

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 5, 2013

David Stack
Town of Bow
10 Grandview Road
Bow, NH 03304

**Subject: Bow, NH: Bow Municipal Water System (PWSID: 0261010)
Water Conservation Plan**

Dear Mr. Stack:

On May 6, 2010, the Department of Environmental Services ("DES") Drinking Water and Groundwater Bureau approved a Water Conservation Plan for . On July 2, 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") signed on July 2, 2013.

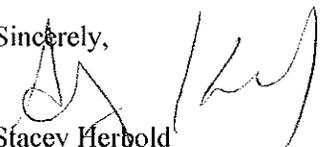
Ongoing three year compliance reports shall be submitted every three years from the date of the original Water Conservation Plan Approval, May 6, 2010. The next compliance report is due on **May 6, 2016**.

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: Bill Klubben, Bow Director of Community Development
Stuart Harkins, Primary Operator
Derek Bennett, NHDES
Steve Roy, NHDES

www.des.nh.gov

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WATER CONSERVATION PLAN

prepared pursuant to

Env-Wq 2101, *Water Conservation Rules*

as required for a proposed

1.0 MGD Municipal Water Supply Well

for the

Town of Bow, New Hampshire

August, 2009

Amended August 13, 2012

Project Description:

The Town of Bow is planning to construct a new water system for the businesses and residents located in the south east area of the community. The system will consist of a gravel packed well, pumping and treatment building, distribution piping and storage. The project is currently in the final stages of design, and is anticipated to be advertised for general bids in the fall of 2009. The Town is currently developing ordinances, rules and regulations, fee structures and other policy and requirements to operate the system. The Town is considering contract operations through a certified water system operator to oversee, operate and maintain the water system in accordance with the requirements of the NHDES. The plan outlined below addresses the requirements of the NHDES Conservation Plan.

Update: Two wells were constructed. PW-1 was approved on May 7, 2010 and PW-2, a backup well was approved on August 12, 2011. The wells were constructed next to one another and were permitted a combined production volume of 1,008,000 gpd.

There are currently no active connections, but two commercial connections have been approved to connect, and there are 11 other applicants under review. Most connections will be commercial, but there will be some residential connections.

The system is composed of 5.7 miles of pipe and is currently being flushed 10-21 days a month to protect the system from corrosion etc. while the system is not running.

Original Applicant:

Mr. James C. Pitts
Town Offices
10 Grandview Road
Bow, New Hampshire 03304
603.494.1382

Original Preparer:

Robert Williamson, P.E.
Wright-Pierce
75 Washington Avenue, Suite 202
Portland, ME 04101
207.523.1403

Current Primary Operator:

Stuart Harkins
White Water Inc.
Division Manager
253B Worcester Road | Charlton, MA 01507
888-377-7678 phone | 508-248-2895 fax
www.whitewateronline.com

Current Owner Contact:

Bill Klubben, Director of Community Development
and
David L. Stack, Town Manager
Town of Bow
10 Grandview Drive
Bow, NH 03304
Tel: (603) 228-1187 Ext. 10
Fax: (603) 224-6680

In accordance to NHDES Administrative Rule Env-Wq 2101.04, *Water Conservation Rules*, the Town of Bow, New Hampshire and/or its representatives will conduct the following water conservation measures subsequent to approval of the proposed well.

1. In accordance to Env-Wq 2101.04 (b and c) water meters will be installed for all water uses including raw and finished water pumping and individual customers. Feedback from the meters will be collected and trended on a new SCADA system.
 - i. Raw and finished water will be metered within a pump station prior to being conveyed to the distribution system. The meters will consist of electro magnetic type meters sized and located based on the expected range of flows and the recommendations of the manufacturer. Currently there are two meters in place, one measuring water from both sources, and one distribution meter. The meters are Siemon Sitron F1 Mag 5100Ws. The two sources are considered a well field; therefore, only one source meter is required.
 - ii. The source meter and distribution meter (raw and finished water) will be calibrated at least yearly.
 - iii. All customers connected to the proposed water system will be 100% metered. Service meters will be sized based on manufacturer specifications while considering the type of water use and anticipated flow rates of each connection. Service meters will be tested or replaced as recommended by AWWA/ PUC as follows:
 1. 5/8" & 3/4" = 10 years
 2. 1", 1 1/2", and 2" = 4 years
 3. 3" = 2 years
 4. 4" & 6" = 1 year

2. The water meters will be selected, installed and maintained as described in "Manual of Water Supply Practices, Water Meters-Selection, Installation, Testing and Maintenance", document identification number AWWA M6, 1999 as required by (Env-Wq 2101.04 (d)).
3. Meters for water service customers are plan to be read monthly and will be read no less than once every 90 days (Env-Wq 2101.04 (e)). Meters on water supply sources shall be read continuously through SCADA as required by (Env-Wq 2101.04 (f)). Source and distribution meter readings shall be read/recorded no less than monthly.
4. The Town will conduct an on-going water audit and leak detection program. The water audit and leak detection program will be conducted as described in "Manual of Water Supply Practices, Water Audits and Leak Detection", document identification number AWWA M36, 1999 as required by (Env-Wq 2101.04 (g)). The proposed system will consist of less than 3 miles of pipe. Pipe is ductile iron and type K copper. An acoustic leak detection conducted by an outside consultant will be conducted yearly.
5. The Town will repair all leaks found during the water audit and leak detection program within 60 days of their discovery unless a waiver is obtained as required by (Env-Wq 2101.04 (h)).
6. The Town will estimate the volume and percentage of unaccounted-for water in the water system once every year using methods and procedures as described in AWWA manual M36, 1999, as required by (Env-Wq 2101.04 (i)). If the percent of unaccounted-for water exceeds 15% of the water introduced into the water system, then the Town will prepare and submit a response plan to NHDES within 60 days of the completion of the estimate. This response plan will describe activities that the Town will conduct to reduce the percentage of unaccounted-for water to below 15% within 2 years.
7. Upon receipt of NHDES approval of the response plan, the Town will conduct the activities outlined in the response plan following the approval schedule as required by (Env-Wq 2101.04 (m)).
8. The proposed system has been designed consistent with water system industry standards and regulation and consistent with other public health and safety considerations in regards to minimum and maximum operating pressures as required by (Env-Wq 2101.04 (n)). Pressures are between 69 psi and 80 psi.
9. A copy of the final rate structure is attached. There is a monthly service charge based on size of meter and a consumption charge of \$5.65/1,000 gallons. Billing will be monthly.
10. The Town intends to conduct water conservation educational programs for its customers once the new system has been commissioned. The educational program will include posting of literature regarding water conservation practices and distributing literature twice a year with customer bills. Literature distributed will be tailored to user type.

Materials used for conservation outreach will be obtained from a variety of sources including:

- NHDES water conservation fact sheet database located at:
<http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm#efficiency>
- USEPA *WaterSense* database located at:
<http://www.epa.gov/watersense/>

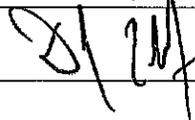
11. Activities outlined in this conservation plan will be completed under the direction of a certified water system operator pursuant to Env-Ws 367 as required by (Env-Wq 2101.05 (q)).

12. The Town will submit an ongoing compliance report to DES every three years from water conservation plan approval date, May 6, 2010. The first report will be submitted by May 6, 2013. The report will be submitted on a form prepared by DES and which may be found at:

http://des.nh.gov/organization/divisions/water/dwgb/water_conservation/index.htm

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

Owner Name (print): DAVID L. STACK, TOWN MANAGER

Owner Signature:  Date: 7/2/13