**2019 Consumer Confidence Report**

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| Water System Name: | **Life Water CO-Op Water System** | Report Date: | **June 2020** |

*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, 2019 and may include earlier monitoring data.*

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

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| Type of water source(s) in use:  | Groundwater from (2) wells |
|  Well #1 (Standby) and Well #2 in Inyokern, CA |
| Drinking Water Source Assessment information: | A drinking water source assessment has been completed and may be  |
| reviewed by contacting the office. The water source vulnerability is limited to septic tank proximity. |
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| Time and place of regularly scheduled board meetings for public participation:  |
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| For more information, contact:  |  Kerry Eikenskold |  Phone:  |  760-377-3151 |
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| ***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 level of a disinfectant added for water treatment that may not be exceeded at the consumer’s tap.**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set by the U.S. Environmental Protection Agency.**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**: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.**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.**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) |

**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 byproducts 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 U.S. EPA and the State Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health.

**Tables 1, 2, 3, 4, 5, and 6 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 State Board 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. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

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| 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(state Total Coliform Rule) | (In a month)4 | 3 | 1 positive monthly sample(a) | 0 | Naturally present in the environment |
| Fecal Coliform or *E. coli*(state Total Coliform Rule) | (In the year)0 | 0 | A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive |  | Human and animal fecal waste |
| *E. coli*(federal Revised Total Coliform Rule) | (In the year)0 | 0 | (b) | 0 | Human and animal fecal waste |
| (a) Two or more positive monthly samples is a violation of the MCL(b) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*. |
| 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) | **Sample Date** | **No. of Samples Collected** | **90th Percentile Level Detected** | **No. Sites Exceeding AL** | **AL** | **PHG** | **No. of Schools Requesting Lead Sampling** | **Typical Source of Contaminant** |
| Lead (ppb) | June 2018 | 5 | 1 | 0 | 15 | 0.2 | 0 | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | June 2018 | 5 | 0.009 | 0 | 1.3 | 0.3 | Not applicable | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

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| **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) | 2017 | 57 |  | none | none | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 2017 | 94 |  | none | none | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |
| **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** |
| Gross Alpha (pCi/L) | 2012 | 1.565 | ND-3.13 | 15 | (0) | Erosion of natural deposits |
| Uranium (pCi/L) | 2012 | 3.65 | 3.5-3.8 | 20 | 0.43 | Erosion of natural deposits |
| Hexavalent Chromium(ppb) | 2014 | 1.1 |  | N/A | N/A | Erosion of natural deposits |
| Radium R-226 (pCi/L) | 2012 | 0.164 |  | 5 | 0.05 | Erosion of natural deposits |
| Radium R-228 (pCi/L) | 2012 | 0.459 |  | 5 | 0.019 | Erosion of natural deposits |
| Barium (ppm) | 2017 | 0.037 |  | 1 | 2 | Erosion of natural deposits |
| Arsenic (ppb) | 2017 | 2.5 |  | 10 | 0.004 | Erosion of natural deposits |
| Fluoride (ppm) | 2017 | 0.68 |  | 2 | 1 | Erosion of natural deposits |
| Nitrate as N (ppm) | 2019 | 1.5 |  | 10 | 10 | Erosion of natural deposits; leaching from fertilizer use and septic systems |
| **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** |
| Chloride (ppm) | 2017 | 30 |  | 500 | N/A | Runoff from natural deposits |
| Color (units) | 2017 | 1.0 |  | 15 | N/A | Naturally occurring organic material |
| Iron (ppb) | 2017 | ND |  | 300 | N/A | Leaching from natural deposits |
| Manganese (ppb) | 2017 | ND |  | 50 | N/A | Leaching from natural deposits |
| Odor (Units) | 2017 | ND |  | 3 | N/A | Naturally occurring organic material |
| Sulfate (ppm) | 2017 | 53 |  | 500 | N/A | Runoff/leaching from natural deposits |
| TDS (ppm) | 2017 | 270 |  | 1000 | N/A | Runoff/leaching from natural deposits |
| Turbidity (NTU units) | 2017 | 0.27 |  | 5 | N/A | Soil runoff |
| Zinc (ppm) | 2017 | ND |  | 5.0 | N/A | Runoff/leaching from natural deposits |

**Summary Information for Violation of a MCL, MRDL, AL, TT,
or Monitoring and Reporting Requirement**

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| **VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT** |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct the Violation** | **Health Effects Language** |
| State Primary MCL(Revised Total Coliform Rule) | The July routine bacteriological sample came back present for Total Coliform. We collected three (3) repeat distribution samples, a storage tank, and a sample at Well #2. Two (2) distribution samples came back present for Total Coliform. | Month of July | Our certified operator conducted emergency disinfection of the water system and collected five (5) special distribution samples, a storage tank, and a sample at Well #2. All samples came back Absent for Total Coliform. | 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. |

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| **VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT** |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct the Violation** | **Health Effects Language** |
| State Primary MCLColiform (TCR) | In August, we were required to collect five (5) routine distribution samples, two (2) of the five (5) tested positive for total coliform. | Month of August | Our certified operator conducted emergency disinfection of the water system and collected five (5) special distribution samples, a storage tank, and a sample at Well #2. All samples came back Absent for Total Coliform. | 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. |

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| **VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT** |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct the Violation** | **Health Effects Language** |
| State Primary MCLColiform (TCR) | In September, we were required to collect five (5) routine distribution samples, two (2) of the five (5) tested positive for total coliform. | Month of September | Mandatory continuous chlorination treatment was installed. | 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. |

**Summary Information for Federal Revised Total Coliform Rule**

**Level 1 and Level 2 Assessment Requirements**

**Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation**

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct two (2) Level 2 assessment(s). Two (2) Level 2 assessment(s) were completed. In addition, we were required to take six (6) corrective actions and we completed five (5) actions.

**Level 2 Assessment on July 18, 2019:**

**A possible cause of bacteriological contamination in July 2019 may be due to the sediments in the pipes that were let loose after recent earthquakes in the area in early July, since high turbidity was detected immediately after the first earthquake. The water cleared up quickly after flushing.**

**Corrective Action:**

**1. The well site should be cleared of debris and vegetation to deter inhabitation of animals.**

**2. A fine mesh screen should be provided on the discharge port of the pressure relief valve on the well**

 **head.**

**3. Tank 3’s vent has a coarse screen. A fine mesh screen should be placed over the coarse screen.**

**Level 2 Assessment on September 13, 2019:**

**A possible cause of bacteriological contamination in August 2019 may be due to unsanitary sample site and a broken water pipe in the Lot 17 (2-ROU). The sample site consisted of a spigot close to the ground, surrounded by dogs. After the total coliform MCL failure in August 2019, the Water System submitted a revised Bacteriological Sample Siting Plan dated September 20, 2019, which was approved by the State Water Board, by a letter dated September 25, 2019. In the revised BSSP, Lot 17 (2-ROU) was replace by Lot 13 (2-ROU).**

**Following approval of the revised BSSP, the Water System collected five routine samples on September 26, 2019, from the locations identified in the revised BSSP and still failed the total coliform MCL in September 2019 since two out of the five routine samples tested positive for total coliform bacteria. In addition, a sample collected on September 26, 2019 from the storage tank also tested positive for total coliform bacteria. A sample collected on September 26, 2019 from Well 02 tested negative for total coliform bacteria.**

**The three corrective actions listed above were corrected by the Water System prior to collecting the routine samples in September.**

**Corrective Actions:**

**1. All water produced by Well 02 entering the distribution system shall receive continuous chlorination**

 **treatment.**

**2. The vent screen on Tan 4 is ripped and should be replaced.**

**3. Drain and clean Tanks 1, 2, 3, and 4.**

**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).

**FOOTNOTES:**

**Lead:** If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Life Water Co-Op Water System is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (1-800-426-4701) or at <http://www.epa.gov/lead>.

**Nitrate:** 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 pregnant women.

Report prepared by: skOO’kum h2o monitoring, inc. Tehachapi, CA

**Consumer Confidence Report**

**Certification Form**

*(to be submitted with a copy of the CCR)*

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| Water System Name: | **LIFE WATER CO-OP WATER SYSTEM** |
|  |  |
| Water System Number: | **1500579** |

The water system named above hereby certifies that its Consumer Confidence Report was distributed on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (*date*) to customers (and appropriate notices of availability have been given). Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the Department of Public Health.

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| Certified by: | Name: |  |  |  |
|  | Signature: |  |  |  |
|  | Title: |  |  |  |
|  | Phone Number: | ( ) | Date: |  |

To summarize report delivery used and good-faith efforts taken, please complete the below by checking

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