2018 ANNUAL WATER QUALITY REPORT

TIERRA LINDA HOA WATER COMPANY

PWS# 10-411

June 2019

Esta es informacion importante. Si no la pueden leer, necesitan que alguien se la traduzca.

We are pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water.

Water System #10-411, known as the **Tierra Linda Water Company**, currently serves a **population of approximately 232 people** throughout the year, and has 83 service connections. The water is pumped from 1well.

If you have any questions about this report or concerning your water utility, please contact Christopher W. Hill, CWH2 Services, LLC, at (520) 904-0741.

Some people may be more vulnerable to contaminants in drinking water than the public

in general.

All 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. 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 of infections. These people should seek advice about drinking water from their health care providers. More information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

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, which 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, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, 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, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water that must provide the same protection for public health.

The table of detected contaminants contains many terms and abbreviations that may be unfamiliar. To help you better understand these terms we've provided the following definitions:

- *Action Level (**AL**): The concentration of a contaminant, if exceeded, triggers treatment or other requirements a water system must follow.*
- *Maximum Contaminant Level (**MCL**): The "maximum allowed" is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.*
- *Maximum Contaminant Level Goal (**MCLG**): The "goal" is the level of a contaminant in drinking water, below which there is no known or expected risk to health. MCLGs allow for a margin of safety.*
- *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.*
- *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.*
- *Nephelometric Turbidity Unit (**NTU**): Nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of five NTU is just noticeable to the average person.*
- *Not Detected (**ND**) or Below Detection Level (**BDL**): Laboratory analysis indicates that the contaminant is not present. ("<" Symbol for less than, the same as ND or BDL)*
- *Not Tested (**NT**): Contaminant was not tested.*
- *Parts per billion (**ppb**) or Micrograms per liter (**µg/l**): One part per billion corresponds to one minute in 2,000years, or one penny in $10,000,000.*
- *Parts per million (**ppm**) or Milligrams per liter (**mg/l**): One part per million corresponds to one minute in two years or one penny in $10,000.*
- *Parts per quadrillion (**ppq**) or Picograms per liter (**pg/l**): One part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in $10,000,000,000,000.*
- *Parts per trillion (**ppt**) or Nanograms per liter (**ng/l**): One part per trillion corresponds to one minute in 2,000,000 years, or one penny in $10,000,000,000.*
- *PicoCuries per Liter (**pCi/l**): A measure of radioactivity in water.*
- *Total Organic Carbon (**TOC**): A measure of the total amount of carbon in water, present as organic molecules.*

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

Additional Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods-of-time because of rainfall or agricultural activity. If you are caring for an infant, and detected nitrate levels are above

5 ppm, you should ask advice from your health care provider.

If **arsenic** is less than 10 ppb, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems. The highest 2018 arsenic result was 11 ppb. Since the arsenic values are close to the MCL, this water system is required to monitor Arsenic quarterly; the 2nd quarter of 2017 was a value of 9.4 ppb, the 3rd quarter of 2017 was a value of 9.4 ppb. The 4th quarter value for Arsenic was 10 ppb. The lowest Arsenic value for 2017 was 9.4 ppb. Arsenic values are based on the running annual average of samples for arsenic and is in compliance and at the drinking water standard of 10 ppb.

Infants and young children are typically more vulnerable to **lead** in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Table of Contaminants

The state requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. **Some of our data, though representative, may be more than one year old.**

This table shows the results of our monitoring for the period of January 1 to December 31, 2017 unless otherwise noted.

Microbiological Contaminants

Contaminant	MCL	MCLG	Unit	System Result	Violation Yes or No	Sample Date(s)	Likely Cont
Total Coliform Bacteria for Systems that collects<40 samples per month	1 positive monthly sample	0	Absent or Present	0	No	Jan. – Dec. 2017	Natural the en

Disinfectants and Disinfection Byproducts

Contaminant	MCL/ MRDL	MCLG/ MRDLG	Units	Average Level Detected & (Range)	Violation Yes or No	Sample Date	Likely Source of Contamination
Chlorine Residual	4	0	ppm	0.47 (0.22-0.73)	No	Running Annual Average – 2018	Water additive used to control microb
TTHM [Total trihalomethanes]	80	0	ppb	2.9 Total (<.5-1.4)	No	11/20/2018	By-product of drinking water chlorin
HAA5 [Haloacetic Acids]	60	0	ppb	<2 Total (<1-<2)	No	11/20/2018	By-product of drinking water chlorin

Lead and Copper

Contaminant	EPA Action Level (AL)	EPA Action Level Goal (ALG)	Units	Maximum Level Detected and Range of Detections	90_{th} Percentile Values and Number of Samples over AL	Violation Yes or No	Sample Dates	Likely Source of Contamination
Copper	1.3	0	ppm	0.026	0.021 No samples were over the action level	No	9-26-17-9-27-17	Corrosion of household plumbing s erosion of natural deposits; leachin wood preservatives
Lead	0.015	0	ppm	<0.0050	<0.0050 No samples were over the action level	No	9-26-17-9-27-17	Corrosion of household plumbing s erosion of natural deposits

Radionuclides

Contaminant	MCL	MCLG	Units	Level Detected& Range	Violation (Yes or No)	Sample Date	Likely Source of Contamination
Alpha emitters	15	0	pCi/l	8.8 +/-0.6	No	12/14/2016	Erosion of natural deposits
Combined radium	5	0	pCi/l	<0.7	No	12/14/2016	Erosion of natural deposits

Inorganic Contaminants

Contaminant	MCL	MCLG	Units	Level Detected (Range)	Violation Yes or No	Sample Dates	Likely Source of Contamination
Arsenic	**10**	**0**	**ppb**	**10 (9.4-11)**	**No, Running Annual Average**	**2018**	**Erosion of natural deposits; runoff fr orchards; runoff from glass and electr production wastes**
Asbestos	7	7	MFL	<0.2	No	12/14/2016	Decay of asbestos cement water mains; natural deposits
Barium	**2**	**2**	**ppm**	**0.10**	**No**	**12/14/2016**	**Discharge of drilling wastes; discharg metal refineries; erosion of natural de**
Beryllium	**4**	**4**	**ppb**	**<0.001**	**No**	**12/14/2016**	**Discharge from metal refineries and c factories; discharge from electrical, ae and defense industries**
Cadmium	**5**	**5**	**ppb**	**<0.0005**	**No**	**12/14/2016**	**Corrosion of galvanized pipes; erosion deposits; discharge from metal refiner from waste batteries and paints**
Chromium	**100**	**100**	**ppb**	**1.4**	**No**	**12/14/2016**	**Discharge from steel and pulp mills; e natural deposits**
Cyanide	**200**	**200**	**ppb**	**<25.0**	**No**	**12/14/2016**	**Discharge from steel/metal factories; from plastic and fertilizer factories**
Fluoride	**4**	**4**	**ppm**	**0.65**	**No**	**12/14/2016**	**Erosion of natural deposits; water ad promotes strong teeth; discharge from and aluminum factories**
Mercury (inorganic)	**2**	**2**	**ppb**	**<0.2**	**No**	**12/14/2016**	**Erosion of natural deposits; discharge refineries and factories; runoff from l runoff from cropland**
Nitrate (as Nitrogen)	**10**	**10**	**ppm**	**1.2**	**No**	**10/14/2018**	**Runoff from fertilizer use; leaching fr tanks, sewage; erosion of natural depo**
Nitrite (as Nitrogen)	**1**	**1**	**ppm**	**<0.05**	**No**	**12/14/2016**	**Runoff from fertilizer use; leaching fr tanks, sewage; erosion of natural depo**
Selenium	**50**	**50**	**ppb**	**<5.0**	**No**	**12/14/2016**	**Discharge from petroleum and metal erosion of natural deposits; discharge**
Thallium	**2**	**0.5**	**ppb**	**<1.0**	**No**	**12/14/2016**	**Leaching from ore-processing sites; di from electronics, glass, and drug facto**
Turbidity	**TT**	**N/A**	**NTU**	**0.78**	**No**	**6/28/06**	**Soil runoff**

Synthetic Organic Contaminants, including Pesticides and Herbicides

Contaminant	MCL	MCLG	Units	Level Detected/Range	Violation Yes or No	Sample Date	Likely Source of Contamination
2,4-D	70	70	ppb	<0.1	No	7/5/07 and 9/23/07	Runoff from herbicide used on row crop
2,4,5-TP (Silvex)	50	50	ppb	<0.2	No	7/5/07 and 9/23/07	Residue of banned herbicide
Alachlor	2	0	ppb	<0.2	No	7/5/07 and 9/23/07	Runoff from herbicide used on row crop
Atrazine	3	3	ppb	<0.1	No	7/5/07 and 9/23/07	Runoff from herbicide used on row crop
Benzo (a) pyrene (PAH)	200	0	ppt	<20	No	7/5/07 and 9/23/07	Leaching from linings of water storage t distribution lines
Carbofuran	40	40	ppb	<0.9	No	7/5/07 and 9/23/07	Leaching of soil fumigant used on rice a
Chlordane	2	0	ppb	<0.2	No	7/5/07 and 9/23/07	Residue of banned termiticide

Dalapon	200	200	ppb	<1.0	No	7/5/07 and 9/23/07	Runoff from herbicide used on rights of
Di (2-ethylhexyl) adipate	400	400	ppb	<0.6	No	7/5/07 and 9/23/07	Discharge from chemical factories
Di (2-ethylhexyl) phthalate	**6**	**0**	**ppb**	**3.3 <0.6 to 3.3**	**No**	**7/5/07, 7/6/07 and 9/23/07**	**Discharge from rubber and chemical**

Contaminant	**MCL**	**MCLG**	**Units**	**Level Detected/Range**	**Violation Yes or No**	**Sample Date**	**Likely Source of Contamination**
Dibromochloropropane	200	0	ppt	<20	No	7/5/07 and 9/23/07	Runoff/leaching from soil fumigant used soybeans, cotton, pineapples, and orchar
Dinoseb	7	7	ppb	<0.2	No	7/5/07 and 9/23/07	Runoff from herbicide used on soybeans vegetables
Diquat	20	20	ppb	<0.4	No	7/5/07 and 9/23/07	Runoff from herbicide use
Dioxin [2,3,7,8-TCDD]	30	0	ppq	<0.255	No	7/5/07 and 9/23/07	Emissions from waste incineration and o combustion; discharge from chemical fa
Endothall	100	100	ppb	<9.0	No	7/5/07 and 9/23/07	Runoff from herbicide use
Endrin	2	2	ppb	<0.01	No	7/5/07 and 9/23/07	Residue of banned insecticide
Ethylene dibromide	50	0	ppt	<10.0	No	7/5/07 and 9/23/07	Discharge from petroleum refineries
Glyphosate	700	700	ppb	<6.0	No	7/5/07 and 9/23/07	Runoff from herbicide use
Heptachlor	400	0	ppt	<40	No	7/5/07 and 9/23/07	Residue of banned temiticide
Heptachlor epoxide	200	0	ppt	<20	No	7/5/07 and 9/23/07	Breakdown of heptachlor
Hexachlorobenzene	1	0	ppb	<0.1	No	7/5/07 and 9/23/07	Discharge from metal refineries and agri chemical factories
Hexachlorocyclopentadiene	50	50	ppb	<0.1	No	7/5/07 and 9/23/07	Discharge from chemical factories
Lindane	200	200	ppt	<20	No	7/5/07 and 9/23/07	Runoff/leaching from insecticide used o lumber, gardens
Methoxychlor	40	40	ppb	<0.1	No	7/5/07 and 9/23/07	Runoff/leaching from insecticide used o vegetables, alfalfa, livestock
Oxamyl [Vydate]	200	200	ppb	<2.0	No	7/5/07 and 9/23/07	Runoff/leaching from insecticide used o potatoes and tomatoes
PCBs [Polychlorinated biphenyls]	500	0	ppt	<100	No	7/5/07 and 9/23/07	Runoff from landfills; discharge of wast
Pentachlorophenol	**1**	**0**	**ppb**	**0.71 <0.4 to 0.71**	**No**	**7/5/07, 7/6/07 and 9/23/07**	**Discharge from wood preserving facto**
Picloram	500	500	ppb	<0.1	No	7/5/07 and 9/23/07	Herbicide runoff
Simazine	4	4	ppb	<0.07	No	7/5/07 and 9/23/07	Herbicide runoff
Toxaphene	3	0	ppb	<1.0	No	7/5/07 and 9/23/07	Runoff/leaching from insecticide used o cattle

Volatile Organic Contaminants

Contaminant	**MCL**	**MCLG**	**Units**	**Level Detected/ Range**	**Violation Yes or No**	**Sample Date**	**Likely Source of Contamination**
Benzene	5	0	ppb	<0.5	No	12/14/2016	Discharge from factories; leaching fro tanks and landfills

Carbon tetrachloride	5	0	ppb	<0.5	No	12/14/2016	Discharge from chemical plants and ot activities
Chlorobenzene	100	100	ppb	<0.5	No	12/14/2016	Discharge from chemical and agricultu factories
o-Dichlorobenzene	600	600	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
p-Dichlorobenzene	75	75	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
1,2-Dichloroethane	5	0	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
1,1-Dichloroethylene	7	7	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac

Contaminant	**MCL**	**MCLG**	**Units**	**Level Detected/ Range**	**Violation Yes or No**	**Sample Date**	**Likely Source of Contamination**
cis-1,2-Dichloroethylene	70	70	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
trans-1,2-Dichloroethylene	100	100	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
Dichloromethane	5	0	ppb	<0.5	No	12/14/2016	Discharge from pharmaceutical and ch factories
1,2-Dichloropropane	5	0	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
Ethylbenzene	700	700	ppb	<0.5	No	12/14/2016	Discharge from petroleum refineries
Styrene	100	100	ppb	<0.5	No	12/14/2016	Discharge from rubber and plastic fact leaching from landfills
Tetrachloroethylene	5	0	ppb	<0.5	No	12/14/2016	Discharge from factories and dry clean
1,2,4-Trichlorobenzene	70	70	ppb	<0.5	No	12/14/2016	Discharge from textile-finishing factor
1,1,1-Trichloroethane	200	200	ppb	<0.5	No	12/14/2016	Discharge from metal degreasing sites factories
1,1,2-Trichloroethane	5	3	ppb	<0.5	No	12/14/2016	Discharge from industrial chemical fac
Trichloroethylene	5	0	ppb	<0.5	No	12/14/2016	Discharge from metal degreasing sites factories
Toluene	1	1	ppb	<0.5	No	12/14/2016	Discharge from petroleum factories
Vinyl Chloride	2	0	ppb	<0.3	No	12/14/2016	Leaching from PVC piping; discharge chemical factories
Total Xylenes	10	10	ppb	<0.5	No	12/14/2016	Discharge from petroleum factories; di chemical factories

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted. No unregulated contaminant monitoring was completed at Tierra Linda HOA during 2018.

This year's CCR serves as notice that Public Notification pursuant to R18-4-105.F as been served to all customers of this public water system and to the State of Arizona, Department of Environmental Quality, June 2019.