

CONSUMER CONFIDENCE REPORT
Report Covers Calendar Year: January 1 – December 31, 2017

Este informe contiene información muy importante sobre el agua usted bebe. Tradúscalo ó hable con alguien que lo entienda bien.

I. Public Water System (PWS) Information

| | | | |
|---|-----------------------------|-----------|-------------|
| PWS Name: | Town of Patagonia | | |
| PWS ID # | AZ04-12-006 | | |
| Owner / Operator Name: | Town of Patagonia | Operator: | Ralph Smith |
| Telephone # | 394-2229 | Fax # | 394-2034 |
| E-mail | pwtreat@patagoniaoffice.net | | |
| We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact <u>Ralph Smith</u> at <u>320-459-7040</u> for additional opportunity and meetings dates and times. | | | |

II. Drinking Water Sources

The sources of drinking water (both tap 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 pickup substances resulting from the presence of animals or from human activity.

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| Our water source(s): | 2 wells located at second st. and doubletree lane #55-605595 and 55-605596 |
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III. Consecutive Connection Sources

A public water system that receives some or all of its finished water from one or more wholesale systems by means of a direct connection or through the distribution system of one or more consecutive systems. Systems that purchase water from another system report regulated contaminants detected from the source water supply in a separate table. PWS ID # AZ04-12-006 provides a consecutive connection source of water.

IV. Drinking Water Contaminants

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, which 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, which are byproducts of industrial processes and petroleum production, and also may come from gas stations, urban stormwater runoff, and septic systems.
Radioactive contaminants, that can be naturally occurring or be the result of oil and gas production and mining activities.

V. Vulnerable Population

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 water poses a health risk. 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 of 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 (EPA) and the U.S. Centers for Disease Control (CDC) 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.

VI. Source Water Assessment

If the public water system received a Source Water Assessment (SWA), include a brief summary of the susceptibility as summarized in the SWA report. Further source water assessment documentation can be obtained by contacting ADEQ, 602-771-4641.

VII. Definitions

AL = Action Level - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
MCL = Maximum Contaminant Level - The "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water.
MCLG = Maximum Contaminant Level Goal - The "Goal" is 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.
MRDLG = Maximum Residual Disinfectant Level Goal.
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 = Picouries per liter - picouries 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 treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

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|------------------|
| ppm x 1000 = ppb |
| ppb x 1000 = ppt |
| ppt x 1000 = ppq |

VIII. Health Effects Language

Nitrate in drinking water at levels above 10 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.
 If arsenic is less than or equal to the MCL, your drinking water 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.
 Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your

home's water, you may wish to have your water tested. Flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

IX. Water Quality Data

| Contaminant (units) | Violation Y / N | Highest Level Detected | Range Detected Absent (A) or Present (P) | MCL | MCLG | Sample Month Year | Likely Source of Contaminatio |
|---|-----------------|------------------------|--|------------|-------------|--------------------------------|--|
| Microbiological | | | | | | | |
| Total Coliform Bacteria (System takes ≥ 12 monthly samples) 5% of monthly samples are positive; (System takes ≤ 12 monthly samples) 1 positive monthly sample | none | 0 | | 0 | 0 | 12 for 2017 1 per month | Naturally Present in Environment |
| Fecal coliform and E. Coli (TC Rule) | | 0 | | 0 | 0 | 7-17 | Human and animal fecal waste |
| Fecal Indicators (E. coli, enterococci or coliphage) (GW Rule) | | 0 | | TT | n/a | | Human and animal fecal waste |
| Total Organic Carbon (ppm) | | | | TT | n/a | | Naturally present in the environment |
| Turbidity (NTU), surface water only | | | | TT | n/a | | Soil Runoff |
| Disinfectants | | | | | | | |
| Chloramines (ppm) | | | | MRDL = 4 | MRDLG = 4 | | Water additive used to control microbes |
| Chlorine (ppm) | n | .18 average | | MRDL = 4 | MRDLG = 4 | monthly | Water additive used to control microbes |
| Chloride dioxide (ppb) | | | | MRDL = 800 | MRDLG = 800 | | Water additive used to control microbes |
| Disinfection By-Products | | | | | | | |
| Haloacetic Acids (ppb) (HAA5) | n | <.2 | | 60 | n/a | 7-17 | Byproduct of drinking water disinfection |
| Total Trihalomethanes (ppb) (THM) | n | 2.6 | | 80 | n/a | 7-17 | Byproduct of drinking water disinfection |
| Bromate (ppb) | | | | 10 | 0 | | Byproduct of drinking water disinfection |
| Chlorite (ppm) | | | | 1 | 0.8 | | Byproduct of drinking water disinfection |
| Lead & Copper | | | | | | | |
| Copper (ppm) | n | ≈.745 ppm | | AL = 1.3 | ALG = 1.3 | 7-16 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) | n | ≈7.6 ppb | | AL = 15 | 0 | 7-16 | Corrosion of household plumbing systems; erosion of natural deposits |
| Radionuclides | | | | | | | |
| Beta / photon emitters (mrem/yr) | | | | 4 | 0 | | Decay of natural and man-made deposits |
| Alpha emitters (pCi/L) | n | | | 15 | 0 | | Erosion of natural deposits |
| Combined Radium 226 & 228 (pCi/L) | n | | | 5 | 0 | | Erosion of natural deposits |
| Uranium (pCi/L) | | | | 30 | 0 | not required to test this year | Erosion of natural deposits |
| Inorganics | | | | | | | |
| Antimony (ppb) | n | | | 6 | 6 | | Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder |
| Arsenic (ppb) | n | 2 | | 10 | 0 | 8-16 | Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes |
| Asbestos (MFL) | n | | | 7 | 7 | | Decay of asbestos cement water mains; Erosion of natural deposits |
| Barium (ppm) | n | .029 | | 2 | 2 | 8-16 | Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits |
| Beryllium (ppb) | n | | | 4 | 4 | | Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries |
| Cadmium (ppb) | n | <.5 | | 5 | 5 | 8-16 | Corrosion of galvanized pipes; |

| Contaminant (units) | Violation Y / N | Highest Level Detected | Range Detected Absent (A) or Present (P) | MCL | MCLG | Sample Month Year | Likely Source of Contaminatio |
|-----------------------------------|-----------------|------------------------|--|-----|------|------------------------|---|
| | | | | | | | natural deposits; metal refineries; runoff from waste batteries and paints |
| Chromium (ppb) | n | <1 | | 100 | 100 | 8-16 | Discharge from steel and pulp mills; Erosion of natural deposits |
| Cyanide (ppb) | n | <.5 | | 200 | 200 | 8-16 | Discharge from steel/metal factories; Discharge from plastic and fertilizer factories |
| Fluoride (ppm) | n | .45 | | 4 | 4 | 8-16 | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories |
| Mercury (ppb) | n | <2 | | 2 | 2 | 8-16 | Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland. |
| Nitrate (ppm) | n | 1.0 | | 10 | 10 | 5-2-17 | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Nitrite (ppm) | n | | | 1 | 1 | Not required this year | Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits |
| Selenium (ppb) | n | <5 | | 50 | 50 | 8-16 | Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines |
| Thallium (ppb) | n | <1 | | 2 | 0.5 | 8-16 | |
| 2,4-D (ppb) | N | | | 70 | 70 | Not required this year | |
| 2,4,5-TP (Silvex) (ppb) | N | | | 50 | 50 | Not required this year | |
| Acrylamide | N | | | TT | 0 | Not required this year | |
| Alachlor (ppb) | N | Nd<.1 | | 2 | 0 | 8-16 | Not required this year |
| Atrazine (ppb) | N | | | 3 | 3 | Not required this year | Runoff from herbicide used on row crops |
| Benzo (a) pyrene (PAH) (ppt) | N | | | 200 | 0 | Not required this year | Leaching from linings of water storage tanks and distribution lines |
| Carbofuran (ppb) | N | | | 40 | 40 | Not required this year | nt used on rice and alfalfa |
| Chlordane (ppb) | N | Nd<.1 | | 2 | 0 | 8-16 | Residue of banned termiteicide |
| Dalapon (ppb) | N | | | 200 | 200 | Not required this year | Runoff from herbicide used on rights of way |
| Di (2-ethylhexyl) adipate (ppb) | N | | | 400 | 400 | Not required this year | Discharge from chemical factories |
| Di (2-ethylhexyl) phthalate (ppb) | N | | | 6 | 0 | Not required this year | Discharge from rubber and chemical factories |

| Contaminant (units) | Violation Y / N | Highest Level Detected | Range Detected Absent (A) or Present (P) | MCL | MCLG | Sample Month Year | Likely Source of Contaminatio |
|--|-----------------|------------------------|--|-----|------|------------------------|---|
| Dibromochloropropane (ppt) | N | <10 | | 200 | 0 | 8-16 | Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards |
| Dinoseb (ppb) | N | | | 7 | 7 | Not required this year | Runoff from herbicide used on soybeans and vegetables |
| Diquat (ppb) | N | | | 20 | 20 | Not required this year | Runoff from herbicide use |
| Dioxin [2,3,7,8-TCDD] (ppq) | N | | | 30 | 0 | Not required this year | Emissions from waste incineration and other combustion; discharge from chemical factories |
| Endothali (ppb) | N | | | 100 | 100 | Not required this year | Runoff from herbicide use |
| Endrin (ppb) | N | <.01 | | 2 | 2 | 8-16 | Residue of hanned insecticide |
| Epichlorohydrin | N | | | TT | 0 | Not required this year | Discharge from industrial chemical factories; an impurity of some water treatment chemicals |
| Ethylene dibromide (ppt) | N | <10 | | 50 | 0 | 8-16 | Discharge from petroleum refineries |
| Glyphosate (ppb) | N | | | 700 | 700 | Not required this year | Runoff from herbicide use |
| Heptachlor (ppt) | N | <10 | | 400 | 0 | 8-16 | Residue of banned termiticide |
| Heptachlor epoxide (ppb) | N | <10 | | 200 | 0 | 8-16 | Breakdown of heptachlor |
| Hexachlorobenzene (ppb) | N | | | 1 | 0 | Not required this year | Discharge from metal refineries and agricultural chemical factories |
| Hexachlorocyclo pentadiene (ppb) | N | | | 50 | 50 | Not required this year | Discharge from chemical factories |
| Lindane (ppt) | N | <10 | | 200 | 200 | 8-16 | Runoff/leaching from insecticide used on cattle, lumber, gardens |
| Methoxychlor (ppb) | N | <.05 | | 40 | 40 | 8-16 | Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock |
| Oxamyl [Vydate] (ppb) | N | | | 200 | 200 | Not required this year | Runoff/leaching from insecticide used on apples, potatoes and tomatoes |
| PCBs [Polychlorinated biphenyls] (ppt) | N | | | 500 | 0 | Not required this year | Runoff from landfills; discharge of waste chemicals |
| Pentachlorophenol (ppb) | N | | | 1 | 0 | Not required this year | Discharge from wood preserving factories |
| Picloram (ppb) | N | | | 500 | 500 | Not required this year | Herbicide runoff |
| Simazine (ppb) | N | | | 4 | 4 | Not required | Herbicide runoff |

| Contaminant (units) | Violation Y/N | Highest Level Detected | Range Detected Absent (A) or Present (P) | MCL | MCLG | Sample Month Year | Likely Source of Contaminatio |
|----------------------------------|---------------|------------------------|--|-----|------|-------------------|---|
| | | | | | | this year | |
| Toxaphene (ppb) | n | <.5 | | 3 | 0 | 8-16 | Runoff/leaching from insecticide used on cotton and cattle |
| Volatile Organics | | | | | | | |
| Benzene (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from factories; leaching from gas storage tanks and landfills |
| Carbon tetrachloride (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from chemical plants and other industrial activities |
| Chlorobenzene (ppb) | N | ND <.5 | | 100 | 100 | 8-16 | Discharge from chemical and agricultural chemical factories |
| o-Dichlorobenzene (ppb) | N | ND <.5 | | 600 | 600 | 8-16 | Discharge from industrial chemical factories |
| p-Dichlorobenzene (ppb) | N | ND <.5 | | 75 | 75 | 8-16 | Discharge from industrial chemical factories |
| 1,2-Dichloroethane (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from industrial chemical factories |
| 1,1-Dichloroethylene (ppb) | N | ND <.5 | | 7 | 7 | 8-16 | Discharge from industrial chemical factories |
| cis-1,2-Dichloroethylene (ppb) | N | ND <.5 | | 70 | 70 | 8-16 | Discharge from industrial chemical factories |
| trans-1,2-Dichloroethylene (ppb) | N | ND <.5 | | 100 | 100 | 8-16 | Discharge from industrial chemical factories |
| Dichloromethane (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from pharmaceutical and chemical factories |
| 1,2-Dichloropropane (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from industrial chemical factories |
| Ethylbenzene (ppb) | N | ND <.5 | | 700 | 700 | 8-16 | Discharge from petroleum refineries |
| Styrene (ppb) | N | ND <.5 | | 100 | 100 | 8-16 | Discharge from rubber and plastic factories; leaching from landfills |
| Tetrachloroethylene (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from factories and dry cleaners |
| 1,2,4-Trichlorobenzene (ppb) | N | ND <.5 | | 70 | 70 | 8-16 | Discharge from textile-finishing factories |
| 1,1,1-Trichloroethane (ppb) | N | ND <.5 | | 200 | 200 | 8-16 | Discharge from metal degreasing sites and other factories |
| 1,1,2-Trichloroethane (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from industrial chemical factories |
| Trichloroethylene (ppb) | N | ND <.5 | | 5 | 5 | 8-16 | Discharge from metal degreasing sites and other factories |
| Toluene (ppm) | N | ND <.0005 | | 1 | 1 | 8-16 | Discharge from petroleum factories |
| Vinyl Chloride (ppb) | N | ND <.3 | | 2 | 2 | 8-16 | Leaching from PVC piping; discharge from chemical |

| Contaminant (units) | Violation Y/N | Highest Level Detected | Range Detected Absent (A) or Present (P) | MCL | MCLG | Sample Month Year | Likely Source of Contamination |
|---------------------|---------------|------------------------|--|-----|------|-------------------|--|
| | | | | | | | factories |
| Xylenes (ppm) | N | ND <.0005 | | 10 | 10 | 8-16 | Discharge from petroleum or chemical factories |

X. Cryptosporidium Monitoring (surface water systems only) Our water is ground water only

We detected *Cryptosporidium* in the finished water or source water. We detected *Cryptosporidium* in ____ of our ____ samples tested.

We have to provide additional treatment 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.

XI. Stage 2 Disinfectants and Disinfection By-products Rule

Stage 2 DBP Rule requires some systems to complete an Initial Distribution System Evaluation (IDSE) to characterize DBP levels in their distribution systems and identify locations to monitor DBPs for Stage 2 DBP Rule compliance. The following table summarizes the individual sample results for the IDSE monitoring in 2009:

| Contaminant | Number of Analyses | Minimum Level Detected | Highest Level Detected |
|------------------------------------|--------------------|------------------------|------------------------|
| Haloacetic Acids (HAA5) (ppb) | 1 | <2 ppb | <2 ppb |
| Total Trihalomethanes (TTHM) (ppb) | 1 | 2.6 ppb | 2.6 ppb |

XII. Violations

| Type / Description | Compliance Period | Corrective Actions taken by PWS |
|--------------------|----------------------|---------------------------------|
| None | 1-1-17 thru 12-31-17 | None necessary |
| | | |
| | | |
| | | |

An explanation of the violation(s) in the above table, the steps taken to resolve the violation(s) and any required health effects information are required to be included with this report. (Attach copy of Public Notice if available.)

Update to Town of Patagonia's 2017 CCR

Source Water Assessment

• : Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the department has given a low risk designation for the degree to which this public water system drinking water source(s) are protected. A low risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection. Further source water assessment documentation can be obtained by contacting ADEQ.

Lead Informational Statement:

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Town of Patagonia 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. 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.

Water Quality Data – Regulated Contaminants

| Lead & Copper | MCL Violation Y or N | 90 th Percentile | Number of Samples Exceeds AL | AL | ALG | Sample Month & Year | Likely Source of Contamination |
|------------------------|----------------------|--|---------------------------------|-----|------|---------------------|--|
| Copper (ppm) | N | .53 | 0 | 1.3 | 1.3 | July 2016 | Corrosion of household plumbing systems; erosion of natural deposits |
| Lead (ppb) | N | 3 | 0 | 15 | 0 | July 2016 | Corrosion of household plumbing systems; erosion of natural deposits |
| Radionuclides | MCL Violation Y or N | Running Annual Average (RAA) OR Highest Level Detected | Range of All Samples (Low-High) | MCL | MCLG | Sample Month & Year | Likely Source of Contamination |
| Alpha Emitters (pCi/L) | N | 5.9 | 5.9 | 15 | 0 | August 2016 | Erosion of natural deposits |

Violation Summary (for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement)

| Violation Type | Explanation, Health Effects | Time Period | Corrective Actions |
|-------------------|-----------------------------------|-------------|--------------------------------------|
| Reporting Failure | Submitted 2016 CCR after deadline | 17 days | Sent in CCR to ADEQ ON July 18, 2017 |