

# 2019 Consumer Confidence Report

Water System Name: MP Mine Operations LLC Report Date: 5/29/20

*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 to December 31, 2019 and may include earlier monitoring data.*

**Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse [Enter Water System's Name Here] a [Enter Water System's Address or Phone Number Here] para asistirlo en español.**

**这份报告含有关于您的饮用水的重要讯息。请用以下地址和电话联系 [Enter Water System's Name Here]以获得中文的帮助:[Enter Water System's Address Here][Enter Water System's Phone Number Here]**

**Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa [Enter Water System's Name and Address Here] o tumawag sa [Enter Water System's Phone Number Here] para matulungan sa wikang Tagalog.**

**Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ [Enter Water System's Name Here] tại [Enter Water System's Address or Phone Number Here] để được hỗ trợ giúp bằng tiếng Việt.**

**Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau [Enter Water System's Name Here] ntawm [Enter Water System's Address or Phone Number Here] rau kev pab hauv lus Askiv.**

Type of water source(s) in use: Groundwater

Name & general location of source(s): \_\_\_\_\_

Throughout 2019, the source water for the Mountain Pass drinking water system originated only from the Shadow Valley Well field for SVW-1, SVW-2, SVW-3, and SVW-4.

Drinking Water Source Assessment information: See below

A source assessment was conducted on both well fields in April 2001. The water source for the Shadow Valley well field is considered most vulnerable to the petroleum pipeline near the well field and cattle grazing nearby as well as vehicle traffic on Interstate 15. The water source for the Ivanpah Valley well field has no existing vulnerabilities. These vulnerabilities are not associated with any detected contaminants. A copy of the complete assessment may be viewed at: San Bernardino County Government Center 385 North Arrowhead Ave. San Bernardino, CA 92415-0160. You may request a summary of the assessment be sent to you by contacting San Bernardino County Department of Public Health.

Time and place of regularly scheduled board meetings for public participation: Regular meetings are not held.

For more information, contact: John Espinoz / Aaron Case Phone: (760) 856-6161/(714)450-5036

## 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.

**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.

**Variations 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

**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.

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 ( $\mu\text{g/L}$ )

**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.

**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) 1	3	1 positive monthly sample <sup>(a)</sup>	0	Naturally present in the environment
Fecal Coliform or <i>E. coli</i> (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 <i>E. coli</i> positive	-	Human and animal fecal waste
<i>E. coli</i> (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	90 <sup>th</sup> Percentile Level Detected	No. Sites Exceeding AL	AL	PHG	No. of Schools Requesting Lead Sampling	Typical Source of Contaminant
Lead (ppb)	9/26/18	5	ND	0	15	0.2	Not applicable	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	9/26/18	5	290.5	0	1.3	0.3	Not applicable	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)	06/27/19, 10/15/19	Not Listed / Not Applicable	25-98	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	06/27/19, 10/15/19	Not Listed / Not Applicable	210-530	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 Particle Activity (pCi/L)	06/27/19, 10/15/19	3.00	ND-7.69	15.0	None	Erosion of natural deposits
Arsenic (ppb)	06/27/19, 10/15/19	2.00	2.0-6.3	10.0	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride (ppb)	06/27/19, 10/15/19	0.100	0.37- 1.2	2.0	1	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate as N (NO <sub>3</sub> -N) (ppm)	06/27/19, 10/15/19	0.400	0.64- 2.8	10.0	45	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Toluene	06/27/19, 10/15/19	0.500	ND-2.6	150	None	Possible lab cross contamination error or from sampling and cross contamination occurred.

**TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	SMCL	PHG (MCLG)	Typical Source of Contaminant
Iron (ppb)	06/27/19, 10/15/19	100	ND- 8,600	300	-	Leaching from natural deposits and casing; industrial wastes
Manganese (ppb)	06/27/19, 10/15/19	20.0	ND-150	50	-	Leaching from natural deposits and casing
Turbidity (NTU)	06/27/19, 10/15/19	0.100	0.13-15	5.0	-	Soil Runoff; Leaching from natural deposits and casing
Total Dissolved Solids (TDS) (ppm)	06/27/19, 10/15/19	0.000	450- 810	1000	-	Runoff/leaching from natural deposits
Specific Conductance (uS/cm)	06/27/19, 10/15/19	0.000	720-1,100	1600	-	Substances that form ions when in water; seawater influence
Chloride (ppm)	06/27/19, 10/15/19	0.000	8.6-29	500	-	Runoff/leaching from natural deposits; seawater influence
Sulfate (ppm)	06/27/19, 10/15/19	0.500	210-410	500	-	Runoff/leaching from natural deposits; industrial wastes
Color (units)	06/27/19, 10/15/19	0.000	ND-30	15.0	-	Leaching from natural deposits and casing

**TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS**

Chemical or Constituent (and reporting units)	Sample Date	Level Detected	Range of Detections	Notification Level	Health Effects Language
Boron	06/27/19, 10/15/19	0.125	-	1.0	The babies of some pregnant women who drink water containing boron in excess of the notification level may

					have an increased risk of developmental effects; based on studies in laboratory animals
Chromium VI (ppb) (Hexavalent Chromium)	06/27/19, 10/15/19	2.4	-	N/A	N/A

### 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. [MP Mine Operations LLC] 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

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
Iron exceeded MCL of 300 ppb (UG/L) which was reported to be 8600 ppb (UG/L)	<b>Testing occurred to decide whether we should or should not reconnect Well #1- Shadow Valley (3600172-001)</b>	<b>Well was not connected to system when testing. Well has been disconnected for over a year.</b>	<b>Repeat sampling for 4 consecutive quarters including 4Q19 to determine if there was a violation and average down.</b>	<b>NA-Well was not connected to system when testing. Well has been disconnected for over a year.</b>
Manganese exceeded MCL of 50 ppb (UG/L) which was reported to be 150 ppb (UG/L)	<b>Testing occurred to decide whether we should or should not reconnect Well</b>	<b>Well was not connected to system when testing. Well has been</b>	<b>Repeat sampling for 4 consecutive quarters including 4Q19 to determine if</b>	<b>NA-Well was not connected to system when testing. Well has been</b>

	<b>#1- Shadow Valley (3600172-001)</b>	<b>disconnected for over a year.</b>	<b>there was a violation and average down.</b>	<b>disconnected for over a year.</b>
Turbidity exceeded MCL of 5 NTU which was reported to be 15 NTU	<b>Testing occurred to decide whether we should or should not reconnect Well #1- Shadow Valley (3600172-001)</b>	<b>Well was not connected to system when testing. Well has been disconnected for over a year.</b>	<b>Repeat sampling for 4 consecutive quarters including 4Q19 to determine if there was a violation and average down.</b>	<b>NA-Well was not connected to system when testing. Well has been disconnected for over a year.</b>
Color exceeded MCL of 15 units which was reported to be 30 units	<b>Testing occurred to decide whether we should or should not reconnect Well #1- Shadow Valley (3600172-001)</b>	<b>Well was not connected to system when testing. Well has been disconnected for over a year.</b>	<b>Repeat sampling for 4 consecutive quarters including 4Q19 to determine if there was a violation and average down.</b>	<b>NA-Well was not connected to system when testing. Well has been disconnected for over a year.</b>

**For Water Systems Providing Groundwater as a Source of Drinking Water**

**TABLE 7 – SAMPLING RESULTS SHOWING  
FECAL INDICATOR-POSITIVE GROUNDWATER SOURCE SAMPLES**

<b>Microbiological Contaminants</b> (complete if fecal-indicator detected)	<b>Total No. of Detections</b>	<b>Sample Dates</b>	<b>MCL [MRDL]</b>	<b>PHG (MCLG) [MRDLG]</b>	<b>Typical Source of Contaminant</b>
<i>E. coli</i>	(In the year)	-	0	(0)	Human and animal fecal waste
Enterococci	(In the year)	-	TT	N/A	Human and animal fecal waste
Coliphage	(In the year)	-	TT	N/A	Human and animal fecal waste

**Summary Information for Fecal Indicator-Positive Groundwater Source Samples,  
Uncorrected Significant Deficiencies, or Groundwater TT**

<b>SPECIAL NOTICE OF FECAL INDICATOR-POSITIVE GROUNDWATER SOURCE SAMPLE</b>
NA
<b>SPECIAL NOTICE FOR UNCORRECTED SIGNIFICANT DEFICIENCIES</b>
NA

VIOLATION OF GROUNDWATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
NA				

**For Systems Providing Surface Water as a Source of Drinking Water**

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique <sup>(a)</sup> (Type of approved filtration technology used)	NA
Turbidity Performance Standards <sup>(b)</sup> (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to __ NA __ NTU in 95% of measurements in a month. 2 – Not exceed __ NA __ NTU for more than eight consecutive hours. 3 – Not exceed __ NA __ NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	NA
Highest single turbidity measurement during the year	NA
Number of violations of any surface water treatment requirements	NA

(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.

**Summary Information for Violation of a Surface Water TT**

VIOLATION OF A SURFACE WATER TT				
TT Violation	Explanation	Duration	Actions Taken to Correct the Violation	Health Effects Language
NA				

**Summary Information for Operating Under a Variance or Exemption**

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**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 [**INSERT NUMBER OF LEVEL 1 ASSESSMENTS**] Level 1 assessment(s). [**INSERT NUMBER OF LEVEL 1 ASSESSMENTS**] Level 1 assessment(s) were completed. In addition, we were required to take [**INSERT NUMBER OF CORRECTIVE ACTIONS**] corrective actions and we completed [**INSERT NUMBER OF CORRECTIVE ACTIONS**] of these actions.

During the past year [**INSERT NUMBER OF LEVEL 2 ASSESSMENTS**] Level 2 assessments were required to be completed for our water system. [**INSERT NUMBER OF LEVEL 2 ASSESSMENTS**] Level 2 assessments were completed. In addition, we were required to take [**INSERT NUMBER OF CORRECTIVE ACTIONS**] corrective actions and we completed [**INSERT NUMBER OF CORRECTIVE ACTIONS**] of these actions.

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**Level 2 Assessment Requirement Due to an *E. coli* MCL Violation**

*E. coli* are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely-compromised immune systems. We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) identify problems and to correct any problems that were found during these assessments.

We were required to complete a Level 2 assessment because we found *E. coli* in our water system. In addition, we were required to take [**INSERT NUMBER OF CORRECTIVE ACTIONS**] corrective actions and we completed [**INSERT NUMBER OF CORRECTIVE ACTIONS**] of these actions.



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