCi/L	--	1	0.05	NO
RADIUM 228	pCi/L	--	1	0.019	NO
RADIUM 226 + RADIUM 228	pCi/L	5	--	--	NO
STRONTIUM 90	pCi/L	8	2	0.35	NO
TRITIUM	pCi/L	20000	1000	400	NO
URANIUM	pCi/L	20	1	0.43	NO

Abbreviations: MCL = Maximum Contaminant Level; MCLG = Maximum Contaminant Level Goal; PHG = Public Health Goal; DLR = Detection Limit for purposes of Reporting, set by SWRCB; TT = Treatment Technique