

The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner

*Celebrating 25 Years of Protecting
New Hampshire's Environment*



AMENDED
WATER CONSERVATION PLAN APPROVAL

July 22, 2013

Tioga River Water Company, Inc.
c/o Norm Harris Jr.
1440 Lake Shore Road
Gilford, NH 03249

**RE: Gilford– Gilford Village Water District (PWS ID: 0881010)
Water Conservation Compliance**

Dear Mr. Harris:

On August 21, 2006, the Department of Environmental Services (“DES”) Drinking Water and Groundwater Bureau approved a Water Conservation Plan for Gilford Village Water District (“GVWD”). On July 15, 2013, DES received an Amended Water Conservation Plan for the system. The purpose of this letter is to approve the Amended Water Conservation Plan (the “Amended WCP”) dated July 15, 2013, per the following conditions:

1. Leak information shall be logged. At a minimum, the following information shall be maintained: date the leak was discovered, date the leak was repaired, type of leak (ex. main, valve, hydrant, service), estimated flow rate of leak (gpm), and the closest street address to the leak.
2. The results of the quarterly night flow analysis shall be maintained in system records for a minimum of three years. Each analysis shall include a brief examination of the results including an explanation if leaks are suspected or not.
3. Ongoing three year compliance reports shall be submitted every three years from the date of the original Water Conservation Plan Approval, August 21, 2006. The next compliance report is due on **August 21, 2015**. Attached to the three year ongoing compliance report shall be:
 - a. The leak log for the prior three years, as described in #1., above; and
 - b. The results of the quarterly night flow analysis for the prior three years.

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095

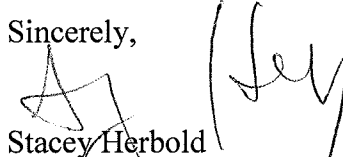
Telephone: (603) 271-2513 • Fax: (603) 271-5171 • TDD Access: Relay NH 1-800-735-2964

4. Revisions to the Amended WCP shall not be implemented without further approval from DES.

A copy of the Amended WCP and the *Water Conservation Plan Ongoing Compliance Form* may be located by going to the DES website, www.des.nh.gov, clicking on the "A-Z List" in the top right corner of the page, and scrolling down to Water Conservation.

Please feel free to contact me with any questions at (603) 271-0659 or via e-mail at stacey.herbold@des.nh.gov.

Sincerely,



Stacey Herbold
Water Conservation Program
Drinking Water and Groundwater Bureau

cc: Eric Skoglund, DES
Leah McKenna, DES
Debra Sonderegger, DES
Kerry Barnsley, DES

Amended Water Conservation Plan for Gilford Village Water District
7/15/2013

Introduction:

Existing new small community water systems seeking a new source of water must adopt a Water Conservation Plan. Gilford Village Water District (GVWD) is proposing to amend its Water Conservation Plan to implement the following night flow leak detection methodology, rather than conducting an acoustic leak detection survey every two years.

Source Meters and Distribution Meter:

GVWD will also continue to read all source and the distribution meter at least monthly.

GVWD shall report to the DES Water Use Registration and Reporting Program. DES has assigned **WUID # 20951** to the facility. The total monthly volume withdrawn from each source shall be reported to DES on a quarterly basis. The first quarter report is due April 15, 2013 and every three months thereafter. The water system shall register as a data provider and utilize the DES OneStop reporting tool to submit water use data. Instructions for using the tool are enclosed with this letter. If you have any questions about Water Use Registration and Reporting or registering as a data provider please contact Derek Bennett at 271-6685 or derek.bennett@des.nh.gov.

Source meters will be selected, installed, and maintained in accordance with “Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance,” (American Water Works Association, 2012). The current source meters are not AWWA certified. When these meters are replaced, the meters will be replaced with AWWA certified meters or the proposed model, make, and size will be forwarded to DES for review prior to installation.

Water Conservation Outreach and Education:

GVWD will distribute water conservation educational materials to residents twice a year. Educational materials will include DES water efficiency fact sheets or EPA WaterSense fact sheets.

Compliance Reporting:

GVWD will submit a Water Conservation Ongoing Compliance Form supplied by DES once every three years from the date of the original Water Conservation Plan approval, August 21, 2006.

Activities outlined in the water conservation plan will be completed by water system personnel under the supervision of a certified water system operator.

Leak Detection:

Night Flow Leak Detection Methodology

1. Distribution Meter

- a. A 2" Neptune T-10 flow meter capable of measuring low flows will be installed on the distribution line and located after treatment and storage.
- b. The meter will be tested/calibrated every 4 years in accordance with AWWA/PUC. The first meter test will commence upon expiration of the manufacturer's new meter accuracy warrantee.
- c. The distribution meter will be selected, installed, and maintained in compliance with "Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance," (American Water Works Association, 2012).

2. Determining Water Use Thresholds

- a. Night time flow analysis will be conducted as described in 3.b., below, and leaks isolated and pinpointed as described in 3.e through 3.h., below.
- b. Leaks will be repaired.
- c. Again, night time flow analysis will be conducted as described in 3.b., below. The lowest flow will be considered the baseline.
- d. The threshold above the baseline will be determined by considering the size, age, and history of the system.
- e. The baseline flow and proposed threshold of 2 gpm will be submitted to DES for review and approval by 2/25/2013. The submittal will also include the reasoning and evidence behind the proposed threshold.

3. Night Flow Analysis

- a. Night flow analysis will be conducted quarterly.
- b. Water usage will be recorded every minute for one hour between 1:00 AM and 4:00 AM to avoid when water in house water softeners are running. Readings will be taken from the distribution meter. Night time flow analysis will be conducted prior to or after sprinkler season.

- c. If flows are above the threshold, then flows will continue to be recorded for an additional hour.
- d. If flows are 1 gpm above the threshold and are not at emergency levels (emergency level = 5 gpm over the threshold) the previous step will be repeated again in 7 days. If at an emergency level, steps will immediately be taken to locate and fix the leak.
- e. If flows are yet again above the threshold, a leak will be assumed. Valves will be closed to isolate select portions of the system and to evaluate the change in flow as measured by the distribution meter to isolate the leak. For example, when one valve is closed, one person in the field (operating the valves) will then communicate with a second person observing the distribution meter to monitor for a change in the background flow.
- f. No later than two weeks from isolating the leak to a certain branch of a system, a sub-contractor skilled in acoustic leak detection will be retained and assist with pinpointing the leak.
- g. Leak detection will be conducted in accordance with "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (American Water Works Association, 2009).
- h. Leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09.

I certify that I understand the responsibilities of the water system as referenced in this amendment to the Water Conservation Plan, and that all information provided is complete, accurate, and not misleading.

Owner Name (print): Norm Harris

Owner Signature: N. H. Harris Date: 7/15/2013

Derek Bennett
Water Conservation Program
Drinking Water and Groundwater Bureau
29 Hazen Drive, PO Box 95 Concord, NH 03302-0095

Re: Gilford Village Water District Midnight water reading threshold (baseline)

Water use for the months of November and December of 2012 were both 270,000 gallons per month. If you will allow 33% of the 270,000 per month to be the baseline we will list the threshold at 2 gpm
($270,000 \times .33 / 30 / 1440 = 2.06$)

If the water use during the survey is greater than the threshold by 1 gpm. We will schedule another survey to be done within 7 days.

Norm Harris III
Operator
Gilford Village Water District