

**Naval Air Weapons Station China Lake  
South Range Public Water System  
2024 Consumer Confidence Report  
CA1503678**



**BLUF**

**NAWSCL South Range Public Water System had no violations and one primary water quality standard exceedance in 2024.**

**Public Works Environmental sampled for 29 different PFAS compounds in August 2023 at both South Range PWS production wells with results showing no detection of these compounds.**

**Public Works Utilities conducted a detailed Lead Service Line Inventory in Summer 2024. All 25 service lines were verified resulting in 0 (zero) lead service lines in the distribution system.**

**Water System Information**

- **Name:** China Lake Naval Air Weapons Station South Range Public Water System CA1503678
- **Report Date:** April 16, 2025
- **Water Source:** Groundwater from two wells
- **Name and General Locations:** Well 24 and Well 25. Located at NAWSCL South Range, Echo Main Site, San Bernardino County, California.

**About This Report**

We test the drinking water quality for many constituents/contaminants as required by federal and state regulations. This report shows results of our monitoring for the period January 1 to December 31, 2024 and may include earlier monitoring data

**Drinking Water Sources**

Drinking water sources (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells (groundwater). As water travels over land surface or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from animals present or from human activity.

NAWSCL source water is raw groundwater which is considered non-potable until after all treatment and disinfection processes have taken place. Contaminants that may or may not be present in all raw source waters include:

- Microbial contaminants, such as viruses and bacteria, 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming

- Pesticides and herbicides, may come from a variety of sources such as agriculture, urban storm water runoff, and residential use
- 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 storm water runoff, agricultural application, and septic systems
- Radioactive contaminants can be naturally-occurring or be the result of oil and gas production and mining activities

### Drinking Water Source Assessment and Protection (DWSAP)

NAWSCL source assessments were conducted in 2003. Since no significant changes have taken place in or around source waters that would change source assessments or protection

- Well 24: is not considered to be vulnerable to contamination
- Well 25: is not considered to be vulnerable to contamination

### Regulation of Drinking Water and Bottled Water Quality

In order to ensure tap water is safe to drink, the U.S. Environmental Protection Agency (EPA) and the State Water Resources Control Board (SWRCB) prescribe regulations that limits the number of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health

### 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 <i>E. coli</i> 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	A required process intended to reduce the level of a contaminant in drinking water.

Term	Definition
(TT)	
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 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)

#### Notes on detected drinking water contaminants

Presence of water contaminants does not necessarily indicate the water poses a health risk. EPA and SWRCB allows us to monitor for certain contaminants less than once per year because concentrations of these contaminants do not change frequently (groundwater). Some data (though representative of the water quality) can be more than year old

### Monitoring Results

#### Coliform Bacteria

Coliform bacteria has not been detected in PWS distribution system, including *E. coli*. Samples are pulled monthly from key locations throughout distribution system.

#### Lead and Copper

Ten lead and copper sites were sampled within distribution system in June 2022. None of these sites exceeded the Regulatory Action Level. State Water Resources Control Board (SWRCB) requires triennial sampling for all lead and copper sites, next sampling cycle is Summer 2025.

#### Information for Violation of MCL or Monitoring/ Reporting Requirement and Revised Total Coliform Rule Level 1/ Level 2 Assessment Requirements

There was one exceedance of primary water quality MCL. No Revised Total Coliform Rule Level 1 or Level 2 Assessments required for this water system in 2024.

Annual disinfection by-products (DBP) sampling resulted in one exceedance of total trihalomethanes (TTHM). This MCL exceedance was the result of replacing the arsenic treatment plant media which required elevated chlorine levels during the flushing process. Public Works Utilities and Environmental worked with the State Water Resources Control Board, Division of Drinking Water to revise our DBP plan to increase monitoring locations and sampling frequency. Utilities increased flushing of water line dead ends which resulted in lower DBPs and they will continue to closely monitor water quality in the system.

### Primary Drinking Water Standards (PDWS) Contaminant Detection

These are legally enforceable standards that apply to public water systems. Primary standards protect public health by limiting levels of contaminants in drinking water

Primary Chemical or Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	MCL [MRDL]	PHG (MCLG) [MRDLG]	Typical Source of Contaminant
<b>Arsenic</b> (ug/L - ppb)	Sampled Weekly	1.9	0 – 3.9	10	4	Erosion of natural deposits
<b>Chromium Hexavalent</b> (ug/L, ppb)	3/2025	.175	.160 - .190	10	0	Erosion of natural deposits
<b>Nitrate</b> (mg/l -ppm)	11/2023	3.7	2.8 – 4.6	10	10	Erosion of natural deposits
<b>Fluoride</b> (mg/l -ppm)	11/2023	.37	..35 - .38	2	1	Erosion of natural deposits
<b>Uranium</b> (pCi/L) (picocuries per liter)	12/2020	3.7	2.9 – 4.4	20	.43	Erosion of natural deposits
<b>Vanadium</b> (Ug/L – ppb)	12/2020	20	18-22	None	21	Erosion of natural deposits
<b>Residual Chlorine</b> (mg/l –ppm)	Sampled Weekly	1.47	.68 – 2.25	4	4	Disinfection Process
<b>Total Trihalomethanes TTHM</b> (ug/l - ppb)	2/2025	7.1	4.1 – 10.0	80	N/A	By-product of drinking water disinfection
<b>Total Haloacetic Acids - HAA5</b> (ug/l - ppb)	2/2025	.50	0 – 1.0	60	N/A	By-product of drinking water disinfection

## Secondary Drinking Water Standards (SDWS) Contaminant Detection

Secondary Standards are non-enforceable guidelines regulating contaminants that may cause cosmetic or aesthetic effects in drinking water. There are no PHGs, MCLGs, or mandatory standard health effects language for these constituents because secondary MCLs are set on the basis of aesthetic concerns (such as taste, odor or color)

Secondary Chemical or Constituent (reporting units)	Sample Date	Average Level Detected	Range of Detections (from two wells)	SMCL	Typical Source of Contaminant
<b>Color</b> (Units)	11/2017	1	1 - 2	15	Naturally occurring organic materials
<b>Foaming Agent (MBAS)</b> (mg/l – ppm)	11/2017	.15	.10 - .20	.50	Naturally occurring breakdown of waste (organic) products
<b>Chloride</b> (mg/l – ppm)	11/2017	41	38-43	500	Runoff and leaching from natural deposits and seawater influence
<b>Specific Conductance</b> (uS/ cm) (microsiemens per centimeter)	11/2017	602	556-647	1600	Substances that form ions when in water and/ or seawater influence Note: Specific conductance is reported in microsiemens per centimeter at 25 degrees Celsius (µS/cm at 25 °C). Siemens per centimeter are the equivalent of mhos per centimeter.
<b>Total Dissolved Solids</b> (mg/l – ppm)	11/2017	360	309 - 410	1000	Runoff and leaching from natural deposits
<b>Turbidity</b> (NTU) (nephelometric turbidity unit)	11/2017	.23	0.22 - .24	5	Soil runoff, turbidity is measure of cloudiness of water. We measure this because it is a good indicator of water quality Note: NTU stands for Nephelometric Turbidity unit, i.e. the unit used to measure the turbidity of a fluid or the presence of suspended particles in water. The higher the concentration of suspended solids in the water is, the dirtier it looks and the higher the turbidity is
<b>Sulfate</b> (mg/l – ppm)	11/2017	42	39-44	500	Runoff and leaching from natural deposits
<b>Odor Threshold</b> (ton)	11/2017	1	1	3	Naturally occurring organic materials

## Sampling Results for Sodium and Hardness

Chemical or Constituent (reporting units)	Sample Date	Level Detected	Range of Detections	MCL	Typical Source of Contaminant
<b>Sodium</b> (mg/l-ppm)	11/2017	101	82-120	None	Salt present in the water, generally naturally occurring
<b>Hardness</b> (mg/l-ppm)	11/2017	97	73 - 120	None	Sum of polyvalent cations present in the water, generally magnesium and calcium, naturally occurring

All other sampled constituents/ contaminants were below required reporting level threshold and are not included in this report, more information for CA1503678 can be found at SWRCB Drinking Water Watch site:

[https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys\\_is\\_number=14504&tinwsys\\_st\\_code=CA](https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=14504&tinwsys_st_code=CA)

#### **Additional information on specific primary constituents/ contaminants**

**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. NAWSCUL Utilities and Energy Management 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 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 or at <http://www.epa.gov/lead>

**Arsenic:** While your drinking water meets federal and state arsenic standard, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the cost of removing arsenic from drinking water. The U.S. Environmental Protection Agency continues to research health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems

**Nitrate:** Nitrate in drinking water at levels above 10 mg/L is a health risk for infants less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of blood to carry oxygen in other individuals, such as pregnant women and those with specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider

#### **Additional Drinking Water Information**

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 risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791)

#### **PFAS in Drinking Water**

**What are per- and polyfluoroalkyl substances and where do they come from?**

Per- and polyfluoroalkyl substances (PFAS) are a group of thousands of man-made chemicals. PFAS have been used in a variety of industries and consumer products around the globe, including in the U.S., since the 1940s. PFAS are found in many consumer products, as well as in industrial products, like certain firefighting agents called aqueous film forming foam (AFFF). PFAS is also found in essential use applications such as in microelectronics, batteries, and medical equipment. PFAS chemicals are persistent in the environment, and some are persistent in the human body – meaning they do not break down and they can accumulate over time.



### Is there a regulation for PFAS in drinking water?

On April 26, 2024, the United States Environmental Protection Agency (EPA) published a National Primary Drinking Water Regulation (NPDWR) final rule on drinking water standards for six PFAS under the Safe Drinking Water Act (SDWA). The rule establishes the following maximum contaminant levels (MCLs):

• <u>perfluorooctane sulfonic acid (PFOS) =</u>	<u>4 ppt</u>
• <u>perfluorooctanoic acid (PFOA) =</u>	<u>4 ppt</u>
• <u>hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX) =</u>	<u>10 ppt</u>
• <u>perfluorononanoic acid (PFNA) =</u>	<u>10 ppt</u>
• <u>perfluorohexane sulfonic acid (PFHxS) =</u>	<u>10 ppt</u>
• <u>HI MCL for PFHxS, PFNA, perfluorobutane sulfonic acid (PFBS), and GenX =</u>	<u>1 (unitless)</u>

Under the NPDWR, regulated public water systems (PWS) are required to complete initial monitoring by April 26, 2027. Beginning April 26, 2027, regulated PWSs will conduct ongoing compliance monitoring in accordance with the frequency dictated by the rule and as determined by the initial compliance monitoring results. Regulated PWSs must demonstrate compliance with the Maximum Contaminant Levels (MCLs) by April 26, 2029.

In order to provide safe drinking water to all Department of Defense (DoD) personnel, OSD policy extends this requirement to all DoD systems which provide drinking water for human consumption, regardless of size of the drinking water system. In addition to the six regulated compounds, DoD-owned systems are required by DoD policy to monitor for 25 PFAS compounds using EPA Method 533. NAWS China Lake sampled for an additional 4 PFAS compounds utilizing EPA Method 537.1 bringing the total to 29 PFAS compounds.

Protecting the health of our personnel, their families, and the communities in which we serve is a priority for the Department. DoD is committed to complying with requirements of the NPDWR and the continued provision of safe drinking water to those that work and live on DoD installations.

### Has NAWSCL tested its water for PFAS in 2024?

Yes.

**In August 2023 samples were collected from all South Range production wells. We are pleased to report that drinking water testing results for all 25 PFAS covered by the sampling method, including the six regulated PFAS, were not detected in your water system.**

### What is next?

NAWS China Lake will continue to monitor for PFAS in accordance with EPA regulation, DoD and State policies. Once required initial monitoring information is available, we will compare the sample results to the MCL and Hazard Index (HI) trigger levels. This will determine what our continuing monitoring requirements will be beginning in 2027, and if needed, we will plan operational or infrastructure changes to ensure our water complies with the PFAS MCLs and HI by April 2029 in accordance with the SDWA. Please contact Michael Bizon: Water Program Manager (michael.e.bizon.civ@us.navy.mil) if you have any questions about this consumer confidence report or if you have any water quality questions or concerns.

### Commanding Officer Comments



CAPT Van Allen