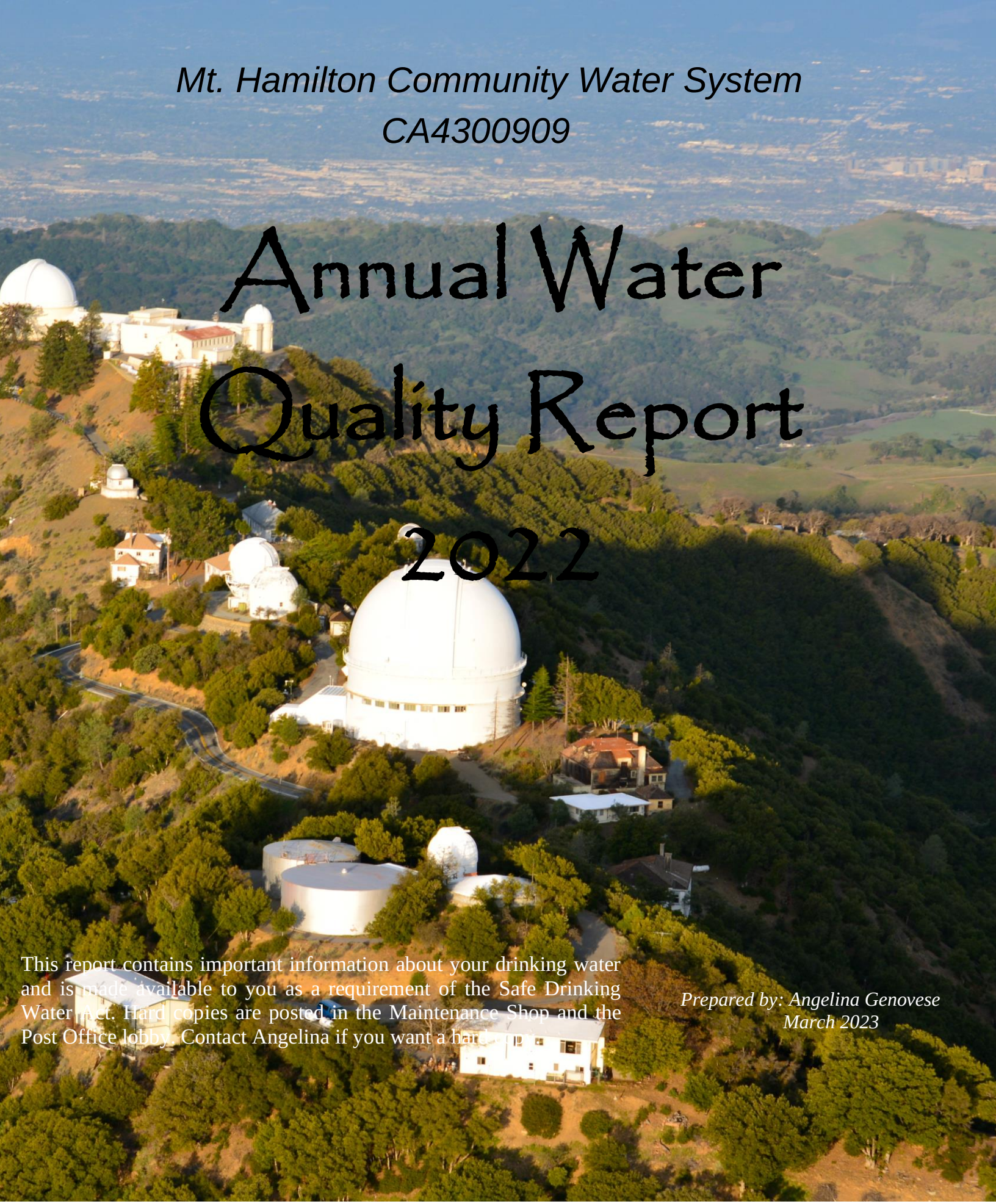
Mt. Hamilton Community Water System

CA4300909

Annual Water Quality Report 2022



This report contains important information about your drinking water and is made available to you as a requirement of the Safe Drinking Water Act. Hard copies are posted in the Maintenance Shop and the Post Office lobby. Contact Angelina if you want a hard copy.

Prepared by: Angelina Genovese
March 2023

2022 Consumer Confidence Report

Mt. Hamilton Community Water System routinely monitors for contaminants in your drinking water according to Federal and State laws. This report shows the results of our monitoring for the period of January 1 – December 31, 2022. Our constant goal is to provide you with a safe and dependable supply of drinking water.

About Your Water

The water system consists of two spring sources, North Spring and South Spring, that have been classified as ***groundwater under the direct influence of surface water.*** This classification mandates that the water be filtered and disinfected. Our system uses chlorine to provide disinfection.

The North Spring provides water most of the year. If there is heavy rain during the spring and winter, the clarity (turbidity) of the water does not always meet water quality standards and it becomes necessary to obtain water from the South Spring.

The South Spring is used as a backup source when the North Spring water is unable to meet the clarity standard and the storage tank levels are getting low. This spring produces clearer water but usually dries up during the summer making it unreliable to use year-round.

Water from either spring is pumped to the water treatment plant on Kepler Peak, next to the KAIT Telescope where it is filtered, chlorinated and pumped into two storage tanks. Water is then gravity-fed throughout the distribution system with booster pumps used where necessary.

Drinking Water Source Assessment

A Watershed Sanitary Survey of the drinking water sources was conducted in 2019. The sources are much protected from activities that might cause contamination. The only likely contaminant sources are wild animals— primarily deer and feral pigs.

Who to Contact

Contact someone below if you have any questions or problems with your water:

Water System-Lead Water Operator

Angelina Genovese……408-238-0650

Cell (emergencies).....707-688-1086

Water System-Water Operator

Tina Kurth.....408-238-9616
Home 408-238-7033
Cell (emergencies)…….408-688-7811

Lick Observatory Superintendent

Kostas Chloros.....408-238-9613
Home..... 408-238-9612

Facilities Supervisor

Joseph Halay.....408-238-9614
Home.....408-238-4271

Glossary

The following are definitions of some of the terms used in this report.

In the following tables you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms, we've provided the following definitions:

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

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

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

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

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

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

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

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

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

Variances and Exemptions: 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 pictogram per liter (pg/L)

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

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

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

Information About Drinking Water

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, can be naturally-occurring or result from urban storm water 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 storm water 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 storm water 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.

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).

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

The following tables 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.

Individual Tap Monitoring for Lead & Copper

Monitoring of individual taps from locations within the water system is performed for lead & copper to verify that the delivered water does not contain lead or copper at levels that may have health effects.

Samples were taken from 5 residences and analyzed in August 2021.
The next analysis will be done in 2024.

There were no violations of lead and copper standards.

Constituent (and reporting units)	**No. of samples collected**	**90th percentile Level Detected**	**No. Sites exceeding AL**	**AL**	**MCLG**	**Likely Source of Contamination**
Lead (ppb)	5	3.1	0	15	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits.
Copper (ppm)	5	0.0475	0	1.3	0.17	Internal corrosion of household water plumbing systems; erosion of natural deposits; leaching from wood preservatives.

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)	7/27/22	10	N/A	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)	7/27/22	150	130-150	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

photo courtesy of Joseph Halay

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
Radiological Every 9th year samples are taken from the North & South Springs. The results are averaged together. The next sampling for Gross Alpha activity will be in 2024.						
Gross Alpha Activity, (pCi/L)	2015	ND	N/A	15	NA	Erosion of natural deposits
Radium 228 (pCi/L)	2006	0.09	0 – 0.181	5	NA	Erosion of natural deposits
Disinfection Byproducts, Disinfection Residual, and Disinfection Byproduct Precursors						
TTHM (ppb) [Total trihalomethanes]	7/25/22	12	NA	80	NA	By-product of drinking water disinfection.
Chlorine (ppm) 2021	Once per month at various residences	0.24	0.07 - 0.42	MRDL = 4 (as Cl_2)	MRDLG = 4 (as Cl_2)	Drinking water disinfectant added for treatment
Inorganic Contaminants						
Barium (ug/l)	7/27/22	102	94-110	1000	2000	Discharge of oil drilling waste and from metal refineries; erosion of natural deposits
Fluoride (ppm)	7/27/22	0.052	0-.075	1	2	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories

photo courtesy of Don Redel

Detection of Contaminants with a Secondary Drinking Water Standard

There are no PHGs, MCLGs, or mandatory standard health affects language for constituents with secondary drinking water standards because secondary MCLs are set on the basis of aesthetics.

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**Typical Source of Contaminant**
Chloride (ppm)	7/27/22	4.7	3.6-5.0	500	Runoff/leaching from natural deposits; seawater influence
Color	7/27/22	1.0	N/A	15	
Electrical Conductance (umhos/cm)	7/27/22	315	310-350	1600	Substances that form ions when in water; seawater influence
Total Dissolved Solids (ppm)	7/27/22	190	200 - 220	1000	Runoff/leaching from natural deposits
Sulfate (ppm)	7/27/22	16	15-19	500	Runoff/leaching from natural deposits; industrial wastes
Zinc (ppb)	7/27/22	58	50-65	5000	Runoff/leaching from natural deposits; industrial wastes

North Spring	Sample Date	Avg Level Detected MPN/100ML	Range of Detections MPN/100ML	Typical Source of Contaminant
Total Coliform	Monthly	13.175	3.1-45	Runoff/Leaching from natural deposits; animal waste products
E.Coli	Monthly	0.167	0.0-1.0	Runoff/Leaching from natural deposits; animal waste products

South Spring	Sample Date	Avg Level Detected MPN/100ML	Range of Detections MPN/100ML	Typical Source of Contaminant
Total Coliform	Monthly	19.17	0.0-200	Runoff/Leaching from natural deposits; animal waste products
E.Coli	Monthly	1.67	0.0-14	Runoff/Leaching from natural deposits; animal waste products

SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES

Treatment Technique [a] (Type of approved filtration technology used)	Rosedale bag & cartridge filters
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 0.2 NTU in 95% of measurements in a month. 2 - Not exceed 0.5 NTU for more than eight consecutive hours. 3 - Not exceed 1.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1	100%
Highest single turbidity measurement during the year	0.199
The 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 earlier 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).

Summary of Tables

As you can see by the table, our system had no violations. We are proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some contaminants have been detected; however, the EPA has determined that your water IS SAFE at these levels.