# 2021 Consumer Confidence Report (CCR)

## Water System Information

Water System Name: Darwin Community Service District

Report Date: July 2022

Type of Water Source(s) in Use: Groundwater Under Influence of Surface Water (Spring 01)

Name and General Location of Source(s): Spring 01, ~9 miles south of the service area, on the naval base

Drinking Water Source Assessment Information:

Assessment Performed by, and may be viewed at, Inyo County Environmental Health Services, County Services Building, 207 W. South Street Bishop CA 93514, on February 2003, on source Intake 01. The activities to which the Darwin Community Services District water supply is most vulnerable includes the military operations at the China Lake Naval Weapons Base and the many historic mining sites in the area. There have been no contaminants detected in the water supply, however the source is still considered vulnerable to activities located near the drinking water source.

Time and Place of Regularly Scheduled Board Meetings for Public Participation:

The DCSD Board meetings are held the second Sunday of each month at 9:30 am at Darwin Station, corner of Main and Market Streets

For More Information, Contact: Michael Laemmle at 760-876-5065

## About This Report

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, 2021 and may include earlier monitoring data.

**SPECIAL NOTES**

The CCR is intended to inform your customers of the quality of the water served in the previous calendar year (January 1, 2021 – December 31, 2021). However, not all water quality parameters are monitored every year. Therefore, if a parameter was not monitored during the previous year, the water system must report the most recent water quality monitoring data that are not more than nine years old. Results of detections of unregulated contaminants under the federal UCMR are recommended to be included for five years from the date of the last sampling.

## Importance of This Report Statement in Five Non-English Languages (Spanish, Mandarin, Tagalog, Vietnamese, and Hmong)

Language in Spanish: Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse Darwin Community Service District a 760-876-5065 para asistirlo en español.

Language in Mandarin: 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 Darwin Community Service District以获得中文的帮助:760-876-5065.

Language in Tagalog: Ang pag-uulat na ito ay naglalaman ng mahalagang impormasyon tungkol sa inyong inuming tubig. Mangyaring makipag-ugnayan sa Darwin Community Service District o tumawag sa 760-876-5065 para matulungan sa wikang Tagalog.

Language in Vietnamese: Báo cáo này chứa thông tin quan trọng về nước uống của bạn. Xin vui lòng liên hệ Darwin Community Service District tại 760-876-5065 để được hỗ trợ giúp bằng tiếng Việt.

Language in Hmong: Tsab ntawv no muaj cov ntsiab lus tseem ceeb txog koj cov dej haus. Thov hu rau Darwin Community Service District ntawm 760-876-5065 rau kev pab hauv lus Askiv.

## Terms Used in This Report

| **Term** | **Definition** |
| --- | --- |
| 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. |
| 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). |
| 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. |
| 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. |
| Regulatory Action Level  (AL) | The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow. |
| 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. |
| 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. |
| ND | Not detectable at testing limit. |
| ppm | parts per million or milligrams per liter (mg/L) |
| ppb | parts per million or milligrams per liter (mg/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) |

## Sources of Drinking Water and Contaminants that May Be Present in Source Water

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.

## Regulation of Drinking Water and Bottled Water Quality

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.

## About Your Drinking Water Quality

### Drinking Water Contaminants Detected

Tables 1, 2, 3, 4, 5, 6, and 8 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 . Sampling Results Showing the Detection of Coliform Bacteria

Complete if bacteria are detected.

| **Microbiological Contaminants** | **Highest No. of Detections** | **No. of Months in Violation** | **MCL** | **MCLG** | **Typical Source of Bacteria** |
| --- | --- | --- | --- | --- | --- |
| Total Coliform Bacteria (State Total Coliform Rule) | 0 | 0 | 1 positive monthly sample (a) | 0 | Naturally present in the environment |
| Fecal Coliform or *E. coli* (State Total Coliform Rule) | 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 | 0 | Human and animal fecal waste |
| *E. coli* (Federal Revised Total Coliform Rule) | 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 . Sampling Results Showing the Detection of Lead and Copper

Complete if lead or copper is detected in the last sample set.

| **Lead and Copper** | **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) | 6/7/21 | 5 | 0 | 0 | 15 | 0.2 | None | Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits |
| Copper (ppm) | 6/7/21 | 5 | 0.15 | 0 | 1.3 | 0.3 | Not  applicable | Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives |

Table . 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) | 3/21/2021 | 38 | n/a | None | None | Salt present in the water and is generally naturally occurring |
| Hardness (ppm) | 3/21/2021 | 310 | n/a | None | None | Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring |

Table . 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** |
| Fluoride (mg/L) | 3/23/21 | 0.22 | n/a | 2 | 1 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| HAA5 (Sum of 5 Haloacetic Acids) (ug/L) | 6/7/2021 | 33\* | n/a | 60 | n/a | Byproduct of drinking water disinfection |
| Nitrate (as Nitrogen, N) (mg/L) | 8/23/2021 | 0.77 | n/a | 10 | 10 | Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits |
| Turbidity (NTU) | 3/24/2020 | 1.0\* | n/a | TT | n/a | Soil runoff |
| **TTHMs (Total Trihalomethanes) (ug/L)** | 6/7/2021 | 120\* | **n/a** | **80** | **n/a** | **Byproduct of drinking water disinfection** |

Table . 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** |
| Chloride (mg/L) | 3/23/2021 | 34 |  | 500 |  | Runoff/leaching from natural deposits; seawater influence |
| Color (Units) | 3/24/2020 | 10 |  | 15 |  | Naturally-occurring organic materials |
| Iron (ug/L) | 3/23/2021 | 510 |  | 300 |  | Leaching from natural deposits; industrial wastes |
| Manganese (ug/L) | 3/23/2021 | 30 |  | 50 |  | Leaching from natural deposits |
| Sulfate (mg/L) | 3/23/2021 | 190 |  | 500 |  | Runoff/leaching from natural deposits; industrial wastes |
| Specific Conductance (µS/cm) | 3/23/2021 | 750 |  | 1600 |  | Substances that form ions when in water; seawater influence |
| Total Dissolved Solids (TDS) (mg/L) | 3/23/2021 | 520 |  | 1000 |  | Runoff/leaching from natural deposits |
| Turbidity (NTU) | 3/24/2020 | 1.0\* |  | TT | N/A | Soil runoff |

Table . Detection of Unregulated Contaminants

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Chemical or Constituent (and reporting units)** | **Sample Date** | **Level Detected** | **Range of Detections** | **Notification Level** | **Health Effects Language** |
| Dimethoate (CYGON) (ug/L) | 5/20/2019 | <10 ug/L |  | N/A | N/A |
| Diazinon | 5/20/2019 | <0.25 ug/L |  | N/A | N/A |
| Metolachlor | 5/20/2019 | <0.50 ug/L |  | 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. Darwin Community Service District 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

Table 7. Violation of a MCL, MRDL, AL, TT or Monitoring Reporting Requirement

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct Violation** | **Health Effects Language** |
| Elevated TTHM levels exceeding MCL | TTHM MCL were exceeded by 50% but reduced from previous year (160 ug/l in 2020 vs 120 ug/l during this reporting year 2021). Elevated TTHM levels are due to tank failure and are expected to be remedied with new tank placement to be completed by end of 2022/early 2023. Nonetheless, latest TTHM levels were down to 89 ug/L in June 2022.. | 9/15/19-present | With the State’s help, expedite water tank replacement project to have bag filtration system back in place and chlorination procedures automated. In interim, provide customers with safe bottled drinking water and provide boil water notice. Expedite tank replacement project. | Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer. |
| Certified Treatment Operator | The system failed to employ or utilize a water treatment operator certified at the appropriate level for the classification of the treatment plant and distribution system. (T2, D1) | 10/8/20-present | The system has a certified T2 System Operator as of July 2021. | None |
| Surface Water Treatment Rule Violation (TT) | In August 2019, the System’s surface water treatment was taken offline due to severe corrosion of the raw water tank. The System currently bypasses the raw water tank and bag filtration. The System currently treats water with chlorination and delivers monthly Boil Water Notices to its population. | 8/17/19 – present | Pending construction of a new raw water tank in 2022. | Inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches. |

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

Table 10. Sampling Results Showing Treatment of Surface Water Sources

|  |  |
| --- | --- |
| Treatment Technique (a) (Type of approved filtration technology used) | SWRCB approved Rosedale bag filtration technology/chlorination. |
| Turbidity Performance Standards (b) (that must be met through the water treatment process) | Turbidity of the filtered water must:  1 – Be less than or equal to [Enter Turbidity Performance Standard to Be Less Than or Equal to 95% of Measurements in a Month] NTU in 95% of measurements in a month.  2 – Not exceed [Enter Turbidity Performance Standard Not to Be Exceeded for More Than Eight Consecutive Hours] NTU for more than eight consecutive hours.  3 – Not exceed [Enter Turbidity Performance Standard Not to Be Exceeded at Any Time] NTU at any time. |
| Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1. | 100% \* |
| Highest single turbidity measurement during the previous year | 1.0 NTU, 3/24/2020 |
| Number of violations of any surface water treatment requirements | 1 continuously, untreated surface water due to raw water tank failure |

(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

Table 11. Violation of Surface Water TT

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Violation** | **Explanation** | **Duration** | **Actions Taken to Correct Violation** | **Health Effects Language** |
| **SWTR-Filtration\***  **(TT)** | See below | August 17,2019-present | Pending construction of a new raw water tank in 2022. | Inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches. |

\*The water system is wholly served by one spring and one surface water treatment plant. The raw water tank to the treatment plant developed multiple leaks during summer 2019, and upon evaluation could not hold enough water to supply the treatment plant. As a result, the raw water tank was taken out of service. The spring water source was temporarily modified to bypass the treatment plant and deliver water straight to the finished water tank without treatment except for chlorine. The water system was placed on a boil water order due to the unfiltered surface water. Currently, the raw water tank continues to be bypassed pending construction of a new tank in 2021. The boil order will remain in effect, and the Darwin CSD staff will continue to issue monthly boil water notices to the community, until the treatment plant resumes operation and returns to compliance with treatment requirements.

During the period: August 17, 2019 – current, filtered water turbidity monitoring has been suspended.

Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.