



So-Hi Domestic Water Improvement District

Consumer Confidence Report for Calendar Year 2014

Public Water System Information

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Purpose of this report:

We want our customers to be informed about their water quality. This report details where your water comes from, what it contains and how your water compares to the standards set by state and federal regulatory agencies.

As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material or substances resulting from the presence of animals or from human activity.

This report will contain a brief explanation regarding contaminants which may reasonably be present in drinking water, and the maximum contaminant levels set by the EPA. The following chart will show how your drinking water measures up to EPA standards.

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.

Where does our water come from?

SHDWID has two primary sources of water. The main supply comes from a leased well in Johnston Canyon, located in the Hualapai Aquifer. Our secondary source (called a consecutive connection source) is water we purchase from Valley Pioneers' Water Company via an interconnection. Systems that purchase water from another system report regulated contaminants detected from the source water supply. VPWC has posted their annual report

on their webpage.

<http://valleypioneerswater.com/forms.html>.

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. For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency and the U.S. Centers for Disease Control guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants, call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

Ensuring your drinking water is safe:

Arizona Department of Environmental Quality initiated a program to assist water providers in meeting their testing requirements. The program – Monitoring Assistance Program – contracts with a state lab to take the required samples for the systems taking advantage of the program. SHDWID does take part in this program. MAP conducts all required sampling for SHDWID except for a few samples that the operator handles. All samples are sent to an accredited lab for analysis and all reports are submitted to ADEQ.

This ensures that your drinking water meets state and federal standards and is safe for domestic use.

The water is hard, but this does not impose a safety/health issue. Hard water naturally occurs in desert regions and can cause scaling to form on plumbing fixtures, cooking utensils and causes the need for increased amounts of soap and detergent.

The District keeps on file the test results for hardness. This information may be useful for those considering a water softener.

Contaminants that may reasonably be expected in drinking water:

- Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring or result from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining and farming.
- Pesticides and herbicides which may come from a variety of sources such as agriculture, storm water runoff and residential users.
- Organic chemical contaminants, including synthetic and volatile organics, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

Nitrate in drinking water at levels above 10 parts per million (ppm) is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant and detected nitrate levels are above 5 ppm, you should ask advice from your health care provider. Nitrates are tested for annually in the hottest part of the year. The last detect for SHDWID was 2.2 ppm.

Arsenic, if less than or equal to the Maximum Contaminant Level (MCL), meets EPA’s standards. EPA’s standard balances the current understanding of arsenic’s possible health effects against the costs of removing arsenic from drinking water. EPA

continues to research the 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. The MCL for arsenic is 10 parts per billion (ppb). The last detect for arsenic was .0019 ppb.

Lead in elevated levels 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. SHDWID 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 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 www.epa.gov/safewater/lead. SHDWID conducts testing at 10 locations for lead and copper every three years. The MCL is .015 mg/L. Our test results were .0064 mg/L.

Cryptosporidium Monitoring (Applies to Surface water systems only)

SHDWID receives all our water from ground supply, so this information does not apply to us.

Additional treatment has to be provided if *Cryptosporidium* is found at greater than 0.075 oocyst per liter. We believe it is important for you to know that *Cryptosporidium* may cause serious illness in 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. These people should seek advice from their health care providers.

Water quality data is provided in the charts at the end of this article.

Definitions

AL = Action Level - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements.

MCL = Maximum Contaminant Level – The highest level of a contaminant that is allowed in drinking water.

MCLG = Maximum Contaminant Level Goal - The level of a contaminant in drinking water below which there is no known or expected risk to health.

MFL = Million fibers per liter.

MRDL = Maximum Residual Disinfectant Level. The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap.

MRDLG = Maximum Residual Disinfectant Level Goal. The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur.

MREM = Millirems per year – a measure of radiation absorbed by the body.

NA = Not Applicable, sampling was not completed by regulation or was not required.

NTU = Nephelometric Turbidity Units, a measure of water clarity.

PCi/L = Picocuries per liter - picocuries per liter is a measure of the radioactivity in water.

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.

PPQ = Parts per quadrillion or Picograms per liter.

TT = Treatment Technique - A required process intended to reduce the level of a contaminant in drinking water.

Water Quality Data

| Microbiological | Violation Y or N | Number of Samples Present <u>OR</u> Highest Level Detected | Absent (A) or Present (P) <u>OR</u> Range of All Samples (L-H) | MCL | MCLG | Sample Month & Year | Likely Source of Contamination |
|---|---------------------|--|--|----------|-----------|---------------------------|---|
| Total Coliform Bacteria (System takes ≥ 40 monthly samples) 5% of monthly samples are positive; (System takes ≤ 40 monthly samples) 1 positive monthly sample | N | | A | 0 | 0 | | Naturally Present in Environment |
| Fecal coliform and E. Coli (TC Rule) | N | | A | 0 | 0 | | Human and animal fecal waste |
| Fecal Indicators (E. coli, enterococci or coliphage) (GW Rule) | N | | A | TT | n/a | | Human and animal fecal waste |
| Total Organic Carbon (ppm) | N | | A | TT | n/a | | Naturally present in the environment |
| Turbidity (NTU) , surface water only | N | | A | TT | n/a | | Soil Runoff |
| Lead & Copper | Violation Y or N | 90 th Percentile <u>AND</u> Number of Samples Over the AL | Range of All Samples (L-H) | AL | ALG | Sample Month & Year | Likely Source of Contamination |
| Copper (ppm) | N | 90 th Percentile = | 0.019 | AL = 1.3 | ALG = 1.3 | 09/13 | Corrosion of household plumbing systems; erosion of natural deposits |

| | | | | | | | |
|---|-------------------------|---|-----------------------------------|------------|-------------|--------------------------------|---|
| Lead (ppb) | N | 90 th Percentile = | 0.0064 | AL = 15 | 0 | 09/13 | Corrosion of household plumbing systems; erosion of natural deposits |
| Inorganic Chemicals (IOC) | Violation Y or N | Running Annual Average (RAA) OR Highest Level Detected | Range of All Samples (L-H) | MCL | MCLG | Sample Month & Year | Likely Source of Contamination |
| Antimony (ppb) | N | <0.001 | | 6 | 6 | 12/12 | Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder |
| Arsenic (ppb) | N | 0.0019 | | 10 | 0 | 12/12 | Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes |
| Asbestos (MFL) | N | <0.2 | | 7 | 7 | 12/12 | Decay of asbestos cement water mains; Erosion of natural deposits |
| Barium (ppm) | N | 0.0042 | | 2 | 2 | 12/12 | Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits |
| Beryllium (ppb) | N | <0.001 | | 4 | 4 | 12/12 | Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries |
| Cadmium (ppb) | N | <0.0005 | | 5 | 5 | 12/12 | Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints |
| Chromium (ppb) | N | 0.0010 | | 100 | 100 | 12/12 | Discharge from steel and pulp mills; Erosion of natural deposits |
| Cyanide (ppb) | N | <0.025 | | 200 | 200 | 12/12 | Discharge from steel/metal factories; Discharge from plastic and fertilizer factories |
| Fluoride (ppm) | N | 0.30 | | 4 | 4 | 12/12 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Mercury (ppb) | N | <0.0002 | | 2 | 2 | 12/12 | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland. |
| Nitrate (ppm) | N | 2.2 | | 10 | 10 | 09/13 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium (ppb) | N | <0.005 | | 50 | 50 | 12/12 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| Thallium (ppb) | N | <0.001 | | 2 | 0.5 | 12/12 | Leaching from ore-processing sites; discharge from electronics, glass, and drug factories |
| Volatile Organic Chemicals (VOC) | Violation Y or N | Running Annual Average (RAA) OR | Range of All Samples (L-H) | MCL | MCLG | Sample Month & Year | Likely Source of Contamination |

| | | Highest Level Detected | | | | | |
|---|---|------------------------|--|-----|-----|-------|---|
| Benzene (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from factories; leaching from gas storage tanks and landfills |
| Carbon tetrachloride (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from chemical plants and other industrial activities |
| Chlorobenzene (ppb) | N | <0.0005 | | 100 | 100 | 12/12 | Discharge from chemical and agricultural chemical factories |
| o-Dichlorobenzene (ppb) | N | <0.0005 | | 600 | 600 | 12/12 | Discharge from industrial chemical factories |
| p-Dichlorobenzene (ppb) | N | <0.0005 | | 75 | 75 | 12/12 | Discharge from industrial chemical factories |
| 1,2-Dichloroethane (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from industrial chemical factories |
| 1,1-Dichloroethylene (ppb) | N | <0.0005 | | 7 | 7 | 12/12 | Discharge from industrial chemical factories |
| cis-1,2-Dichloroethylene (ppb) | N | <0.0005 | | 70 | 70 | 12/12 | Discharge from industrial chemical factories |
| trans-1,2-Dichloroethylene (ppb) | N | <0.0005 | | 100 | 100 | 12/12 | Discharge from industrial chemical factories |
| Dichloromethane (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from pharmaceutical and chemical factories |
| 1,2-Dichloropropane (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from industrial chemical factories |
| Ethylbenzene (ppb) | N | <0.0005 | | 700 | 700 | 12/12 | Discharge from petroleum refineries |
| Styrene (ppb) | N | <0.0005 | | 100 | 100 | 12/12 | Discharge from rubber and plastic factories; leaching from landfills |
| Tetrachloroethylene (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from factories and dry cleaners |
| 1,2,4-Trichlorobenzene (ppb) | N | <0.0005 | | 70 | 70 | 12/12 | Discharge from textile-finishing factories |

| | | | | | | | |
|------------------------------------|---|---------|--|-----|-----|-------|---|
| 1,1,1-Trichloroethane (ppb) | N | <0.0005 | | 200 | 200 | 12/12 | Discharge from metal degreasing sites and other factories |
| 1,1,2-Trichloroethane (ppb) | N | <0.0005 | | 5 | 3 | 12/12 | Discharge from industrial chemical factories |
| Trichloroethylene (ppb) | N | <0.0005 | | 5 | 0 | 12/12 | Discharge from metal degreasing sites and other factories |
| Toluene (ppm) | N | <0.0005 | | 1 | 1 | 12/12 | Discharge from petroleum factories |
| Vinyl Chloride (ppb) | N | <0.0003 | | 2 | 0 | 12/12 | Leaching from PVC piping; discharge from chemical factories |
| Xylenes (ppm) | N | <0.0005 | | 10 | 10 | 12/12 | Discharge from petroleum or chemical factories |

The Mission of the So-Hi Domestic Water Improvement District is to provide safe domestic water at reasonable cost to the customers, landowners and stakeholders of the District.

This Consumer Confidence Report is part of our ongoing effort to assure our customers of our diligence in providing the best quality water possible.