# 2015 Consumer Confidence Report

# Freedom Hill Cooperative

**PWS ID# 1403030**

*Introduction*

Our mission is to deliver the best quality drinking water for your water system. In addition to compliance with EPA drinking water rules, we also provide service and repairs to your system equipment to keep it running at an optimal and efficient level. Aging infrastructure presents challenges to drinking water safety and continuous improvement is needed to maintain the quality of life we desire for today and the future. Many factors can contribute to a loss of water quality, which is why we closely monitor your water system during regular system checks. This helps us deliver the best quality of water possible. When considering the high value we place on water, it is truly a bargain to have water service that protects public health, fights fires, supports businesses, the economy; and provides us with the high-quality of life we enjoy.

*Major Repairs Or Replacement Projects*

1/30/2015: Performed leak survey. Found broken faucet at #77 Pine Ridge Road.
2/25/2015: Pulled pump from well #4. Cleaned out galvenized pipe. Hydrofractured well to clean iron out of fractures. Replaced water end of pump and reinstalled.
3/19/2015: Drilled 640' well (#6).
3/24/2015: Removed pump from well #5 and installed new pump on well #6.
3/27/2015: Dug trench from new well (#6) and tied into water line.
6/29/2015: Ran temporary line from burned house lot to # 93 Pine Ridge. Dug up and repaired service line feeding home at #93 Pine Ridge.
8/7/2015: Located leak. Dug up line from curb valve to home and replaced line with 3/4" pipe.
8/20/2015: Rebed of all five water treatment vessels with new media and stone.
4/7/2015: Installed new pressure gauges on three pre-filters. Rebuilt chemical feed pump.

There are no projects planned at this time.

*What is a Consumer Confidence Report?*

The Consumer Confidence Report (CCR) details the quality of your drinking water, where it comes from, and where you can get more information. This annual report documents all detected primary and secondary drinking water parameters, and compares them to their respective standards known as Maximum Contaminant Levels (MCLs).

*Sources of Drinking 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 in Water*

**Contaminants that <u>may be present</u>** in source water include:

- **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 water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and 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.

**In order to ensure that tap water is safe to drink**, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The US Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

## *What is the source of my drinking water?*

Drinking water is provided by a blend of three bedrock wells. Bedrock Well 003 is located 156' southeast of the pump house. Bedrock Well 004 is located 145' northwest of the pump house; and Well #6 (completed March 2015) replaced Well #5. Chlorine is added to the water through a mixing tank, which then runs through an iron and manganese reducing filter and an arsenic removal filter.

## *Why are contaminants in my 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 water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 800-426-4791.

## *Do I need to take special precautions?*

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. EPA/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 at 800-426-4791.

## *Source Water Assessment Summary*

DES prepared drinking water source assessment reports for all public water systems between 2000 and 2003 in an effort to assess the vulnerability of each of the state's public water supply sources. Included in the report is a map of each source water protection area, a list of potential and known contamination sources, and a summary of available protection options. The results of the assessment, prepared on August 10, 2000 are noted below.

- Bedrock Well 003 susceptibility factors were rated (1) high, (0) medium, (11) low.
- Bedrock Well 004 susceptibility factors were rated (1) high, (0) medium, (11) low.
- Bedrock Well 004 susceptibility factors were rated (1) high, (0) medium, (11) low.

Note: This information is over 15 years old and includes information that was current at the time the report was completed. Therefore, some of the ratings might be different if updated to reflect current information. At the present time, DES has no plans to update this data.
The complete Assessment Report is available for review at Gilford Well Company. For more information, call Gilford Well Company at 603-524-6343 or visit the DES Drinking Water Source Assessment website at http://des.nh.gov/organization/divisions/water/dwgb/dwspp/dwsap.htm

## *How can I get involved?*

For more information about your drinking water, please call Gilford Well Company at 603-524-6343 or Donna Rollins at 603-225-6405. Although we do not have specific dates for public participation events or meetings, feel free to contact us with any questions you may have.

## *Violations and Other Information*

The attached table contains information about any violations incurred by the water system during the 2015 sampling year.

## BULK WATER DELIVERIES

| Bulk Water Source | Dates Delivered | Gallons delivered | Reason for delivery |
|---|---|---|---|
| Fortin Construction, Inc. | 2/17/2015 | 6,000 | Wells not keeping up with demand. |
| | 2/19/2015 | 12,000 | |
| | 2/23/2015 | 12,000 | |
| | 2/25/2015 | 6,000 | |
| | 2/25/2015 | 6,000 | |
| | 2/26/2015 | 6,000 | |
| | 3/5/2015 | 18,000 | |
| | 3/9/2015 | 18,000 | |
| | 3/13/2015 | 12,000 | |
| | 3/16/2015 | 18,000 | |
| | 3/20/2015 | 18,000 | |
| | 3/23/2015 | 18,000 | |
| | 3/23/2015 | 6,000 | |

## Violations

| Violations | Date of Violation | Explanation | Action taken to resolve | Health Effects |
|---|---|---|---|---|
| Significant deficiency (found during sanitary survey) | 8/23/2015 | DES found significant deficiencies during a site inspection, which included missing record drawings, well cover on well #4 was missing bolts, and the electrical wiring on bedrock well #6 was exposed. | Record drawings we scanned and forwarded to DES. Missing cap bolts were replaced on well #4. Cable for well #5 was buried and secured. Photos of completed work were forwarded to DES and the deficiency was closed. | Inadequately treated water may contain disease causing organisms. These organisms include bacteria, viruses, and parasites which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. |

# Detected Water Quality Results

## Microbiological Contaminants

Freedom Hill is tested on a quarterly basis and remains bacteria free.

## Radioactive Contaminants

| Contaminant (Units) | Level Detected | (MCL) Highest Level Allowed | (MCLG) Contaminant Level Goal | Exceeded MCL? | Likely Source of Contamination | Health Effects of Contaminant |
|---|---|---|---|---|---|---|
| Compliance Gross Alpha (pCi/L) | 1 pCi/L<br><br>3/30/2010 | 15 | 0 | No | Erosion of natural deposits | Certain minerals are radioactive and may emit a form of radiation know as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer. |
| Uranium (ug/L) | 2 ug/L<br><br>2/3/2015 | 30 | 0 | No | Erosion of natural deposits | Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity. |

## Inorganic Contaminants

| Contaminant (Units) | Level Detected | (MCL) Highest Level Allowed | (MCLG) Contaminant Level Goal | Exceeded MCL? | Likely Source of Contamination | Health Effects of Contaminant |
|---|---|---|---|---|---|---|
| Arsenic (ppb) | 8 ppb<br>Running Annual Average<br><br>Range: 1-15 ppb | 10 | 0 | No | Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes | (5 ppb through 10 ppb) While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. 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.<br>(above 10 ppm) Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. |

## Inorganic Contaminants, continued

| Contaminant (Units) | Level Detected | (MCL) Highest Level Allowed | (MCLG) Contaminant Level Goal | Exceeded MCL? | Likely Source of Contamination | Health Effects of Contaminant |
|---|---|---|---|---|---|---|
| Barium (ppm) | 0.007 mg/L<br><br>2/3/2015 | 2 | 2 | No | Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits | Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure. |
| Chlorine (ppm) | 0.44 mg/L<br><br>Calculated 12/22/2015 | MRDL= 4 | MRDLG= 4 | No | Water additive used to control microbes | Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort. |
| Chromium (ppb) | 4 ppb<br><br>2/3/2015 | 100 | 100 | No | Discharge from steel and pulp mills; erosion of natural deposits | Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis. |
| Fluoride (ppm) | 1.200 mg/L<br><br>2/3/2015 | 4 | 4 | No | Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories | Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling also known as dental fluorosis, may include brown staining and/or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums. |

## Synthetic Organic Contaminants (including Pesticides and Herbicides)

| Contaminant (Units) | Level Detected | (MCL) Highest Level Allowed | (MCLG) Contaminant Level Goal | Exceeded MCL? | Likely Source of Contamination | Health Effects of Contaminant |
|---|---|---|---|---|---|---|
| Di (2-ethylhexyl) phthalate (ppb) | 0.75 ppb Average<br><br>Range: 0-1.6 ppb | 6 | 0 | No | Discharge from rubber and chemical factories | Some people who drink water containing di (2-ethylhexyl) phthalate well in excess of the MCL over many years may have problems with their liver, or experience reproductive difficulties, and may have an increased risk of getting cancer. |

## Volatile Organic Contaminants

| Contaminant (Units) | Level Detected | (MCL) Highest Level Allowed | (MCLG) Contaminant Level Goal | Exceeded MCL? | Likely Source of Contamination | Health Effects of Contaminant |
|---|---|---|---|---|---|---|
| Methyl tertiary-butyl ether (MtBE) (ppb) | 0.6 ppb<br><br>2/3/2015 | 13 | 13 | No | A gasoline additive | The New Hampshire Bureau of Health Risk Assessment considers MtBE a possible human carcinogen. Some people who drink water containing MtBE in excess of the MCL over many years could experience problems with their kidneys and may have an increased risk of getting cancer. |

### Definitions

**Action Level** or **AL:** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
**Maximum Contaminant Level** or **MCL**: The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
**Maximum Contaminant Level Goal** or **MCLG:** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
**Maximum Residual Disinfectant Level** or **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** or **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.

### Abbreviations

mg/L: milligrams per Liter
pCi/L: picoCurie per Liter
ppb: parts per billion
ppm: parts per million
ug/L: micrograms per Liter

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