*Supervisor*
Tony Hay

*Special District Administrator*
Levon Bedrosian

# Annual
# Drinking Water Quality Report
# 2011
# Peaceable Hill Water

Public Water System Identification Number - 3903639

To: Residents of Peaceable Hill Water District

From: Levon Bedrosian, Special District Administrator

Date: May 2, 2012

Re: Distribution of Annual Water Quality Report

As required by the New York State Department of Health, the Town of Southeast is providing you with the enclosed Annual Water Quality Report for 2011.

This Report has been prepared by the Village of Brewster for its' water supply. The report is distributed to state and county agencies that monitor the supply as well as properties which are served by the system. As the Peaceable Hill Water District receives their water directly from the Village system, a copy of the report is being mailed to you.

Should you have any questions regarding this report, please contact my office at 845-279-8206 or feel free to contact the Village of Brewster I f you seek their direct response to the report.

**Town of Southeast, New York**
One Main Street
Brewster, NY 10509

# ANNUAL WATER QUALITY REPORT

## Village of Brewster Water Supply

Public Water System Identification Number - 3903639

Village of Brewster (owner)
50 Main Street
Brewster, New York 10509
845-279-3760
www.brewstervillage-ny.gov

Reporting for January 2011 through December 2011

Prepared by
Daniel Crawford
Water Superintendent
Village of Brewster
April 2012

**This report contains important information about your drinking water.**

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

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Terms and Abbreviations

1. AL = Action Level
2. MCL = Maximum Contaminant Level
3. MCLG = Maximum Contaminant Level Goal
4. MG/L = Milligrams Per Liter or ppm
5. PPM = Parts Per Million or Milligrams Per Liter
6. UG/L = Micrograms Per Liter or ppb
7. PPB = Parts Per Billion or Micrograms Per Liter
8. TT = Treatment Technique

1. Action Level – The concentration of a contaminant, which if exceeded, triggers treatment or other requirements, which a water system must follow.

2. Maximum Contaminant Level – The "Maximum Allowed" (MCL) is the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as possible.

3. Maximum Contaminant Level Goal – The "Goal" (MCLG) is 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.

4. Milligrams Per Liter (MG/L) – Corresponds to one part of liquid in one million parts of liquid (parts per million – ppm).

5. Parts per million = ppm = mg/l = Milligrams per liter
(One part of liquid in one million parts of liquid) ppm

6. Micrograms Per Liter (UG/L) – Corresponds to one part of liquid in one billion parts of liquid (parts per billion – ppb).

7. Parts per billion = ppb = ug/l = Micrograms per liter
(One part of liquid in one billion parts of liquid) ppb

8. Treatment Technique – A required process intended to reduce the level of a contaminant in drinking water.

# Introduction – Annual Water Quality Report

Drinking water in the United States is among the most regulated and safest in the world. **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 activities. Contaminants that may be present in source water include: microbial contaminants; inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems.**

The primary legislation governing drinking water quality is the Safe Drinking Water Act (SDWA) passed by Congress in 1974, amended in 1986 and further strengthened in 1996. This legislation resulted in the development of national standards for drinking water quality.

Testing and monitoring results are reported regularly to the state health department and by law each state must meet the federal standards. An important new element of the 1996 reauthorization of the SDWA is the requirement for annual "Consumer Confidence Reports". As of 1999 each water supplier is to provide customers with an Annual Water Quality Report identifying the source of their drinking water, contaminant levels, and notice of any violation and health risks posed from any violation.

While reviewing this report it is important to remember that all **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.** It is true however that **some people may be more vulnerable to disease causing microorganisms or pathogens than the general population. This would include 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. More information about contaminants, potential health effects and EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium, Giardia and other microbial pathogens are available from the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.**

I am pleased to report that the water supplied to you by the Village of Brewster meets or exceeds all Federal and State requirements for safe drinking water. If you have any questions regarding this report please feel free to contact the Village Office. Those interested in decisions that may affect the quality of their water are invited to attend Village Board meetings at 50 Main Street. All Village Board meetings are scheduled on Wednesdays and start at 7:30 P.M. Information on scheduled meetings is available upon request from the Village Office or visit http://www.brewstervillage-ny.gov.

# Overview - Village of Brewster Water System

Source – Treatment – Production – Storage – System Improvements

## Source* & Treatment

The Village of Brewster supply source is ground water drawn from five sand and gravel wells*****. Before the water enters the pump station it is treated by means of an air stripping packed column in order to remove any Volatile Organic Compounds that may be present (Refer to page 5 - #2 organics – Refer to page 8, source water contaminants). The distribution system is supplied from the pump station by two vertical turbine booster pumps located over a clearwell (an in ground holding tank within the pump house). Disinfection is provided to the clearwell by a direct feed of chlorine gas.

## Production

Between 2004 and 2007 all of the Villages four production wells were redeveloped or reconstructed to maximize production capabilities. In 2008 a suitable location for a fifth well was determined, construction was completed in 2009 and the new well was put into service in 2010. The Village Board has now reached its objective to be able to meet peak demand with its largest producing well off line. The Village water supply serves a population of approximately 2500 people and average water production is approximately 225,000 gallons per day. In summer months peak demand can climb to 275,000 gallons per day. In 2011 the Village well field produced 73 million gallons of water.

## Storage*

The Village storage tank has a capacity of one million gallons. Disinfection is maintained by injection of liquid chorine and operation of a recirculation pump to maintain water movement within the tank. A chlorine analyzer monitors the tank water on a 24-hour basis to insure that proper chlorine disinfection is maintained.

## System Improvements

In 1999 the Village began addressing its aging infrastructure with the construction of a new one million gallon storage tank. In 2006 the Village completed a six million dollar project to replace its aging distribution system. In 2009 the Village continued well field improvements with the addition of a fifth production well. In August 2011 the Village Board approved replacing the antiquated well field control panel with a new system. Work was completed in November 2011. The Village Board will continue to address system improvements on an ongoing basis in order to protect the health, safety and welfare of Village water users.

***** Per New York State Public Health Law Code 5-1.33 paragraph (h)
Information may be exempt from public disclosure if it is determined the information will pose a security risk to the operation of the community water system.
Specific information related to source and storage locations has been omitted from this report. Any individual, group or organization requiring this information must make proper application and show just cause as to the need for acquiring said information.

# Water Rate Schedule – Village of Brewster

June 2, 2010 and forward (effective with the October, 2010 billing)

**Rates inside the Village of Brewster –**

Metered service; add A. + B. + C. (if applicable) + D. (if applicable) + E. (if applicable)
Unmetered service; add A. + F.

A. A basic charge of $8.00 per month per unit (currently designated for fund deficit reduction)
B. 2500 gallon minimum usage charge equivalent to $36.00 per quarter per unit during the billing period (on or about every three months). 2500 gallons per quarter is equivalent to 27 gallons per day.
C. $0.0144 per gallon for 82 gallons per day per-unit during the quarterly billing period (on or about every three months). [Equivalent to an additional 10,000 gallons per quarter per unit]
D. $0.02 per gallon for the next 328 gallons per day per-unit during the quarterly billing period (on or about every three months). [Equivalent to an additional 30,000 gallons per quarter per unit]
E. $0.028 per gallon for all consumption over 438 gallons per day per-unit during the quarterly billing period (on or about every three months). [Equivalent to all usage over 40,000 gallons per quarter per unit]
F. No meter: $920.00 per unit billed quarterly (on or about every three months).

   Broken meter, bad reading, short reading: prorated based on average metered usage determined solely by the Village. The Village of Brewster solely determines incremental (pro-rating) billing if any, and may from time to time adjust the billing period.

**Rates outside the Village of Brewster –**

Metered service; add A. + B. Unmetered service; add A. + C.

A. A basic charge of $5.00 per month per unit (currently designated for fund deficit reduction.)
B. All metered customers are billed at a rate of $0.023 per gallon billed quarterly (on or about every three months).
C. No meter: $1,380.00 per unit billed quarterly (on or about every three months).

   Broken meter, bad reading, short reading: prorated based on average metered usage determined solely by the Village. The Village of Brewster solely determines incremental (pro-rating) billing if any, and may from time to time adjust the billing period.

Anyone wishing additional information regarding the Villages water rates may contact the Village office at 845-279-3760**.** Residents of the Peaceable Hill Water District that require additional information should direct any questions to the Town of Southeast.
Town Special Districts – 845-279-8206 / Town Hall - 845-279-2196.

# Village of Brewster Monitoring Requirements

(Detected contaminants are reported on pages 6 - 8)

## 1. Microbiological (Coliform Bacteria) – Monthly

**No detects for the reporting period – Jan. 2011 through Dec. 2011**

**Microbiological Contaminants**

Coliform Bacteria – Coliform are bacteria that are naturally present in the environment. Fecal Coliform and E. Coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes.

## 2. Organics – Annually & Quarterly

Quarterly and annual sampling of organics can detect over 60 types of contaminants.

**Organic Chemical Contaminants**

Organic chemical contaminants, including synthetic and volatile organic chemicals, are by-products of industrial processes and petroleum production and can also come from gas stations, dry cleaners, storm water runoff and septic systems.

**SOC's –** (Synthetic Organic Contaminants, including Pesticides - PCB's) Tested every 3 years. No detects for the reporting year 2011. Next sampling in 2014

**VOC's – Volatile Organic Contaminants - Quarterly**

Dry cleaning chemicals were found to be present in the Villages source water (well field aquifer) back in 1978. A brief history of contamination is provided on page 8.
Refer to page 8 for detection levels before and after treatment

**MTBE** (gasoline additive) – **Twice Annually**

**No detect for the reporting period – Jan. 2011 through Dec. 2011.**

## 3. Inorganics

**Inorganic Contaminants**

Inorganic contaminants, such as salts and metals, can be naturally occurring or result from storm water runoff or wastewater discharges.

**Nitrate – Annually -** Refer to page 6 for detection level

**Metals Group 1 & 2 & Fluoride – Every 3 years** (Tested in 2009) Refer to page 6.

Metals – Group 1 – Arsenic, Barium, Cadmium, Chromium, Mercury, Selenium.
Metals – Group 2 – Antimony, Beryllium, Cyanide, Nickel, Sulfate, Thallium.

***Sodium – Quarterly –** Refer to page 6 for detection level

*****Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used by people on moderately restricted sodium diets.

**Lead & Copper – Every 3 years** (Tested in 2009) Refer to page 7 for detection levels

## 4. Disinfection by-products – Every 3 years (Tested in 2009)

During disinfection (chlorination), certain by-products form as a result of chlorine reacting with naturally occurring organic matter.

**Haloacetic Acids –** (Tested in 2009) Refer to page 6 for detection level

**Trihalomethanes –** (Tested in 2009) Refer to page 6 for detection level

## 5. Radiological - Every 4 years - No detects for the reporting year 2008

Radioactive Contaminants can come from decay and erosion of natural deposits.

## 6. Asbestos - No detects for the reporting year 2004

Asbestos Contamination can come from decay of asbestos cement pipe.
(No further testing required at this time for asbestos)

**Refer to page 1, Terms & Abbreviations for assistance in understanding this chart. Contamination definitions are provided on page 5.**

**Dates & results of testing presented in this report are from the most recent testing done in accordance with Health Dept. requirements.**

# Table of Detected Contaminants Village of Brewster Water Distribution System

| Contaminant | Violation Yes / No | Date of Sample | Contaminant Level Detected | Unit Measurement | MCLG | Regulatory Limit MCL | Likely Source of Contaminant |
|---|---|---|---|---|---|---|---|
| **Inorganic Compounds** – (Refer to page 5 - #3) | | | | | | | |
| Barium | No | 7/09 | .091 PPM | PPM | 2 PPM | 2 PPM | Well drilling operations Erosion of Natural Deposits |
| Chromium | No | 7/09 | .003 PPM | PPM | 1 PPM | 1PPM | Erosion of Natural Deposits |
| Nickel | No | 7/09 | .0027 PPM | PPM | .01 PPM | .01 PPM | Erosion of Natural Deposits |
| Nitrate | No | 2/11 | .43 PPM | PPM | 10 PPM | 10 PPM | Erosion of Natural Deposits |
| Sulfate | No | 7/09 | 20 PPM | PPM | None Available | 250 PPM | Erosion of Natural Deposits |
| * Sodium | No | Quarterly 2011 | Average 66.75 MG/L Range 55. – 79. | MG/L | None Available | No Designated Limit | Naturally Occurring & Storm Water Runoff |

*** Sodium – Water containing more than 20 MG/L of sodium should not be used for drinking by people on severely restricted sodium diets.** (See page 5 - #3)

**Disinfection By-products** – By-Products resulting from chlorination. (Refer to page 5 - #4)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Trihalomethanes | No | 7/09 | 71 PPB | PPB | None Available | 80 PPB (MCL) | By-product of drinking water chlorination |
| Haloacetic Acids | No | 7/09 | 34 UG/L (PPB) | UG/L | None Available | 60 UG/L (MCL) | By-product of drinking water chlorination |

2009 Test Results – Village of Brewster – Lead & Copper – (Next required round of sampling will be in 2012)

| Contaminant | ***Violation*** Yes / No | Date of Sample | Contaminant **Level Detected** | Unit Measurement | MCLG | **Regulatory Limit** ***MCL / AL*** | Likely Source of Contaminant |
|---|---|---|---|---|---|---|---|
| **– 90th Percentile Reportable Value** = (10 sites tested – the level that falls in the 90% high range of samples) | | | | | | | |
| Copper | No | 6/09 | .28 MG/L (PPM) | MG/L | 1.3 MG/L | 1.3 MG/L Action Level | Copper Pipe Household Plumbing & Service Connections |
| **– 90th Percentile Reportable Value** = (10 sites tested – the level that falls in the 90% high range of samples) | | | | | | | |
| Lead | No | 6/09 | 2.7 UG/L (PPB) | UG/L | 0 | 15 UG/L Action Level | Lead Pipes & Lead Solder Household Plumbing & Service Connections |

**90th Percentile Value =** The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution system that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected in your water system.

Lead Reportable value for lead is 2.7 ug/l = (10 sites tested – the level that falls in the 90% high range of samples)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Results | .0ppb | 1.3ppb | 1.6ppb | 1.7ppb | 1.8ppb | 2.0ppb | 2.3ppb | 2.5ppb | **2.7ppb** | 3.8ppb |

**Reportable Value**

Copper Reportable value for copper is 0.28 mg/l = (10 sites tested – the level that falls in the 90% high range of samples)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Test Results | .09ppm | .11ppm | .12ppm | .14ppm | .14ppm | .16ppm | .19ppm | .21ppm | **.28ppm** | .32ppm |

**Reportable Value**

**Note: 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 homes plumbing. In most cases lead gets into water after it leaves the utility, through household plumbing. If you are concerned about elevated lead levels in your homes water you can minimize risks. Whenever plumbing has not been used for 6 or more hours flush stagnant water by running your cold-water tap from 30 seconds to 2 minutes prior to using tap water for drinking or cooking. For additional information you may contact the Safe Drinking Water Hotline at: 800-426-4791.

**Most suspect to lead contamination:**

Any home with lead pipes or with a lead service connection. Any home with copper pipes with lead solder installed between 1982 and 1986. (In 1986 new regulations banned the use of lead in new plumbing). (Older homes should have built up a protective coating within the pipe to act as a barrier against lead solder). If you think your home is suspect, you may wish to have your water tested by an environmental laboratory.

| Contaminant | Violation Yes / No | Date of Sample | Contaminant Level Detected | Unit Measurement | MCLG | Regulatory Limit MCL | Likely Source of Contaminant |
|---|---|---|---|---|---|---|---|
| **VOC's – Test results from quarterly samples taken within the distribution system – Results after treatment** | | | | | | | |
| Dichloroethene | NO | Quarterly 2011 | Annual Ave. 1.58 ppb 2.2 - 2.3 - .97 - .82 | PPB | 70 ppb | 70 ppb | Discharge from dry cleaners |
| Trichloroethene | NO | Quarterly 2011 | Annual Ave. .72 ppb .76 .69 .80 .62 | PPB | 0 ppb | 5 ppb | Discharge from dry cleaners |
| Tetrachloroethene | NO | Quarterly 2011 | Annual Ave. .94 ppb .99 - 1.1 - .76 .91 | PPB | 0 ppb | 5 ppb | Discharge from dry cleaners |

Source Water Contaminants Listed Below: Test Results before treatment and distribution (well field).

**These test results provided below are levels of source water contaminants before treatment and distribution of your water. Raw water quality data is not uses for compliance monitoring, these test results are provided for additional information purposes only, violation regulations do not apply. I would like to point out it is encouraging to see that source water test results have fallen below EPA Maximum Contaminate Levels for safe drinking water.**

History: In 1978 routine water sampling revealed traces of VOC's in the well field water. Present were Dichloreothylene, Trichlorethylene, and Tetrachloroethylene. These compounds are generally derived from light industry cleaning processes such as dry cleaning. Soil and water samples were collected and subsequent analysis confirmed the source of contamination as a drywell adjacent to a dry cleaner. The U.S. Environmental Protection Agency (EPA) conducted a Remedial Action at the Brewster Wellfield site to address contamination and implement a cleanup operation. The Village in association with the EPA installed an on-site packed-column air stripping unit to treat groundwater and provide a safe source of water. The contaminated soil was excavated and removed. Operation of the air stripping unit has been successful in contamination removal and all state and federal requirements have been met on a consistent basis. The Village of Brewster samples quarterly before and after treatment in order to insure proper removal of remaining contaminants from your drinking water.

2011-Test results **BEFORE TREATMENT** and distribution

| Contaminant | Unit Measurement | MCLG | MCL | Likely Source of Contaminant | Level Detected | Violation |
|---|---|---|---|---|---|---|
| Dichloroethene (Dichloreothylene) | ppb | 70 ppb | **70 ppb** | Discharge from dry cleaners | Annual High – 4.5 ppb<br>Annual Low – .63 ppb<br>**Annual Ave. – 2.5 ppb** | No (Does not apply) |
| Trichloroethene (Trichlorethylene) | ppb | 0 ppb | **5 ppb** | Discharge from dry cleaners | Annual High – 1.6 ppb<br>Annual Low – .0 ppb<br>**Annual Ave. – .97 ppb** | No (Does not apply) |
| Tetrachloroethene (Tetrachloroethylene) | ppb | 0 ppb | **5 ppb** | Discharge from dry cleaners | Annual High – 2.9 ppb<br>Annual Low – 1.2 ppb<br>**Annual Ave. – 2.13 ppb** | No (Does not apply) |

# Closing Remarks

The Mayor and Village Board hope you have found this report to be informative and easy to understand. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. In closing we would like to leave you with the following thoughts about your water.

## Water Conservation & Leak Detection

Please help conserve our valuable resource by repairing any water leaks within your home and reporting suspected water leaks within our system. Just a slow drip can waste 20 gallons a day (over 7000 gallons a year). A toilet leak can waste up to 100 gallons a day (that's over 30,000 gallons a year). Check for toilet leaks by putting a few drops of food color in the tank and see if the color shows up in the bowl. The sound of running water through your pipes may be an indication of a leak on your incoming service line, notify your water department. Water your lawn sparingly in the early morning or late evening.

## Contaminants & Backflow Prevention:

Any building with a sprinkler system or that processes hazardous material or chemicals should be isolated from the potable water supply by the appropriate level of protection consistent with the degree of hazard posed by the service connection.

Never use chemical spray attachments on garden hoses without a backflow prevention device. Never leave a hose in a contaminated source of water (such as a bucket or dirty pool of water). If water pressure drops on the incoming service line the contaminant could be sucked back into your homes pipes and water supply. You can help protect our local water supplies by properly disposing of chemicals or potentially harmful substances and by reporting any known violations or abuses.

## Shutting your water off in an emergency:

Your home should have a "master shutoff valve" inside and a curb valve outside. In case of emergency do you know where your valves are and how to shut your water off? Village residents may contact the Village if they would like to schedule an appointment to locate their outside shutoff.

**Reporting Water Emergencies:** **Business Hours – Contact the Village Office @ 279-3760**

After hours a call to the Village Police Dept. @ 845-279-3618 will be forwarded to the N.Y. State Police or you may call the Putnam County Sheriff Department @ 845-225-4300 an ask them to contact the Village of Brewster Department of Public Works.

**Agency Contact Numbers:** If you require any further information please do not hesitate to contact any of the agencies listed below for assistance.

**Village of Brewster @ 1-845-279-3760 – 8:30A.M. – 4:00P.M.**
www.brewstervillage-ny.gov
Town Special Districts (Sewer & Water) @ 1-845-279-8206 – Town Residents
Town of Southeast (Town Hall) @ 1-845-279-2196 – Town Residents
Putnam County Department of Health Water Supply @ 845-808-1390
New York State Department of Health
Bureau of Public Water Supply Protection @ 1-518-402-7650
http://www.health.state.ny.us
EPA Safe Drinking Water Hotline @ 1-800-426-4791
http://www.epa.gov/safewater

**Town of Southeast**
**Special District Office**
One Main Street
Brewster, NY 10509