**2021 Consumer Confidence Report**

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| Water System Name: **Pacific Scientific-EMC** | Report Date: 6/30/2021 |

*Pac Sci EMC tests 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 to December 31, 2020 and may include earlier monitoring data.*

**Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Pac Sci EMC a (831) 637-3731 para asistirlo en español.**

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| Type of water source(s) in use: Well water | | |
| Name & general location of source(s): Well 01 and 02 – Located West of Lake Teledyne | | |
| Drinking Water Source Assessment information: A Level 2 Assessment was conducted by the Division of Drinking Water on May 13, 2020. Please contact Charlie Martin at (831) 630 5398 to coordinate reviewing this assessment. | | |
| Time and place of regularly scheduled board meetings for public participation: NA | | |
| For more information, contact: Charlie Martin | Phone: | (831) 630 5398 |

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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 (U.S. EPA).  **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**: Permissions from the State Water Resources Control Board (State Board) 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 (µg/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 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)  12 | | 6 | | 1 positive monthly sample | | | | | 0 | Naturally present in the environment |
| Fecal Coliform or *E. coli*  (state Total Coliform Rule) | (In the year)  2020 | | 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)  2020 | | 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) | 9/19/19 | 5 | | <0.0028 | | 0 | 15 | 0.2 | Not applicable | | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers;  erosion of natural deposits |
| Copper (ppm) | 9/19/19 | 5 | | 0.240 | | 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) | 4/7/20 | 440 | N/A | None | None | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 5/12/20 | 1150 | 1100-1200 | None | None | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally  occurring |
| **TABLE 4 – SAMPLING RESULTS FOR RADIOACTIVE CONTAMINANTS** | | | | | | |
| **Chemical or Constituent**  (and reporting units) | **Sample Date** | **Level Detected** | **MCL (AL) [MRDL]** | **PHG (MCLG) [MRDLG]** | **Typical Source of Contaminant** | **Health Effects** |
| Gross Alpha particle activity (pCi/L) | 2020 | 2.66 | 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. |
| Uranium (pCi/L) | 2016 | 3.37-11.6  3.81 (avg) | 20 | 0.43 | Erosion of natural deposits | 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. |
| Ra-226 &Ra-228 | 2020 | 0.231 | 5 | 0 | Erosion of natural deposits | Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. |
| Ra-228 | 2020 | 0 | 5 | 0 | Erosion of natural deposits | Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer. |
| **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 | 4/4/19 | 690 | N/A | 500 | N/A | Runoff/leaching from natural deposits; seawater influence |
| \*Sulfate | 5/12/20 | 580  (avg) | 550-610 | 500 | N/A | Runoff/leaching from natural deposits; seawater influence |
| \*Specific Conductance (µS/cm) | 2020 | 3763  (avg) | 3500-4000 | 1600 | N/A | Substances that form ions when in water; seawater influence |
| \*Total Dissolved Solids (TDS) | 2020 | 2312  (avg) | 2100-2500 | 1000 | N/A | Runoff/leaching from natural deposits |
| \*Turbidity Units (NTU) | 5/12/20 | 13.3 | 0.79-26 | 5 | N/A | Soil runoff |
| Iron | 2020 | 0.0205  (avg) | 0-0.41 | 300 | N/A | Leaching from natural deposits; industrial wastes |

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| **TABLE 6 – DETECTION RESULTS FOR INORGANICS** | | | | | | |
| **Chemical or Constituent**  (and reporting units) | **Sample Date** | **Level Detected** | **MCL (AL) [MRDL]** | **PHG (MCLG) [MRDLG]** | **Typical Source of Contamination** | **Health Effects Language** |
| Nitrate as NO3 | 7/7/2020 | 0.48 (avg) | 45 | 45 | Runoff and leaching from fertilized 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 pregnant women. |
| Perchlorate (ppb) | 2020 | 3.2-5.8  4.6 (avg) | 6 | 1 | 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. |
| Chromium Hexavalent | 7/14/2016 | 0.059-1.4  0.729 (avg) | 1 | 0.02 | Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits. | Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer. |
| Barium | 2016 | 620 | 1000 | N/A | Discharge 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. |
| Nitrate as N | 2020 | 0-1.6  0.8 (avg) | 10 | 10 | 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 pregnant women. |
| Fluoride | 7/14/2016 | 0.003-0.004  0.0035 (avg) | 2 | 1 | Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits. | Some people who drink water containing hexavalent chromium in excess of the MCL over many years may have an increased risk of getting cancer. |
| N-Nitrosodimethylamine (NDMA) ng/L | 9/16/2020 | 31.5 | N/A | N/A | NDMA can be unintentionally produced in and released from industrial  sources through chemical reactions, such as those that involve  alkylamines with nitrogen oxides, nitrous acid or nitrite salts. Potential  industrial sources include byproducts from tanneries, pesticide  manufacturing plants, rubber and tire manufacturers, alkylamine  manufacture and use sites, fish processing facilities, foundries and dye  manufacturers | Exposure to high levels of NDMA may cause liver damage. |

**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 U.S. EPA’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. U.S. EPA/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).

Lead-Specific Language: 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. Pac Sci EMC 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. [***OPTIONAL:*** If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.] 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 (1-800-426-4791) or at <http://www.epa.gov/lead>.

# 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** |
| Coliform Rule Exceedance | Greater than 1 coliform positive sample taken in consecutive months. | March-September | An anomaly in our R.O. processing system was the suspected culprit in the high coliform counts in the months of March-September. PacSci-EMC has chosen to supply purchased water until it can identify specific cause and corrective action. | 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. |
| Chloride | Runoff/leaching from natural deposits. | Persistent | PacSci-EMC utilizes a reverse osmosis system which reduces the Specific Conductance to within the MCL or purchases water that meets the MCL requirement. | This MCL is established for Aesthetic purposes only (taste, odor, or appearance) and is void of health effects. |
| Sulfate | Runoff/leaching from natural deposits. | Persistent | PacSci-EMC utilizes a reverse osmosis system which reduces the Specific Conductance to within the MCL or purchases water that meets the MCL requirement. | This MCL is established for Aesthetic purposes only (taste, odor, or appearance) and is void of health effects. |
| Specific Conductance (µS/cm) Greater than 1600. | PacSci-EMC water is naturally high in dissolved solids. | Persistent | PacSci-EMC utilizes a reverse osmosis system which reduces the Specific Conductance to within the MCL or purchases water that meets the MCL requirement. | This MCL is established for Aesthetic purposes only (taste, odor, or appearance) and is void of health effects. |
| Total Dissolved Solids (TDS) | PacSci-EMC water is naturally high in dissolved solids. | Persistent | PacSci-EMC utilizes a reverse osmosis system which reduces the Specific Conductance to within the MCL or purchases water that meets the MCL requirement. | This MCL is established for Aesthetic purposes only (taste, odor, or appearance) and is void of health effects. |
| Turbidity | Believed to be due to well work. | One time anomaly | None required | This MCL is established for Aesthetic purposes only (taste, odor, or appearance) and is void of health effects. |