

**Death Valley National Park  
Maintenance Division  
Water System Operations  
Death Valley, Ca 92328  
June of 2018  
Consumer Confidence Report  
Cow Creek Water System**

Dear Water System Customer:

Safe and reliable drinking water supplies are one of the most important resources we have available to us. Here at the National Park Service Death Valley Water System Operations we're committed to providing safe drinking water supplies to our customers that meets or exceeds the standards of quality. In an effort to keep our customers thoroughly informed about the quality of our water supplies, we provide this annual report. The following water quality information can be used for future reference in addressing any questions that you may have regarding your drinking water.

The Cow Creek Community water supply is collected from Nevares springs infiltration gallery. The collection system capacity is approximately 218,000 gallons per day. Source water is 101 degrees. Tap water will often exceed 104 degrees because of the intense heat penetration through the ground to the pipes during hot weather.

The raw water is considered moderately mineralized consisting of sodium, calcium and magnesium, salts and bicarbonate, sulfates, and chloride. The water is considered high silica water in which amorphous silica and magnesium silicate deposits could create serious problems by fouling surfaces of water handling equipment. This type of silica scale is very tenacious and difficult to remove.

A Reverse Osmosis Plant has been installed above the 350,000 gallon tank and is doing a wonderful job of removing the minerals. The total dissolved solids have dropped from 850 to 300 mg/L.

Specific water quality data relating to treated water supplies can be found in Table 1 of this report. All water naturally contains a variety of dissolved mineral and organic substances and the California Department of Health Services has adopted drinking water standards that establish limits that may affect health or aesthetic qualities of water.

The California Department of Health Services (DHS) sets the drinking water standards and has determined that fluoride is a health concern at certain exposure levels. Fluoride occurs naturally in combination with other elements such as, sodium fluoride

(NaF) or sodium silicofluoride ( $\text{Na}_2\text{SiF}_6$ ). All fluoride compounds dissociate to yield fluoride ion when the compounds come in contact with water.

In cooperation with the Department of Health Services, Division of Drinking Water, the National Park Service in Death Valley has now developed means of meeting the standards for fluoride with the installation of the R.O. Plant.

Samples of water are collected monthly for bacterial testing by the Inyo County Health Department. All water supplied to the public is disinfected with chlorine. This insures all harmful bacteria are removed. Water is tested daily for chlorine residuals to continuously monitor and control chlorine performance and to also alert personnel if problems occur.

We would like to encourage managers, residents, employees, schools, etc to distribute this water quality report to individuals who may be non-billed water users to assure the broadest distribution of this information possible. The National Park Service will provide additional copies at no charge. Again, we would like to restate our commitment towards providing safe drinking water to all our customers. If you have any questions, please contact us at the Cow Creek Maintenance offices during regular business hours: Monday through Friday 7:00 am to 3:30 p.m. at (760) 786-3264.

## Table 1

### Terms and abbreviations used below:

- **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 Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. The U.S. Environmental Protection Agency sets MCLGs.
- **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 (MCLGs) as is economically and technologically possible. Secondary MCLs are set to protect odor, taste, and appearance of drinking water.
- **Regulatory Action Level (AL):** The concentration of a contaminant which, when exceeded, triggers treatment or other requirements that a water system must follow.
- **NA:** not applicable **ND:** not detectable **PPB:** parts per billion **PPM:** parts per million
- **mg/L:** milligrams per liter **pCi/l:** Pico curies per liter **ug/L:** micrograms per liter

Thomas Buck  
  
Water Treatment Supervisor

## Death Valley National Park / Cow Creek Water System

### Inorganic Chemicals / Metals

|           |     | MCL   | RAW   | FINAL |                                                                                                                                     |
|-----------|-----|-------|-------|-------|-------------------------------------------------------------------------------------------------------------------------------------|
| Aluminum  | ppm | 0.002 | ND    | ND    | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland                   |
| Antimony  | ppm | 0.006 | ND    | ND    | Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder                                                 |
| Arsenic   | ppm | 0.01  | 0.006 | ND    | Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes                              |
| Barium    | ppm | 2     | ND    | ND    | Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits                                          |
| Beryllium | ppm | 0.004 | ND    | ND    | Discharge from metal refineries and coal-burning factories; Discharge from electrical, aerospace, and defense industries            |
| Cadmium   | ppm | 0.005 | ND    | ND    | Corrosion of galvanized pipes; Erosion of natural deposits; Discharge from metal refineries; Runoff from waste batteries and paints |
| Chromium  | ppm | 0.1   | ND    | ND    | Discharge from steel and pulp mills; Erosion of natural deposits                                                                    |
| Copper    | ppm | 1.3   | 0.05  | 0.05  | Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives                              |
| Cyanide   | ppm | 0.15  | ND    | ND    | Discharge from steel/metal factories; Discharge from plastic and fertilizer factories                                               |
| Fluoride  | ppm | 2     | 3.2   | 1.4   | Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories           |
| Lead      | ppm | 0.015 | ND    | ND    | Corrosion of household plumbing systems; Erosion of natural deposits                                                                |
| Mercury   | ppm | 0.002 | ND    | ND    | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland                   |
| Nickel    | ppm | 0.001 | ND    | ND    | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland                   |
| Selenium  | ppm | 0.05  | ND    | ND    | Discharge from petroleum and metal refineries; Erosion of natural deposits; Discharge from mines                                    |
| Silver    | ppm | 0.001 | ND    | ND    | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland                   |
| Thallium  | ppm | 0.002 | ND    | ND    | Leaching from ore-processing sites; Discharge from electronics, glass, and drug factories                                           |
| Vanadium  | ppm | 0.003 | ND    | ND    | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills; Runoff from cropland                   |

### Nitrate / Nitrite

|         |     |    |    |    |                                                                                             |
|---------|-----|----|----|----|---------------------------------------------------------------------------------------------|
| Nitrate | ppm | 10 | ND | ND | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |
| Nitrite | ppm | 1  | ND | ND | Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits |

### Radiological

|                      |       |    |     |     |                             |
|----------------------|-------|----|-----|-----|-----------------------------|
| Gross Alpha emitters | pCi/L | 15 | 12  | 12  | Erosion of natural deposits |
| Uranium              | ppb   | 20 | 1.2 | 1.2 | Erosion of natural deposits |

### Regulated SOC's

All tested SOC's results were non detectible

Regulated VOC's

All tested VOC's results were non detectible

Secondary / GP

|                           |     |         |     |     |
|---------------------------|-----|---------|-----|-----|
| Bicarbonate Alkalinity    | ppm | NR      | 350 | 189 |
| Calcium                   | ppm | NR      | 42  | 22  |
| Choride                   | ppm | 500     | 32  | 17  |
| Hardness (Total) as CaCO3 | ppm | NR      | 200 | 108 |
| Magnesium                 | ppb | 50      | 21  | 11  |
| pH                        | ppm | 6.5-8.5 | 7.6 | 7.6 |
| Sodium                    | ppm | 500     | 140 | 75  |
| Sulfate                   | ppm | 500     | 170 | 92  |
| Total Disolved Solids     | ppm | 1000    | 610 | 330 |

Microbiological  
Contaminants

|                        |     |    |    |    |                                      |
|------------------------|-----|----|----|----|--------------------------------------|
| Total Coliform         | P/A | P  | P  | A  | Naturally present in the environment |
| Total Coliform Monthly | %   | 5% | 0% | 0% | Naturally present in the environment |
| Fecal Coliform         | P/A | P  | A  | A  | Human and animal fecal waste         |
| E. Coli                | P/A | P  | A  | A  | Human and animal fecal waste         |

Disinfectants  
and Disinfection  
Byproducts

|                              |     |    |      |     |                                         |
|------------------------------|-----|----|------|-----|-----------------------------------------|
| Chlorine                     | ppm | 4  | 0    | 0.9 | Water additive used to control microbes |
| Haloacetic Acid (HAA5)       | ppb | 50 | NT   | ND  | Disinfectant By-Product                 |
| Total Trihalomethane (TTHM5) | ppb | 80 | NT   | ND  | Disinfectant By-Product                 |
| Turbidity                    | NTU | 1  | 0.35 | 0.1 | Soil runoff                             |

- MCLMaximum Contaminant Level
- RAWSource of Water
- FinalFinished Water that is available for the consumer
- NDNo Detection
- NRNo Regulation

|              |                                                                                                                 |
|--------------|-----------------------------------------------------------------------------------------------------------------|
| <b>NT</b>    | <b>Not Tested</b>                                                                                               |
| <b>NTU</b>   | <b>Nephelometric Turbidity Units / Clarity of the water</b>                                                     |
| <b>P/A</b>   | <b>Presence / Absence</b>                                                                                       |
| <b>pCi/L</b> | <b>Picocuries per Liter / standard measure for the intensity of radioactivity / one trillionth of one curie</b> |
| <b>ppm</b>   | <b>Parts per million / milligrams per liter / mg/L</b>                                                          |
| <b>ppb</b>   | <b>Parts per billion / micrograms per liter / ug/L</b>                                                          |

**Any questions relating to analytical measurements can be answered easily from information obtained from the internet.**