

Kings Mountain Park Mutual Water Company

San Mateo County
Woodside California 95062
System ID # 4100539

Watershed Sanitary Survey

Revised August 2015

Preface: This Watershed Sanitary Survey has been completed to meet the requirements of the California Code of Regulations, Title 22 Chapter 17. This is also used periodically review the health of the watershed and to use as a guidance document to plan activities in the watershed. The Watershed survey will be available to all consumers of the water company and will be posted on the company website.

1.0 Physical and hydrological description of the watershed:

The water company is located in the unincorporated community of Kings Mountain and lies near the ridgeline of the Santa Cruz Mountains. Linear valleys and mountains characterize the area and the terrain is rugged and steep. The area is sparsely populated and the watershed of Tunitas Creek up to the point of collection is relatively small.

The watershed is approximately 125 acres or 0.2 square miles of sparsely developed land in the western slopes of the northern Santa Cruz Mountains, wholly within San Mateo County. The large majority, estimated to be greater than 90% of the existing watershed is owned and managed by the non-profit Mid-Peninsula Open Space District. (MPOSD). The land within the watershed that is within MPOSD land is wholly within the Purisima Creek Redwoods Open Space Preserve boundary. District Rangers are responsible for enforcing district regulations and are on regular patrol of the area. The most distant and highest elevation land within the watershed, which runs along the ridgeline, has some privately held parcels, some with residences. The number of residences within the watershed is estimated to be fewer than 25. There is no known commercial, industrial or farming activity within the watershed. Maps of the area, the watershed and the locations of the water sources can be found in Appendix B of this document.

2.0 Summary of the source water Quality Monitoring Data:

The Company samples the source water as required by the San Mateo County Department of Public Health, California State Department of Public Health and most

recently, the California State Water Resources Control Board. and all monitoring results are submitted to regulatory agency of record. Additionally, results are distributed to all members of the water company. This comes in the form of the Annual Consumer Confidence Report (CCR). A copy of the previous five years of reports is attached in appendix A of this document.

2.1 Bacteriological tests: No total coliform or fecal coliform bacteria were detected during routine monthly water testing completed in 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, and through July of 2015 at the time of this report.

2.2. Source turbidity. The Company began source water turbidity sampling in January 2009. The Turbidimeter is tied to the source water pumps so that when source water turbidity reaches 1.00 NTU, the pumps are shut down. Turbidity during this time period ranged from .098 NTU to 1.003.

2.3 pH. pH of the water from 2010 through 2015 ranged from 8.1 to 8.5 with an average of 8.3.

2.4. Temperature. Temperature is measured after primary and secondary filtration, all of which is performed in uninsulated structures. The temperature of the water between 2010 and 2015 ranged from 3.1 C to 25.9 C.

2.5 Disinfection by-products. A disinfectant residual in the domestic water is necessary to inactivate pathogens, maintain water quality, and prevent regrowth in the distribution system. Disinfection residuals are necessary to maintain water quality, however, it is generally recognized that disinfection may contribute to the formation of disinfection by-products. (DBPs)

Disinfectants react with organic matter to produce DBPs. Researchers have determined that the natural organic matter (NOM) is the principal precursor to DBP formation. Source water contains the precursors of DBPs generally as naturally occurring organic substances such as humic and folic acids. These acids belong to a family of compounds that are formed during the decomposition of vegetation. Halogenated organic byproducts such as chloroform and trihalomethanes are produced when free chlorine reacts with NOM. High concentrations of these DBP are thought to be a health concern.

2. 5 Inorganic and Organic Contaminants.

The schedule for testing for Inorganic and organic constituents is prescribed by the county. Only constituents that had detectable levels, whether below or above the MCL or above or below reportable limits are listed. A complete set of the previous 5 years of analytical results are available from the water company upon request.

Note:

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water.

Source: Water that is tested prior to any treatment.

Please reference the attached CCR's for a description of the likely sources of the different contaminants. Also refer to Appendix C of this document for additional information on sources of contamination and their health effects.

2010

	Level	MCL	Source of water
Barium	130 ug/l	1000 ug/l	Source
Nickel	4.0 ug/l		Source
Combined radium	0.879 pCi/l	100 ug/l	Source
Fluoride	0.30 mg/l	2.0 mg/l	Source
Nitrate as NO3	1.1 mg/l	45 mg/l	Source
Nitrate and Nitrite as N	0.24 mg/l	10 mg/l	Source
TTHM	91 ug/l	80ug/l	Treated water
HAA5	34 ug/l	60 ug/l	Treated water
Sodium	18 mg/l		Source
Hardness	260 mg/l		Source

2011

	Level	MCL	Source of water
Nitrite (as Nitrate NO3)	0.24 mg/l	10 mg/l	Source
TTHM	34 ug/l	80ug/l	Treated water
HAA5	77 ug/l	60 ug/l	Treated water

2012

	Level	MCL	Source of water
Nickel	14 ug/l	50 ug/l	Source
Flouride	0.30 mg/l	10 mg/l	Source
Nitrate as NO3	ND	60 ug/l	Source
Nitrite as nitrate NO3	ND	80 ug/l	Source
TTHM	68 ug/l	60 ug/l	Treated water
HAA5	51 ug/l	45 mg/l	Treated water
Sodium	11 mg/l		
Hardness	195 mg/l		

2013

	Level	MCL	Source of water
TTHM	67 ug/l	80ug/l	Treated water
HAA5	54 ug/l	60 ug/l	Treated water

2014

	Level	MCL	Source of water
Barium	130 ug/l	100 ug/l	Source
Nickel	<10 ug/l	50 ug/l	Source
Combined Radium	0.879 mg/l	45 mg/l	Source
flouride	0.32 mg/l	10 mg/l	Source
Nitrate as NO3	ND	60 ug/l	Source
Nitrite as nitrate NO3	<2.0 mg/l	80 ug/l	Source
TTHM	46.9 ug/	60 ug/l	Treated water
HAA5	87.05 ug/l	45 mg/l	Treated water
Sodium	17 mg/l		
Hardness	233 mg/l		

2015 (up to August 2015)

	Level	MCL	Source of water
TTHM	60.31 ug/l	80 ug/l	Treated water
HAA5	13.25 ug/l	60 ug/l	Treated water

Description of activities and sources of Contamination:

Due to the rural and remote nature of the watershed, the fact that much of it is designated as park land, the lack of private residences (thus few septic tanks), no industry, no commercial activity and only two roads (highway 35 and Tunitas Creek Road) that bisect the entire watershed, there are minimal activities and sources of contamination within the existing watershed. The set backs of existing homes and septic systems from the collection points of the drinking water greatly limit septic tanks as a potential source of contamination. Additionally, the watershed is monitored for illegal dumping, and there have been no recorded instances of dumping of materials that could contaminate the watershed within the past five years. There have been no known vehicular accidents that have released hazardous materials along the roadways within the watershed. Also, there are no commercial lumbering activities in the watershed.

Description of any significant changes in the past five years, which could affect the source water:

There have been no significant changes within the watershed within the past five years. There have been no new road building, no new homes, and no new septic systems that the

company is aware of that have been developed within the boundaries of the existing watershed.

Watershed control and Management Practices:

As the vast majority of the watershed is owned by the MPOSD and is designated permanently as open space, the Company relies of the MPOSD to manage the watershed. It is the MPOSD policy to not alter or develop the land within the existing watershed. There a couple of sparsely used hiking trails within the watershed, and none that come close where the water source is. There are no plans to expand or develop any new trails within the watershed at this time. The forested areas within the watershed are almost exclusively second and third growth redwood, Douglas fir and Tanbark oak. Though the terrain is sloped, there have been no visible signs of erosion or landslides dues to the fact that there has been no active logging with the watershed for several decades. This has allowed for the watershed to remain quite stable and consistent for the past several decades. Due to the MPOSD mandate to preserve the park for future generations, it is anticipated that the watershed will remain well preserved without risk from development or erosion or logging activities, which are the greatest threats to watersheds of this type.

Evaluation of the Company water systems ability to meet the requirements of Chapter 17, Title 22 of the California Code of Regulations:

The Company, through its Board and System Manager, is confidant that is can maintain safe and healthy drinking water as required by Health and Safety code to its customers. The infrastructure of the water company meets all current regulatory requirements. Due to the rural nature of the watershed and that it is permanently projected as open space; there is minimal risk of contaminating that water supply. Furthermore, in close cooperation with the local governing agency, The San Mateo County Department of Public Health, the company regularly monitors a wide variety water quality parameters as required.

Recommendations and corrective actions:

Currently, the water company has no recommendations or corrective actions underway as the recent sanitary survey as performed by the California State Water Resources Control Board had found no deficiencies in the source water/watershed. The company will continue to monitor the watershed for threats the existing surface water supply and will mitigate any issues as they develop.

Appendix A

2010 Consumer Confidence Report

Water System Name: King's Mountain Park Mutual Water Company Report Date: May 1, 2011

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2010.

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

Type of water source(s) in use: Surface water

Name & location of source(s): Purissima Creek Watershed

Drinking Water Source Assessment information: See attached copy of the Source Water Assessment.

Time and place of regularly scheduled board meetings for public participation: Every third Tuesday of the month, 7: 30 p.m.

For more information, contact: Werner Glinka, President Phone: 650.851.5909

TERMS USED IN THIS REPORT

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

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

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

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

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

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

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

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

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

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

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

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

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

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

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	5		0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	5		0	1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant
Sodium (ppm)	7/19/10	18 ppm		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	7/19/10	260 ppm		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Barium	7/19/10	130 ppb		1000 ppb		Erosion from natural deposits.
Nickel	7/19/10	4.0 ppb		100 ppb		Erosion from natural deposits.
Combined Radium	7/19/10	0.879 pCi/l		5 pCi/l		Erosion from natural deposits.
Fluoride	7/19/10	0.30 ppm		2.0 ppm		Erosion from natural deposits.
Nitrite (as Nitrogen N)	7/19/10	0.24 ppm		1.0 ppm		Runoff and leaching from fertilizer use. Leaching from septic tanks. Erosion from natural deposits.
Nitrite (as nitrate NO3)	7/19/10	1.1 ppm		45 ppm		Erosion from natural deposits.
Haloacetic acids (HAA5)	7/19/10	34 ppb		60 ppb		Byproduct of drinking water chlorination.
TTHM (Total Trihalomethane)	various	91 ppb	62-91 ppb	80 ppb		Byproduct of drinking water chlorination.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

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

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ

transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique ^(a) (Type of approved filtration technology used)	Rosedale filter bag for primary filtration. Homespring Ultra filtration units for secondary filtration.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to ____ NTU in 95% of measurements in a month. 2 – Not exceed ____ NTU for more than eight consecutive hours. 3 – Not exceed ____ NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	.003 NTU
Number of violations of any surface water treatment requirements	None

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

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

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

Summary Information for Surface Water Treatment

Water is initially filtered through a Rosedale filter bag. The water is then processed through Homespring ultra-filtration units which meets current federal requirements for removal of *Cryptosporidium*. Chlorine solution is then injected and water is routed to a storage tank to ensure adequate chlorine contact time. Daily measurements of Chlorine and turbidity are taken. Automated systems prevent water with elevated turbidity to enter system. Automated chlorine monitors system to ensure that chlorine is within a specific operating range. Weekly residual chlorine tests are performed at first point of use to ensure adequate chlorine in system.

2011 Consumer Confidence Report

Water System Name: King's Mountain Park Mutual Water Company Report Date: May 16, 2012

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Type of water source(s) in use: Surface water

Name & location of source(s): Purísima Creek Watershed

Drinking Water Source Assessment information: See attached copy of the Source Water Assessment.

Time and place of regularly scheduled board meetings for public participation: Every third Tuesday of the month, 7: 30 p.m.
location announced each month

For more information, contact: Tom Koos, System Manager Phone: 650.465.5774

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Nitrite (as nitrate NO ₃)	10/24/11	1.1 ppm		45 ppm		Erosion from natural deposits.
Haloacetic acids (HAA5)	7/19/10	34 ppb		60 ppb		Byproduct of drinking water chlorination.
THM (Total Trihalomethane)	various	77 ppb	60-77 ppb	80 ppb		Byproduct of drinking water chlorination.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

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Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	.093 NTU
Number of violations of any surface water treatment requirements	None

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

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Water is initially filtered through a Rosedale filter bag. The water is then processed through Homespring ultra-filtration units which meets current federal requirements for removal of *Cryptosporidium*. Chlorine solution is then injected and water is routed to a storage tank to ensure adequate chlorine contact time. Daily measurements of Chlorine and turbidity are taken. Automated systems prevent water with elevated turbidity to enter system. Automated chlorine monitors system to ensure that chlorine is within a specific operating range. Weekly residual chlorine tests are performed at first point of use to ensure adequate chlorine in system. Currently, the company has a waiver for the iron which is a secondary drinking water standard.

2012 Consumer Confidence Report

Water System Name: King's Mountain Park Mutual Water Company Report Date: May 17, 2013

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2012.

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

Type of water source(s) in use: Surface water

Name & location of source(s): Purissima Creek Watershed

Drinking Water Source Assessment information: See attached copy of the Source Water Assessment.

Time and place of regularly scheduled board meetings for public participation: Every third Tuesday of the month, 7: 30 p.m. location announced each month

For more information, contact: Tom Koos, System Manager Phone: 650.465.5774

TERMS USED IN THIS REPORT

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

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

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

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

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

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

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

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

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

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

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

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0		More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0		A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	5		0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	5		0	1.3	0.17	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)	3/25/12	11 ppm		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	3/25/12	195 ppm		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Barium	7/19/10	130 ppb		1000 ppb		Erosion from natural deposits.
Nickel	3/25/12	14 ppb		100 ppb		Erosion from natural deposits.
Combined Radium	7/19/10	0.879 pCi/l		5 pCi/l		Erosion from natural deposits.
Fluoride	3/25/12	0.30 ppm		2.0 ppm		Erosion from natural deposits.
Nitrite (as Nitrogen N)	7/5/12	ND		1.0 ppm		Runoff and leaching from fertilizer use. Leaching from septic tanks. Erosion from natural deposits.
Nitrite (as nitrate NO3)	6/21/12	ND		45 ppm		Erosion from natural deposits.
Haloacetic acids (HAA5)	various	51 ppb	28-50.8 ppb	60 ppb		Byproduct of drinking water chlorination.
TTHM (Total Trihalomethane)	various	68 ppb	40.1-67.62 ppb	80 ppb		Byproduct of drinking water chlorination.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

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

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ

transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	Rosedale filter bag for primary filtration. Homespring Ultra filtration units for secondary filtration.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	.048 NTU
Number of violations of any surface water treatment requirements	None

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

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

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

Summary Information for Surface Water Treatment

Water is initially filtered through a Rosedale filter bag. The water is then processed through Homespring ultra-filtration units which meets current federal requirements for removal of *Cryptosporidium*. Chlorine solution is then injected and water is routed to a storage tank to ensure adequate chlorine contact time. Daily measurements of Chlorine and turbidity are taken. Automated systems prevent water with elevated turbidity to enter system. Automated chlorine monitors system to ensure that chlorine is within a specific operating range. Weekly residual chlorine tests are performed at first point of use to ensure adequate chlorine in system.

2013 Consumer Confidence Report

Water System Name: King's Mountain Park Mutual Water Company Report Date: March 7, 2014

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2013.

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

Type of water source(s) in use: Surface water

Name & location of source(s): Purissima Creek Watershed

Drinking Water Source Assessment information: See attached copy of the Source Water Assessment.

Time and place of regularly scheduled board meetings for public participation: Every third Tuesday of the month, 7: 30 p.m.
location announced each month

For more information, contact: Tom Koos, System Manager Phone: 650.465.5774

TERMS USED IN THIS REPORT

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

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

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

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

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

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

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

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

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

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

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

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

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

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

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Contaminants that may be present in source water include:

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

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

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

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA

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

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

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	5		0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	5		0	1.3	0.17	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)	3/25/12	11 ppm		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	3/25/12	195 ppm		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Barium	7/19/10	130 ppb		1000 ppb		Erosion from natural deposits.
Nickel	3/25/12	14 ppb		100 ppb		Erosion from natural deposits.
Combined Radium	7/19/10	0.879 pCi/l		5 pCi/l		Erosion from natural deposits.
Fluoride	3/25/12	0.30 ppm		2.0 ppm		Erosion from natural deposits.
Nitrite (as Nitrogen N)	7/5/12	ND		1.0 ppm		Runoff and leaching from fertilizer use. Leaching from septic tanks. Erosion from natural deposits.
Nitrite (as nitrate NO3)	6/21/12	ND		45 ppm		Erosion from natural deposits.
Haloacetic acids (HAA5)	Various, quarterly	67 ppb	15.9-67.7 ppb	60 ppb		Byproduct of drinking water chlorination.
THM (Total Trihalomethane)	Various, quarterly	54ppb	38.99-5318 ppb	80 ppb		Byproduct of drinking water chlorination.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

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

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ

transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	Rosedale filter bag for primary filtration. Homespring Ultra filtration units for secondary filtration.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	.048 NTU
Number of violations of any surface water treatment requirements	None

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

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

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

Summary Information for Surface Water Treatment

Water is initially filtered through a Rosedale filter bag. The water is then processed through Homespring ultra-filtration units which meets current federal requirements for removal of *Cryptosporidium*. Chlorine solution is then injected and water is routed to a storage tank to ensure adequate chlorine contact time. Daily measurements of Chlorine and turbidity are taken. Automated systems prevent water with elevated turbidity to enter system. Automated chlorine monitors system to ensure that chlorine is within a specific operating range. Weekly residual chlorine tests are performed at first point of use to ensure adequate chlorine in system.

2014 Consumer Confidence Report

Water System Name: King's Mountain Park Mutual Water Company Report Date: May 4, 2015

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2013.

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

Type of water source(s) in use: Surface water

Name & location of source(s): Purisima Creek Watershed

Drinking Water Source Assessment information: See attached copy of the Source Water Assessment.

Time and place of regularly scheduled board meetings for public participation: Every third Tuesday of the month, 7: 30 p.m.
location announced each month

For more information, contact: Tom Koos, System Manager Phone: 650.465.5774

TERMS USED IN THIS REPORT

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

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

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

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

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

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

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

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

Variations and Exemptions: Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.

ND: not detectable at testing limit

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

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

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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.
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- *Pesticides and herbicides*, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- *Organic chemical contaminants*, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

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

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

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	Highest No. of Detections	No. of months in violation	MCL	MCLG	Typical Source of Bacteria
Total Coliform Bacteria	0		More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i>	0		A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or <i>E. coli</i>	0	Human and animal fecal waste

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER						
Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90 th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb)	5		0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	5		0	1.3	0.17	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)	3/12/14	17 ppm		none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	3/12/14	233 ppm		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

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

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
Barium	3/12/14	130 ppb		1000 ppb		Erosion from natural deposits.
Nickel	3/12/14	<10 ppb		100 ppb		Erosion from natural deposits.
Combined Radium	3/12/14	0.879 pCi/l		5 pCi/l		Erosion from natural deposits.
Fluoride	3/12/14	0.32 ppm		2.0 ppm		Erosion from natural deposits.
Nitrite (as Nitrogen N)	3/12/14	ND		1.0 ppm		Runoff and leaching from fertilizer use. Leaching from septic tanks. Erosion from natural deposits.
Nitrite (as nitrate NO3)	3/12/14	<2.0 ppm		45 ppm		Erosion from natural deposits.
Haloacetic acids (HAA5)	Various, quarterly	46.9 ppb	27.0-46.9 ppb	60 ppb		Byproduct of drinking water chlorination.
TTHM (Total Trihalomethane)	Various, quarterly	87.05ppb	74.52-87.05 ppb	80 ppb		Byproduct of drinking water chlorination.

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	MCL	PHG (MCLG)	Typical Source of Contaminant

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language

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

Additional General Information on Drinking Water

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ

transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique ^(a) (Type of approved filtration technology used)	Rosedale filter bag for primary filtration. Homespring Ultra filtration units for secondary filtration.
Turbidity Performance Standards ^(b) (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.1 NTU in 95% of measurements in a month. 2 – Not exceed 1.0 NTU for more than eight consecutive hours. 3 – Not exceed 5.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100%
Highest single turbidity measurement during the year	.024 NTU
Number of violations of any surface water treatment requirements	None

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

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

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

Summary Information for Surface Water Treatment

Water is initially filtered through a Rosedale filter bag. The water is then processed through Homespring ultra-filtration units which meets current federal requirements for removal of *Cryptosporidium*. Chlorine solution is then injected and water is routed to a storage tank to ensure adequate chlorine contact time. Daily measurements of Chlorine and turbidity are taken. Automated systems prevent water with elevated turbidity to enter system. Automated chlorine monitors system to ensure that chlorine is within a specific operating range. Weekly residual chlorine tests are performed at first point of use to ensure adequate chlorine in system.

Appendix A

Appendix B



PURISIMA CREEK REDWOODS

Open Space Preserve

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT
www.openspace.org

Legend

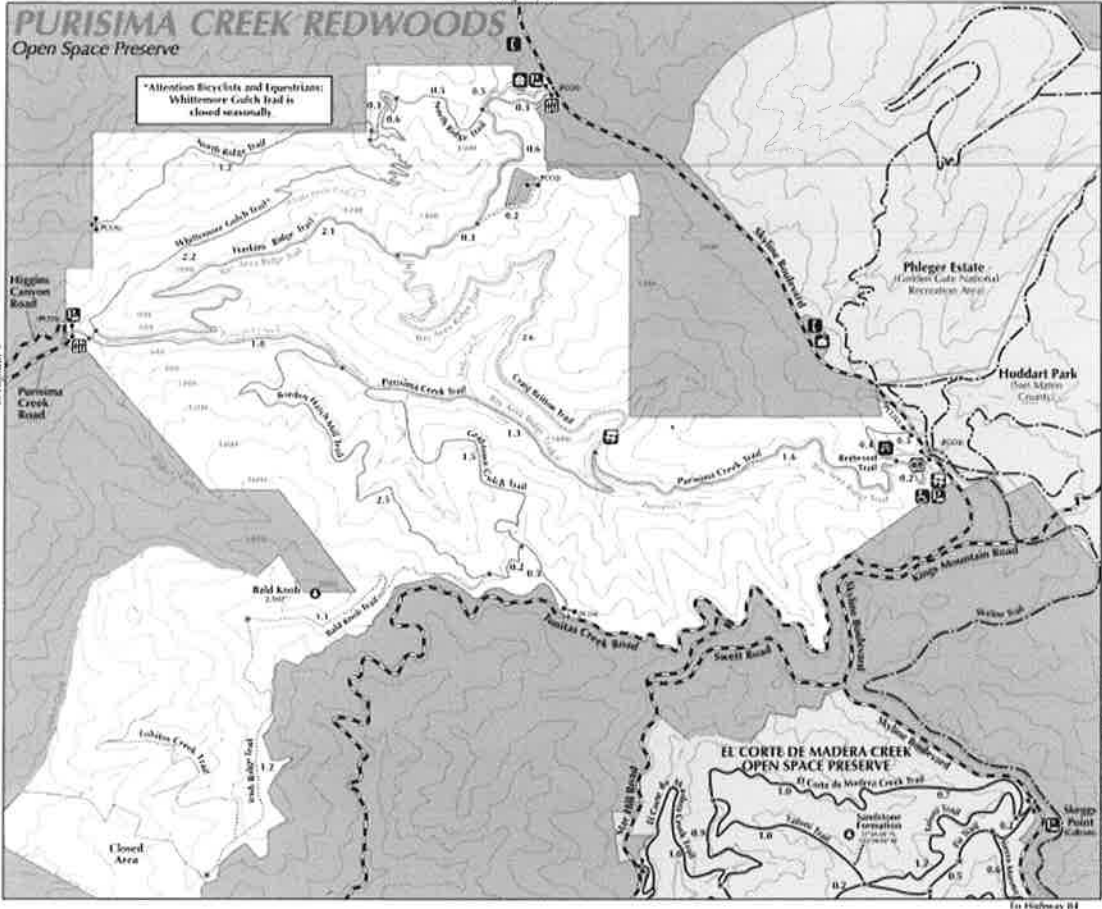
Vehicle Parking Lot	Restrooms	Bench	Picnic Area	Public Telephone
Fire Station	Residence	Easy Access Trail (Redwood Trail)	Point of Interest	Other Public Lands
Gate (75)	Trail Distance in Miles	Bay Area Ridge Trail	Vehicle Driveway	Creek
				No Public Entry Private or Leased Lands

Trail Use

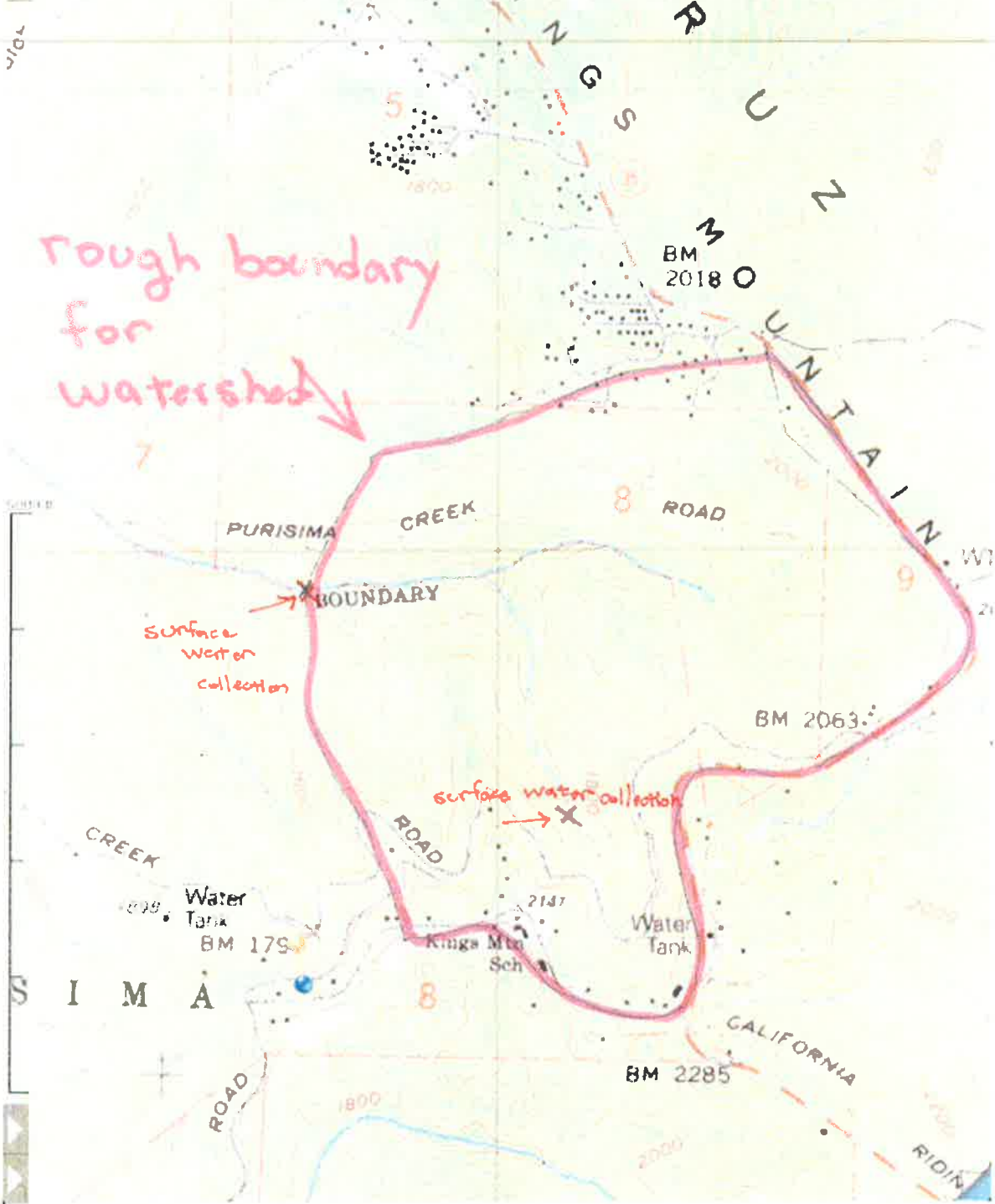
Hiking Only	Hiking, Equestrian	Hiking, Bicycling, Equestrian	Note: Dogs are not allowed on this preserve.
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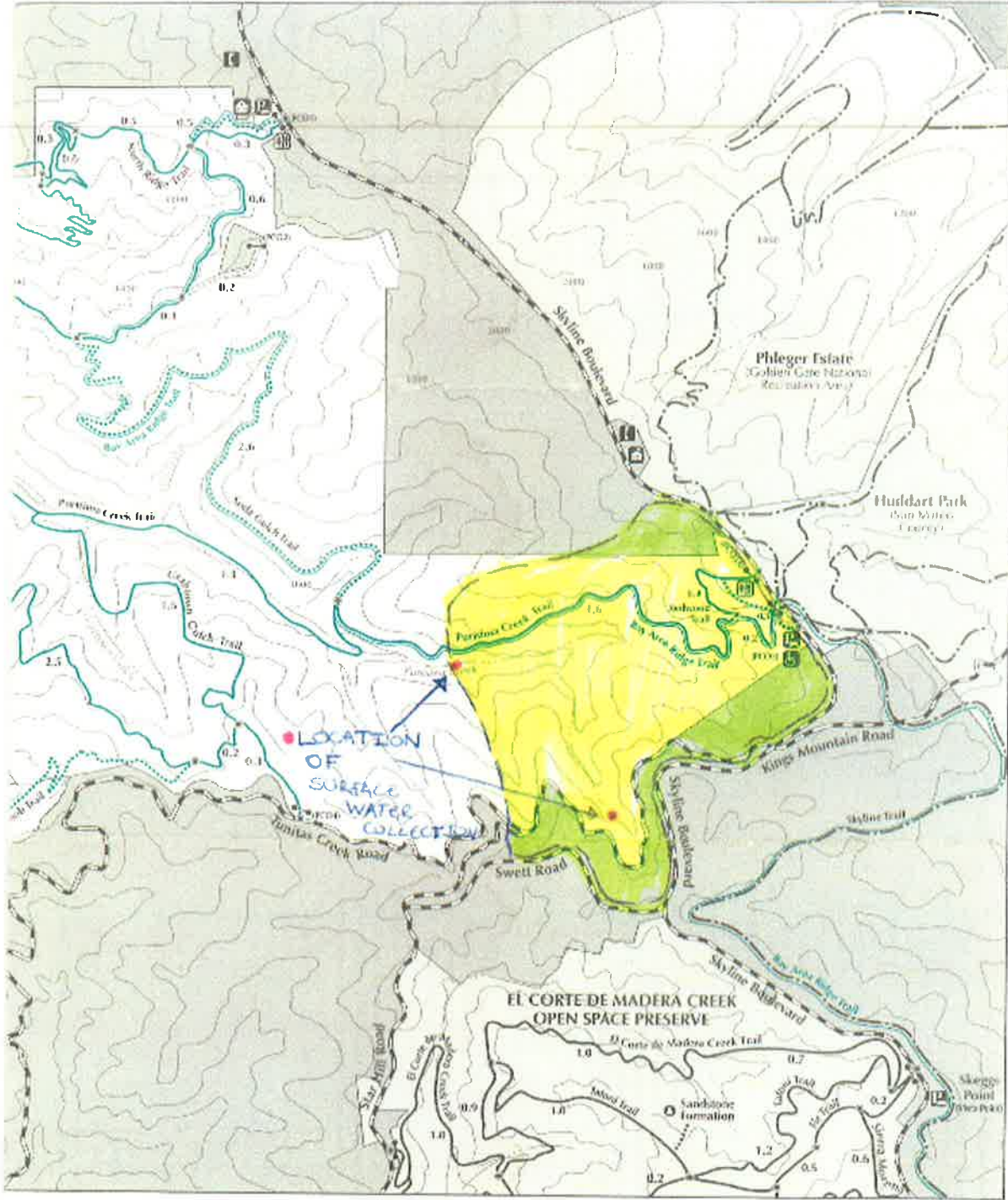
Check trail conditions and seasonal closures by calling the District office or visiting the Web site www.openspace.org.
 GPS coordinates displayed on this map are projected in WGS 1984 and represent the approximate locations of points of interest.



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To Highway 92



To Highway 64

Appendix A-2: Regulated Contaminants with Secondary MCLs

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

Constituent	Secondary MCL (units)	To convert to CCR, multiply by	MCL in CCR units	Typical Source of Contaminant
Aluminum	0.2 mg/L	1000	200 ug/L	Erosion of natural deposits; residual from some surface water treatment processes
Color	15 Units	-	15 Units	Naturally-occurring organic materials
Copper	1.0 mg/L	-	1.0 mg/L	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents [MBAS]	0.5 mg/L	1000	500 ug/L	Municipal and industrial waste discharges
Iron	0.3 mg/L	1000	300 ug/L	Leaching from natural deposits; industrial wastes
Manganese	0.05 mg/L	1000	50 ug/L	Leaching from natural deposits
Methyl-tert-butyl ether [MTBE]	0.005 mg/L	1000	5 ug/L	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor---Threshold	3 Units	-	3 Units	Naturally-occurring organic materials
Silver	0.1 mg/L	1000	100 ug/L	Industrial discharges
Thiobencarb	0.001 mg/L	1000	1 ug/L	Runoff/leaching from rice herbicide
Turbidity	5 Units	-	5 Units	Soil runoff
Zinc	5.0 mg/L	-	5.0 mg/L	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	1000 mg/L	-	1,000 mg/L	Runoff/leaching from natural deposits
Specific Conductance	1,600 μ S/cm	-	1,600 μ S/cm	Substances that form ions when in water; seawater influence
Chloride	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; seawater influence
Sulfate	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; industrial wastes

Appendix C:

Appendix A-2: Regulated Contaminants with Secondary MCLs

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

Constituent	Secondary MCL (units)	To convert to CCR, multiply by	MCL in CCR units	Typical Source of Contaminant
Aluminum	0.2 mg/L	1000	200 ug/L	Erosion of natural deposits; residual from some surface water treatment processes
Color	15 Units	-	15 Units	Naturally-occurring organic materials
Copper	1.0 mg/L	-	1.0 mg/L	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Foaming Agents [MBAS]	0.5 mg/L	1000	500 ug/L	Municipal and industrial waste discharges
Iron	0.3 mg/L	1000	300 ug/L	Leaching from natural deposits; industrial wastes
Manganese	0.05 mg/L	1000	50 ug/L	Leaching from natural deposits
Methyl-tert-butyl ether [MTBE]	0.005 mg/L	1000	5 ug/L	Leaking underground storage tanks; discharge from petroleum and chemical factories
Odor--- Threshold	3 Units	-	3 Units	Naturally-occurring organic materials
Silver	0.1 mg/L	1000	100 ug/L	Industrial discharges
Thiobencarb	0.001 mg/L	1000	1 ug/L	Runoff/leaching from rice herbicide
Turbidity	5 Units	-	5 Units	Soil runoff
Zinc	5.0 mg/L	-	5.0 mg/L	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids	1000 mg/L	-	1,000 mg/L	Runoff/leaching from natural deposits
Specific Conductance	1,600 μ S/cm	-	1,600 μ S/cm	Substances that form ions when in water; seawater influence
Chloride	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; seawater influence
Sulfate	500 mg/L	-	500 mg/L	Runoff/leaching from natural deposits; industrial wastes

Appendix A-1: Regulated Contaminants with Primary MCLs, MRDLs, TTs, or ALs

Key

AL = Regulatory Action Level

MCL = Maximum Contaminant Level

PHG = Public Health Goal

MCLG = Maximum Contaminant Level Goal

MRDL = Maximum Residual Disinfectant Level

MRDLG = Maximum Residual Disinfectant Level Goal

MFL = million fibers per liter

NTU = Nephelometric Turbidity Units

TT = Treatment Technique

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

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

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

ppt = parts per trillion, or nanograms per liter

ppq = parts per quadrillion, or picograms per liter

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
Microbiological Contaminants						
(1) Total Coliform Bacteria			MCL: Systems that collect ≥40 samples/month: more than 5.0% of monthly samples are positive; Systems that collect <40 samples/month: no more than 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 <i>E. coli</i>		MCL: a routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or <i>E. coli</i> positive		(0)	Human and animal fecal waste	Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.
Turbidity	TT		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

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
<i>Giardia lamblia</i> Viruses Heterotrophic plate count bacteria <i>Legionella</i> <i>Cryptosporidium</i>		Surface water treatment = TT		HPC = n/a; Others = (0)		symptoms such as nausea, cramps, diarrhea and associated headaches. Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
Radioactive Contaminants						
Gross Beta particle activity (pCi/L)	50 (a)	-	50	(0)	Decay of natural and man-made deposits	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
(a) Effective 6/11/2006, the gross beta particle activity MCL is 4 millirem/year annual dose equivalent to the total body or any internal organ. 50 pCi/L is used as a screening level.						
Strontium-90 (pCi/L)	8	-	8	0.35	Decay of natural and man-made deposits	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	-	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	-	15	(0)	Erosion of natural deposits	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Combined radium (pCi/L)	5	-	5	(0)	Erosion of natural	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
Uranium (pCi/L)	20	-	20	0.43	deposits Erosion of natural deposits	may have an increased risk of getting cancer. 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.
<u>Inorganic Contaminants</u>						
Aluminum (ppm)	1	-	1	0.6	Erosion of natural deposits; residue from some surface water treatment processes	Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.
Antimony (ppb)	0.006	1000	6	20	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder	Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar.
Arsenic (ppb)	0.010 ^(b)	1000	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.
<p>(b) Effective 1/23/2006, the federal arsenic MCL is 0.010 mg/L. A new state MCL has not yet been adopted and remains as 0.5 mg/L (or 50 ppb). If the arsenic concentration is above 5 up to not including 10 ppb, refer to pages 17 and 18 for the special educational statement to include in the CCR.</p>						
Asbestos (MFL)	7 MFL	-	7	7	Internal corrosion of asbestos cement water mains; erosion of natural deposits	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
Barium (ppm)	1	-	1	2	Discharges 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.

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
Beryllium (ppb)	0.004	1000	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.
Cadmium (ppb)	0.005	1000	5	0.04	Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints	Some people who drink water containing cadmium in excess of the MCL over many years may experience kidney damage.
Chromium (ppb)	0.05	1000	50	(100)	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits	Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.
Copper (ppm)	AL = 1.3	-	AL = 1.3	0.17	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives	Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.
Cyanide (ppb)	0.15	1000	150	150	Discharge from steel/metal, plastic, and	Some people who drink water containing cyanide in excess of the MCL over many years may

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
					fertilizer factories	experience nerve damage or thyroid problems.
Fluoride (ppm)	2.0	-	2.0	1	Erosion of natural deposits; water additive that 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 (ppb)	AL = 0.015	1000	AL = 15	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 sight 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] (ppb)	0.002	1000	2	1.2	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland	Some people who drink water containing mercury in excess of the MCL over many years may experience mental disturbances, or impaired physical coordination, speech and hearing.
Nickel (ppb)	0.1	1000	100	12	Erosion of natural deposits; discharge from metal factories	Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.
Nitrate (ppm)	45 (as nitrate)	-	45 (as nitrate)	45 (as NO3)	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

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
Nitrite (ppm)	1 (as nitrogen)	-	1 (as nitrogen)	1 as N	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits	<p>pregnant women.</p> <p>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.</p>

Contaminant (CCR units)	Traditional MCL in mg/L	To convert for CCR, multiply by	MCL in CCR units	PHG (MCLG)	Major Sources in Drinking Water	Health Effects Language
Perchlorate (ppb)	0.006	1000	6	6	Perchlorate is an inorganic chemical used in solid rocket propellant fireworks, explosives, flares, matches, and a variety of industries. It usually gets into drinking water as a result of environmental contamination from historic aerospace or other industrial operations that used or use, store, or dispose of perchlorate and its salts.	Perchlorate has been shown to interfere with uptake of iodide by the thyroid gland, and to thereby reduce the production of thyroid hormones, leading to adverse effects associated with inadequate hormone levels. Thyroid hormones are needed for normal prenatal growth and development of the fetus, as well as for normal growth and development in the infant and child. In adults, thyroid hormones are needed for normal metabolism and mental function.
Selenium (ppb)	0.05	1000	50	(50)	Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years may experience hair or fingernail losses, numbness in fingers or toes, or circulation system problems.

Contaminant (CCR units)	Traditional MCL or [MRDL] in mg/L	To convert for CCR, multiply by	MCL or [MRDL] in CCR units	PHG, (MCLG) or [MRDLG]	Major Sources in Drinking Water	Health Effects Language
Disinfection Byproducts, Disinfectant Residuals, and Disinfection Byproduct Precursors						
Federal Rule						
TTHMs [Total Trihalomethanes] (ppb)	0.080	1000	80	n/a	By-product of drinking water chlorination	Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
Haloacetic Acids (ppb)	0.060	1000	60	n/a	Byproduct of drinking water disinfection	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
Bromate (ppb)	0.010	1000	10	(0)	Byproduct of drinking water disinfection	Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.
Chloramines (ppm)	[MRDL = 4.0 (as Cl ₂)]	-	[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 (ppm)	[MRDL = 4.0 (as Cl ₂)]	-	[MRDL = 4.0 (as Cl ₂)]	[MRDLG = 4 (as Cl ₂)]	Drinking water disinfectant added for treatment	Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chlorite (ppm)	1.0	-	1.0	(0.8)	Byproduct of drinking water disinfection	Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who

Contaminant (CCR units)	Traditional MCL or [MRDL] in mg/L	To convert for CCR, multiply by	MCL or [MRDL] in CCR units	PHG, (MCLG) or [MRDLG]	Major Sources in Drinking Water	Health Effects Language
Chlorine dioxide (ppb)	[MRDL = 0.8 (as ClO ₂)]	1000	[MRDL = 800 (as ClO ₂)]	[MRDLG = 800 (as ClO ₂)]	Drinking water	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 experience anemia.
Control of DBP precursors (TOC)	TT	-	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.