

# 2021 Consumer Confidence Report

## Your Annual Drinking Water Quality Information



### Bard College at Simon's Rock

84 Alford Road, Great Barrington, MA 01230

Massachusetts Department of Environmental Protection Public Water Supply ID #1113017

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This report provides a snapshot of the drinking water quality that was achieved last year. Included are details about where your water comes from, what it contains and how its quality compares to state and federal standards. We are committed to providing you with information because informed customers are our best allies.

#### **PUBLIC WATER SYSTEM INFORMATION**

The water system at Bard College at Simon's Rock is composed of two parts. The main campus east of Alford Road is served by the Great Barrington Fire District, while the Liebowitz Building is served by a groundwater well. The 275-acre campus is home to approximately 30 buildings including lecture halls, student housing, and athletic facilities, and serves water to as many as 500 students and staff during the school year.

Bard College at Simon's Rock makes every effort to provide you with safe and uncontaminated drinking water. To protect against bacterial contamination, water from Well #1 is treated with sodium hypochlorite (chlorine salt) and is stored in several baffle tanks, extending the efficiency of the chlorine, resulting in 4-log virus removal. Water obtained from Great Barrington Fire District is also treated to provide disinfection prior to entering the distribution system. The water quality achieved with our system is monitored by us and MassDEP to determine if any future changes to treatment may be required. Our Licensed Contract Water Operator and maintenance staff routinely inspect the system. In addition, MassDEP inspects the system approximately every 3 years to evaluate compliance with current state and federal regulations. Our last Sanitary Survey inspection was conducted by MassDEP on July 30, 2021. Items addressed in the Sanitary Survey include the incorporation of several residential wells into the Simon's Rock PWS, adjustments to the chlorine treatment system at the Liebowitz Building, and the need for a cross connection survey, among other small items. These compliance issues are being addressed on an ongoing basis.

#### **OPPORTUNITIES FOR PUBLIC PARTICIPATION**

While we do not have regularly scheduled meetings regarding our water system, we welcome any opportunity to discuss concerns or issues. Please contact us if you would like to publicly discuss your drinking water

#### **YOUR DRINKING WATER SOURCE**

##### ***Where Does My Drinking Water Come From?***

The drinking water for Bard College at Simon's Rock comes primarily from the Great Barrington Fire District, with a connection to the GBFD system located on Lake Mansfield Road, with water being pumped up to a 150,000-gallon storage tank off of Fox Run. However, the Liebowitz Building is on the college's privately owned water supply. This service consists of a single well located behind the Liebowitz Building and is designated by MassDEP Source Name and ID Number as: Well #1 [1113017-01G]

##### ***How are These Sources Protected?***

MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply sources serving this water system. The SWAP Report assesses the susceptibility of public water supplies. A susceptibility ranking of "moderate" was assigned to this system using the information collected during the assessment by MassDEP. The complete SWAP report is available online at <https://www.mass.gov/service-details/the-source-water-assessment-protection-swap-program>.

*Residents can help protect sources by:*

- *practicing good septic system maintenance,*
- *supporting water supply protection initiatives at the next town meeting*
- *taking hazardous household chemicals to hazardous materials collection days,*
- *contacting the water department or Board of Health to volunteer for monitoring or education outreach to schools,*
- *Limiting pesticide and fertilizer use, etc.*

## **SUBSTANCES FOUND IN TAP WATER**

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, 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 stormwater 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, urban stormwater runoff, and residential uses.

**Organic chemical contaminants** - Including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

**Radioactive contaminants** - which can be naturally occurring or be the result of oil and gas production and mining activities.

## **COMPLIANCE WITH REGULATIONS**

### ***Does Drinking Water Meet Current Health Standards?***

We are committed to providing you with the best water quality available. During our routine sampling in August, elevated levels of Perchlorate and Haloacetic Acids were found in Well 01G, which serves the Liebowitz Building. A description of these violations, the potential health risks, and what we did to correct these issues can be found after the tables on page 4.

## **IMPORTANT DEFINITIONS**

**Maximum Contaminant Level (MCL)** - The highest level of a contaminant that is allowed in drinking water. MCL's are set as close to the MCLG's as feasible using the best available treatment technology.

**Maximum Contaminant Level Goal (MCLG)** - The level of a contaminant in drinking water below which there is no known expected risk to health. MCLG's allow for a margin of safety.

**Action Level (AL)** - The concentration of a contaminant which, if exceeded triggers treatment or other requirements that a water system must follow.

**90th Percentile** - Out of every 10 homes sampled, 9 were at or below this level.

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

**Secondary Maximum Contaminant Level (SMCL)** - These standards are developed to protect aesthetic qualities of drinking water and are not health based.

**Unregulated Contaminants** - Contaminants for which EPA has not established drinking water standards. The purpose is to assist EPA in determining their occurrence in drinking water and whether future regulation is warranted.

**Method of Detection Limit (MDL)** - The minimum concentration of a substance that can be measured and reported with 99% confidence the analyte concentration is greater than zero and determined from analysis of a sample in a given matrix containing the analyte

**Turbidity** - A measure of the cloudiness of water. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

**Massachusetts Office of Research and Standards Guidelines (ORSG)** - This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure.

## WATER QUALITY TESTING RESULTS

The water quality tables show the most recent water quality testing results where levels were detected and compares those levels to standards set by the Environmental Protection Agency and Massachusetts Department of Environmental Protection.

MassDEP has reduced the monitoring requirements for inorganic contaminants (IOCs), synthetic organic contaminants (SOCs), and perchlorate, because the source is not at risk of contamination. The last samples were collected on 9/7/2017 for Perchlorate, 7/16/2020 for Inorganic Contaminants, and 4/13/2021 for Synthetic Organic Contaminants, and were all found to meet all applicable US EPA and MassDEP standards.

With the exception of those compounds noted on the tables below, all other compounds in the panels reported undetectable levels.

Regulated Contaminant	Date(s) Collected	Highest Result	Range Detected	MCL	MCLG	Violation (Yes/No)	Possible Source(s) of Contamination
<b>INORGANIC CONTAMINANTS</b>							
<b>Nitrate (ppm)</b>	08/10/2021	0.591	N/A	10	10	No	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
<b>Perchlorate (ppb)</b>	08/10/202, 9/7/2021	8.2	0.053-8.2	2	N/A	Yes	Rocket propellants, fireworks, munitions, flares, blasting agents

Perchlorate interferes with the normal function of the thyroid gland and thus has the potential to affect growth and development, causing brain damage and other adverse effects, particularly in fetuses and infants. Pregnant women, the fetus, infants, children up to the age of 12, and people with a hypothyroid condition are particularly susceptible to perchlorate toxicity.

### DISINFECTANTS AND DISINFECTION BY-PRODUCTS

<b>Chlorine Residual (ppm)</b>	Daily	0.6	0.4-0.6	4	4	No	Byproduct of drinking water chlorination
<b>Total Trihalomethanes (TTHMs) (ppb)</b>	8/10/2021, 9/7/2021, & 11/18/2021	56	ND-56	80	N/A	No	Byproduct of drinking water chlorination
<b>Haloacetic Acids (HAA5) (ppb)</b>	8/10/2021, 9/7/2021, & 11/18/2021	331	ND-331	60	N/A	Yes	Byproduct of drinking water disinfection

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Contaminant (units)	Dates Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source(s) of Contamination
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### UNREGULATED AND SECONDARY CONTAMINANTS

<b>Sodium (ppm)</b>	7/16/2020	3.12	N/A	N/A	20	Natural Sources, runoff from use of salt on roadways, byproduct of water treatment process.
<b>Chloroform (ppb)</b>	8/10/2021, 9/7/2021, & 11/18/2021	ND-51	17.47	N/A	70	By-product of drinking water chlorination
<b>Bromodichloromethane (ppb)</b>	8/10/2021, 9/7/2021, & 11/18/2021	0.84-3.9	1.58	N/A	N/A	Trihalomethane; by-product of drinking water chlorination

Some people who drink water containing bromodichloromethane at high concentrations for many years could experience liver and kidney problems.

<b>Dibromochloromethane (ppb)</b>	8/10/2021, 9/7/2021, & 11/18/2021	ND-1.1	0.37	N/A	N/A	Trihalomethane; by-product of drinking water chlorination
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Some people who drink water containing dibromochloromethane at high concentrations for many years could experience liver and kidney problems.



**LEAD AND COPPER – September 10, 2021**

Contaminant (units)	Action Level	90 <sup>th</sup> Percentile	Number of Sites Sampled	Number of sites above the Action Level	Possible Sources of Contamination	Violation (Yes/No)
<i>Lead (ppb)</i>	<i>15</i>	<i>8.2</i>	<i>5</i>	<i>0</i>	<i>Corrosion of household plumbing</i>	<i>No</i>
<i>Copper (ppm)</i>	<i>1.3</i>	<i>0.175</i>	<i>5</i>	<i>0</i>	<i>Corrosion of household plumbing</i>	<i>No</i>

ppm = parts per million, or milligrams per liter (mg/l)

ppb = parts per billion, or micrograms per liter (ug/l)

ND = Not Detected

N/A = Not Applicable

**WATER QUALITY VIOLATIONS**

During our regularly scheduled routine monitoring on 8/10/21, it was discovered that Well 01G, which serves the Liebowitz Building, showed levels of Haloacetic Acids and Perchlorate that exceeded MassDEP regulations. Total Haloacetic Acids returned with a result of 331 ppb (Maximum Contaminant Level of 60 ppb) and Perchlorate returned a result of 8.2 ppb (Maximum Contaminant Level of 2 ppb).

One potential cause of HAA5 and Perchlorate exceedances is from the breakdown of older chlorine. Since the chlorine disinfection system for the 01G system was kept in the basement boiler room of the Liebowitz Building, and combined with the lack of water usage during the summer months, it was determined that the high temperatures and low water turnover lead to an increase in the aforementioned byproducts.

The chlorine system was moved to another part of the basement, and a new storage tank was installed. Testing for Perchlorate and Haloacetic Acids was again performed on 9/7/2021, with Perchlorate results dropping from 8.2 ppb to 0.053 ppb, and Haloacetic Acids results dropping from 331 ppb to 3.6 ppb. All further testing that has been done since has reported equally as low, or non-detectable levels.