2021 Consumer Confidence Report

Water System Name: **Estero Mutual Water Company** Report Date: June 27, 2022,

We test the drinking water quality for all constituents as required by state and federal regulations. This report shows the results of monitoring for the period of January 1-December 31, 2021 as well as previous data where applicable.

Type of water source(s) in use: Surface water + three ground water wells.

Name & location of source(s): Reservoir, Well 12, Well 13 and Well 14, Dillon Beach, California

Drinking Water Source Assessment information: Available at California Department of Public Health.

Time and place of regularly scheduled board meetings for public participation: Monthly Board of Director Meetings, Tomales Regional History Center, Tomales, California.

For more information, contact: John Brezina, Manager Phone: (707) 878-2400

TERMS USED IN THIS REPORT

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

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

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

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

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

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

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

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

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

Variances and Exemptions: 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, and 5 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	(In a mo.) none	NONE	More than 1 sample in a month with a detection	0	Naturally present in the environment
Fecal Coliform or *E. coli*	(In the year) none	NONE	A routine sample and a repeat sample detect total coliform and either sample also detects fecal coliform or *E. coli*	0	Human and animal fecal waste

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

Lead and Copper (complete if lead or copper detected in the last sample set)	No. of samples collected	90th percentile level detected	No. sites exceeding AL	AL	PHG	Typical Source of Contaminant
Lead (ppb) 8/28/19 Samples taken from various households	5	0.00 mg/L	none	0.015 mg/L	2	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm) 8/28/19 Samples taken from various households	5	0.13 mg/L	none	1.3 mg/L	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) Well 12	06/22/21	41.0 ppm		none	none	Salt present in the water and is generally naturally occurring
Well 13	06/22/21	44.0 ppm				
Well 14	06/22/21	38.0 ppm				
Reservoir	11/29/21	81.0 ppm				

Hardness (ppm) Well 12 Well 13 Well 14 Reservoir	06/22/21 06/22/21 06/22/21 11/29/21	98.0 ppm 75.0 ppm 65.0 ppm 160.ppm		none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

**Any violation of an MC 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
Aluminum Reservoir	11/29/21	ND		1000 ug/L		Erosion of natural deposits
Fluoride mg/L Well 12 Well 13 Well 14 Reservoir	06/22/21 06/22/21 06/22/21 11/29/21	1.10 mg/L 1.00 mg/L 0.13 mg/L 0.20 mg/L		2.0 mg/L	PHG 1.0mg/L	Erosion of natural deposits
Nitrate mg/L Well 12 Well 13 Well 14 Reservoir	06/22/21 06/22/21 05/04/21 11/29/21	ND 4.0 ND ND		10 mg/L	10 mg/L	Soil runoff from grazing, sewer system
Total Trihalomethanes (TTHMs) ug/L	01/22/21 04/18/21 08/0821 11/29/21	71.0 ug/L 67.0 ug/L **152.4ug/L** **103.3ug/L**		80 ug/L		By-product of drinking water chlorination
Haloacetic Acids ug/L	01/22/21 4/18/21 08/08/21 11/29/21	30.0 ug/L 31.0 ug/L **77.7 ug/L*** 40.3 ug/L		60 ug/L		By-product 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
Iron ug/L Reservoir Well 12 **Well 13** **Well 14**	11/29/21 06/22/21 06/22/21 06/22/21	100 ug/L ND ug/L **1200 ug/L** **590 ug/L**	110-290	300 ug/L		Leach from natural deposits
Total Dissolved Solids (TDS) ppm Reservoir Well 12 Well 13 Well 14	11/29/21 06/22/21 06/22/21 06/22/21	400 ppm 200 ppm 200 ppm 140 ppm		1000 ppm		Runoff/leaching from natural deposits
Specific Conductance uS/cm Reservoir Well 12 Well 13 Well 14	11/29/21 06/22/21 06/22/21 06/22/21	670 uS/cm 360 uS/cm 350 uS/cm 310 uS/cm		1600 uS/cm		Substances that form ions when in water; seawater influence.

Chloride ppm	Reservoir	11/29/21	190.0 ppm		500 ppm		Runoff / leaching from natural deposits; seawater influence.
	Well 12	06/22/21	58.0 ppm				
	Well 13	06/22/21	71.0 ppm				
	Well 14	06/22/21	53.0 ppm				
Color Units	**Reservoir**	11/29/21	**20.0**		15		Naturally-occurring organic materials
	Well 12	06/22/21	5.0				
	Well 13	06/22/21	10.0				
	Well 14	06/22/21	<5.0				
Sulfate mg/L	Reservoir	11/29/21	29.0 mg/L		500 mg/L		Soil runoff
	Well 12	06/22/21	28.0 mg/L				
	Well 13	06/22/21	11.0 mg/L				
	Well 14	06/22/21	25.0 mg/L				
Manganese ug/L	Well 13	6/22/21	22.0 ug/L		50 ug/L		Leaching from natural deposits.
Turbidity NTU	Reservoir	11/29/21	1.00 NTU		5.0 NTU		Soil runoff.
	Well 12	6/22/21	1.50 NTU				
	Well 13	6/22/21	**6.30 NTU**				
	Well 14	6/22/21	1.00 NTU				
Odor TON	**Reservoir**	11/29/21	**50 TON**		3.0 TON		Naturally occurring organic materials.
	Well 12	6/22/21	ND				
	Well 13	6/22/21	ND				
	Well 14	6/22/21	ND				

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
NONE DETECTED					

Any violation of an MCL, MRDL, or TT is noted in* **bold ***font****. 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).

Estero Mutual Water Company's Micro filtration system is mechanically capable of filtering Cryptosporidium, and other microbial contaminants such as coliform bacteria, fecal coliform, and Giardia even prior to the addition of chlorine as a federally required disinfectant.

Summary Information for Contaminants Exceeding an MCL, MRDL, or AL or Violation of Any TT or Monitoring and Reporting Requirement

There were two(2) Primary Contaminant; Trihalomethane and Haloacetic Acid that exceeded a MCL. (see following paragraph)

-There were ***NO*** Contaminants that exceeded an MRDL, AL.

-There were ***NO*** Violations of any Treatment Techniques (TT).

-There were ***NO*** Violations of any Monitoring and Reporting Requirements.

PRIMARY MCL of Total Trihalomethanes in two samples (TTHM MCL 80ug/L) and one sample of Haloacitic Acids (HAA5 MCL 60ug/L) were exceeded. (TTHM's 8/8/21 152.4 ug/L and 11/29/21 103.3 ug/L) (HAA5 8/8/21 77.7 ug/L).

-Please Note –The Total Trihalomethane state required average of four running quarters is 80ug/L or below, EMWC's 2021 year end average was 98.25 ug/L due to the historic drought causing exceptionally low water levels in the reservoir that concentrated naturally occurring dissolved organics, the percursurs of both Trihaolmethane and Haloacetic acid. Please note: the last two TTHM quarterly results in 2022 were 80ug/L and 55ug/L meeting and within the MCL's on a downward trend. For a more detailed analysis please contact EMWC (707) 878-2400

-AS PREVIOUSLY NOTED Trihalomethanes and Haloacetic Acids are by-products of drinking water chlorination which is federally required in all drinking water systems as a disinfection agent.

-AS A CONTINUING REMINDER Trihalomethanes and Haloacetic Acids can be further reduced at your home, if desired (by up to 90%) with the proper use of household carbon filtration.

Iron, color and odor are reported PRIOR to filtration at EMWC facility. They are SECONDARY Contaminants -the MCL is set on a basis of AESTHETICS ONLY.

(Proper use of household carbon filtration will reduce iron, color and odor if desired).

-There are NO PHGs, MCLGs or mandatory standard health effects for Secondary Contaminants.

For Systems Providing Ground Water as a Source of Drinking Water

(Refer to page 1, "Type of water source in use" to see if your source of water is surface water or groundwater)

TABLE 7 – SAMPLING RESULTS SHOWING FECAL INDICATOR-POSITIVE GROUND WATER SOURCE SAMPLES					
Microbiological Contaminants (complete if fecal-indicator detected)	**Total No. of Detections**	**Sample Dates**	**MCL MRDL**	**PHG MCLG MRDLG**	**Typical Source of Contaminant**
E. coli	(In the year) **NONE**	N/A	0	(0)	Human and animal fecal waste

Enterococci	(In the year) **NONE**	N/A	0 TT	n/a	Human and animal fecal waste
Coliphage	(In the year) **NONE**	N/A	0 TT	n/a	Human and animal fecal waste

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

*-**NONE DETECTED** – THERE WERE **NO** DEFICIENCES OR VIOLATIONS.*

*-There were **NO** Fecal Indicator-Positive results from Ground Water Source Samples.*

*-There were **NO** Deficiencies in Ground Water Treatment Technique (TT).*

*-There were **NO** Violations of a Ground Water Treatment Technique (TT).*

For Systems Providing Surface Water as a Source of Drinking Water

(Refer to page 1, "Type of water source in use" to see if your source of water is surface water or groundwater)

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [(a)] (Type of approved filtration technology used)	Micro 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 2.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	100% of samples met Turbidity Performance Standard No. 1
Highest single turbidity measurement during the year	0.066 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 earlier in this report.*

Summary Information for Violation of a Surface Water TT

*-There were **NO** **VIOLATIONS** of a Surface Water Treatment Technique (TT).*

Please feel free to contact Estero Mutual Water Company (707) 878-2400 with any questions or concerns*