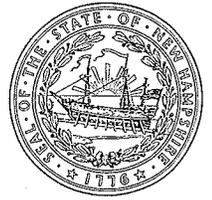


The State of New Hampshire
Department of Environmental Services

Thomas S. Burack, Commissioner

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



March 7, 2013

AMENDED
WATER CONSERVATION PLAN APPROVAL

Joseph Hebert
7 Riverside St.
Hooksett, NH 03106

**Subject: Hooksett, Hooksett Village Water Precinct (PWS ID: 1181020)
Water Conservation Plan**

Dear Mr. Hebert:

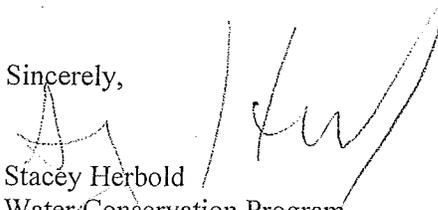
On March 24, 2005, the Department of Environmental Services ("DES") Drinking Water and Groundwater Bureau issued a Large Groundwater Withdrawal approval to Hooksett Village Water Precinct. Pursuant to Env-Wq 2101, *Water Conservation* rules, systems proposing new large groundwater withdrawals must implement a water conservation plan. While HVWP has been implementing water conservation regulations, a formal amended plan was submitted to DES on February 28, 2013 (the "Amended WCP"). The amended plan is approved per the following conditions:

1. Unaccounted for water shall be calculated quarterly.
2. A log shall be maintained for accounting purposes including a leak log, flushing log, fire flow, and any other water uses.
3. Ongoing three year compliance reports shall be submitted every three years from the date of the original approval, March 24, 2005. The next compliance report is due on **March 24, 2015**.
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

www.des.nh.gov

29 Hazen Drive • PO Box 95 • Concord, NH 03302-0095
(603) 271-3503 • TDD Access: Relay NH 1-800-735-2964

Hooksett Village Water Precinct
Water Conservation Plan



January 2013

CONSERVATION PLAN OUTLINE

I. Introduction

A. Contact Information

**Hooksett Village Water Precinct
7 Riverside Dr
Hooksett, NH 03106**

B. System Overview

1. Reason for new source. **On March 24, 2006, Hooksett Village Water Precinct (HVWP) received a Well Siting Approval and Large Groundwater Withdrawal Permit. As a condition of the permit, HVWP was required to comply with Env-Ws 390.05, now Env-Wq 2101, Water Conservation Rules.**

2. Number of existing and proposed connections for each of the following classes:

- a) Residential. **970**
- b) Industrial/commercial/institutional. **64**
- c) Municipal. **23**

3. Description of any connections that currently receive or will receive more than 20,000 gpd. **None**

C. Water Use Trends and Supporting Data / Population Trends:

1. Existing and anticipated seasonal fluctuation in water use and reason for fluctuation. **Trends indicates usage at least doubles during summer months.**

2. Anticipated growth in population and seasonal fluctuation in population. **Univ apt=204 units,**

3. Average daily water use. Winter months=180-200,000 per day summer=550-700,000max

4. Maximum daily water use. Winter=200,000 summer=700,000

5. Minimum hourly flows (if available). Not available

II. System Side Management

A. Source Meters

1. Name designation of each water source. Meter make, model, size and date of last calibration for each existing source meter.

North Well #1 – Water Specialties propeller meter, 4”, installed in 2009 (to be replaced in 2013)

South Well #2 - Water Specialties propeller meter, 4”, installed in 2009 (to be replaced in 2013)

South Backup Well –Sensus propeller 300, 4”, installed in 2006 (not used very much so meter will stay but go on yearly testing/calibration schedule)

East Well –Sensus T2, 6”, installed in 2012 (to be replaced in 2013)

2. Frequency that source meters will be tested/calibrated. **Yearly by professional testing/calibration company.**
3. Frequency that source meters will be read. **Everyday and at least every 30 days.**
4. **Source meters 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, 1999).**

B. Service Meters

1. How many un-metered connections exist? 5-7
Due to low pressure problems and one meter not easy to access.
2. Proposed timeframe for installing meters on un-metered connections (no later than three years from source water approval). **Looking to install Sensus iPearl meters on low pressure connections as no interior moving parts by end of 2013. (West River road= Will install new meter with radio read on hard to access connection in 2013 (floor in home must be cut to access).**
3. Irrigation meters: **Some connections and neighborhoods have separate irrigation meters.**
4. Additional meters:
 - a) **5 hydrant meters used to account for flushing volumes and given to construction sites to measure water use prior to install of meter. Also, when flushing sells water to water trucks to fill pools etc. (Note*Fire department is also supposed to report water use, but do not always do so for accounting purposes. DES has sent letter to fire department and HVWP has tried numerous times to gain compliance from the water department.)**
 - b) **In pump houses meters are also in place to measure water tested for treatment.**
5. Frequency that service meters will be read (at least every 90 days). **Quarterly**
6. Description of all methods that will be used to read service meters. **Currently service meters are read manually. Starting in 2013, an automatic meter reading system is being installed so that water use numbers may be transmitted directly to the HVWP office. The replacement of all meters to the Badger 25 meters and the installation of radio reads on all service meters is proposed to be completed within 5-7 years (depending on the economy).**

7. Expected number of days needed to read all service meters. Currently it takes HVWP 5-7 days depending on the weather to read all service meters. Once all radio reads are installed meters will be able to be read instantaneously.

8. Proposed rate of meter testing and/or meter change out. Brass Badger 25 meters are going in on all residential connections and compound meters on larger connections (3"-12"). The manufacturer says that the Badger 25s are good for 20 years. Change out will begin 15 years out from original installation. 10% of meters will then be changed out a year 15 years. Install date of each meter will be logged so age of meters may be tracked and oldest meters replaced first.

9. Service 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, 1999).

C. Water Audit

1. Frequency that water audit will be conducted. Quarterly.

2. The water audit will be calculated in accordance with "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (American Water Works Association, 2009).

3. The water system shall prepare and submit a response plan to the department within 60 days if the percentage of non-revenue water exceeds 15 percent of the total water introduced to the water system. The response plan shall identify how the water system intends to reduce the percentage of non-revenue water to below 15 percent within two years.

D. Leak Detection

1. Leak detection methodology:

a) Leak detection done when Joe changes out meters. New service meters are going in on all connections. Valves and nearby hydrants checked during each service meter change using acoustic leak detection equipment.

b) Once meter change out is complete proactive acoustic leak detection will continue. 10-15% is the goal after meters are all changed. When a meter at resident is changed, a leak detection is conducted. Granite State Rural is used when all other methods have failed. 5-10 times yearly

c) Assess tank charts each 3 times a week for abnormalities. (Ex. In the early morning hours tank level stays fairly constant, during higher water use hours tank level drops a few feet before pump kicks on. If no constant rate during early morning hours then know there is a leak.)

d) **Installing automatic meter reading technology. The technology will be used to detect leaks on the service side. A report will be produced each day to show any potential leaks on connections and the owner of the connection will be notified.**

e) **Unaccounted for water will be calculated quarterly to track increases in unaccounted for water which may indicate a leak.**

f) **Residents often call the water department if they see a main leakage issue or are having pressure issues, which HVWP quickly follows up on.**

2. **Are pipe locations known? Yes**

3. **Length of pipe in system: Approximately 16.5 miles**

4. **Breakdown of pipe material, age, and length. 60-65% plastic, 5-10% asbestos and ductile, the other 30% could be cast iron or steel (most of the Precinct is plastic).**

5. **Availability of contact points and adequacy of spacing. Hydrants all 500' apart and can also listen on all water valves.**

6. **Will future leak detection surveys be conducted in-house or contracted out? Both**

7. **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).**

8. **Leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09.**

E. Pressure Management

1. **Existing minimum distribution pressure. 60 psi**

2. **Existing maximum distribution pressure. 152 psi**

3. **How is pressure monitored and how will pressure continue to be monitored? It is monitored through gauges that are in the pump houses and Booster pump station through SCADA system. HVWP is called out ASAP by alarm company when there is loss of pressure at any time.**

4. **What method will be used to reduce pressures in zones found to be in excess of 80 psi? One PRV on main in place and two more PRVs proposed. PRVs are located on each home and tow main PRVs proposed.**

5. What will be the timeframe for reduction? **2-3 years**

F. Intentional Water Loss

1. Are there "bleeders" used within the system at dead ends to improve water quality or prevent freeze-up? **No**
2. Are storage tanks intentionally allowed to overflow because of system hydraulics or water quality concerns? **No**

III. Consumption Side Management

A. Conservation Rate Structure and Billing

1. Description of rate structure: **Base rate for quarter increases with meter size and ranges from \$25 to \$1,155. The rate structure is an increasing block rate structure ranging from \$2.80/1000 gallons to \$4.50/1000 gallons.**

2. If irrigation meters are installed, will irrigation water be billed at a different rate? **No. The water rate is the same for all water uses, although customers must pay for their own irrigation meter as well as inspection by water department confirming the meter was installed properly.**

3. Will a seasonal rate structure be utilized in addition to the general rate structure? **HVWP uses a tiered rate structure just for this purpose.**

4. Billing frequency: **Quarterly**

5. Informative billing practices to be used (ex. water use in gallons / usage history). **Billing shows previous quarterly read and current quarterly read. Customers call and can receive a print out of the full usage and billing detail back to when the account went on line.**

B. Educational Outreach Initiative

1. Informational materials that will be used. **Currently water saving tips are printed on the back of bills quarterly. Also, water efficiency materials are posted at the town hall, precinct, and library. Also, send out letter from superintendent of precinct asking customers to conserve once a year.**

2. Does the water system intend on becoming a WaterSense partner?
<http://www.epa.gov/watersense/> **Yes HVWP would be interested and will look into this.**

3. Will a rebate program be offered to replace older fixtures with WaterSense certified fixtures?

4. Will customer audits be offered?

5. Other outreach plans?

IV. Zoning Ordinance / Bylaws

1. Irrigation System: **All new connections are requested to install rain sensors on irrigation systems. HVWP requests just rain sensors**

V. Water Use Restrictions

A. What is the water system's plan relative to implementing water restrictions? **Have never had to implement a water restriction yet, but would notify using 2 signs and putting information in the newspaper and radio.**

B. Who is responsible for enforcing restrictions? **Enforced only by HVWP personnel.**

VI. Reporting and Implementation

A. **HVWP will submit the "Water Conservation Plan Ongoing Compliance Form" once every three years documenting how compliance with the requirements of Env-Wq 2101 is being achieved.**

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

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): Joseph Nebert

Owner Signature: Joe Nebert Date: 2/28/13