

To: Great Barrington Selectboard and Great Barrington Board of Health
From: Jennifer Tabakin, Town Manager
Re: Information and Materials on Housatonic Water Works
Date: 10/15/2018

I have a package of information to share with the Selectboard, the Board of Health and the public.

- 1) DEP sent a package of documents relating to their orders, inspections, and sampling pertaining to plant upgrades required, corrosion control treatments and repairs to the water distribution system.
- 2) DEP sent an information sheet on water main flushing to maintain high-quality water. DEP reported that their staff has followed up with the HWW system relative to the current flushing. The system has additional flushing to be done this fall. Housatonic reports that it was taking chlorine residuals as part of its flushing process to ensure proper disinfection is maintained. In light of the concerns of residents, Mass DEP asked that HWW perform additional bacteria sampling during the flushing work and HWW agreed to do so. HWW reports that it is finding the flushing to be effective in removing sediment from the system. Flushing is a recommended practice and most systems try to do it at least annually and some systems twice per year. DEP provide a copy of an information sheet on flushing. DEP encourages Housatonic and the Town to work together to use the Town's telephone notification for flushing notifications when possible.
- 3) Technical assistance offered. DEP will make technical assistance available to the Town officials to assist with determining how to best improve the system, address questions about the capital plan and evaluate long-term ownership and management structures. DEP will assist the town in determining if there are funding and grants available to conduct needs assessments, capital improvement plans and state revolving fund programs for either capital improvements, acquisition or other management options. Some specific areas for funding include the SRF (State Revolving Fund) Program, the drinking water state revolving fund financing and also rural programs under USDA for water systems.
- 4) Town consultant David Prickett will be presenting his water system study to the Selectboard and public in an upcoming meeting at the end of October or November. Included in this package is an executive summary of his assignment and preliminary results of his study. This study was funded by Town Meeting in the FY18 budget.
- 5) Information from the Board of Health is also included. Water testing kits are available to the public and the handout explains where to find this information.
- 6) Lastly, I will also remind the Board, that we are lucky to have a relatively pristine water sources in town that requires very minimal treatments, including a gravel filtration system and / or a sand based filtration system. We also have appear to have adequate water supply to meet the demand in the future. At the same time, similar to many other municipalities, we have the challenge of needing to upgrade old lines, some of which are close to a hundred years old. This requires an investment in our infrastructure.



Fact Sheet

Water Main Flushing FAQ for Consumers

What is water main flushing?

Water main flushing moves water systematically through sections of a drinking water distribution system, creating a scouring action to clean the line. The increased flow rate scours the water pipe's inner walls and helps to remove build-up of naturally occurring debris and sediment. The water is discharged through select fire hydrants onto local roads or other surface areas.

- The process is critical to the overall maintenance of a distribution system and is one of the most important practices carried out by public drinking water systems to maintain high water quality, improve the carrying capacity of pipes, and ensure proper operation of distribution system components, such as hydrants and valves.
- Flushing the water main lines also ensures that fire hydrants are operational and allows the operator to assess the available water pressure and flow rate for firefighting purposes. Flushing at lower velocities can also be used to bring fresh water into a part of the distribution system where the water main ends or dead-ends. Water main flushing is typically carried out through either conventional or unidirectional flushing (UDF). The type of flushing performed is based on the specific goals to be achieved within the distribution system.
 - Conventional flushing consists of opening hydrants in targeted areas and discharging the water until any accumulations are removed and the water becomes clear. The water moves freely from all directions to an open hydrant. Since there is less flow in a given pipe, velocities may be too low to adequately clean, or scour, the pipes.
 - UDF means that water mains are flushed systematically from areas closest to the source water to the outer edges of the water system. Certain valves are closed during UDF operations to minimize disturbance. Fire flow tests are not conducted during UDF because the closed valves alter the normal flow pattern and may skew results.
- Flushing may be done as an important part in maintaining adequate chlorine residuals in outer areas of a water distribution system
- MassDEP recommends and in some instances requires public water systems to maintain a flushing program.

Why is a flushing program important?

- Removes sediment- Loose sediment and other deposits may slowly build up on the inside of the water mains over time causing discolored water. Flushing at the appropriate velocities can remove these sediments and deposits and will improve taste, odor and color that may be problematic e.g. naturally occurring iron or manganese deposits in the distribution system may affect color.
- Reduces biofilm - Biofilm is a thin layer of microorganisms that can grow on the inside of the distribution piping, A proper scouring velocity must be achieved to effectively minimize biofilm.
- Maintains proper distribution system operation- Flushing requires the opening and closing of hydrants and valves to ensure that water moves through pipe segments for effective cleaning. This operational practice also provides water operators with the opportunity to identify broken or inoperable valves and hydrants which is important to ensure that they will work properly in an emergency.

- Improves the age of the water in the distribution system - Flushing can remove water from areas of the distribution system that have low water use. Older water may no longer have the desired chlorine residual.
- Allows the assessment of the flow rate available for firefighting purposes.

How will you know when your local water supplier will be flushing in your area?

Your Public Water Supplier (PWS) should notify you of the location (streets), date and time of flushing. PWSs may use more than one of the following methods to notify you: hand delivered notice, postal letter, posters, newspaper, website, electronic boards, telephone, text, emails, social media, etc. For a list of Massachusetts PWSs see the contacts section of <https://www.mass.gov/lists/drinking-water-health-safety>.

What should you do when your public water supply informs you that they will be flushing your water distribution lines?

MassDEP recommends the following:

- Prior to the designated flushing period: consider collecting water for drinking, cooking and other human consumption purpose. Fill a pitcher or pot.
- During the designated flushing period in your area, you may experience water discoloration or sediment.
 - Do not use the water in your home, as the water quality may be temporarily reduced at this time and you do not want to draw the water being flushed from the mains into your home piping. **Using the water during flushing may result in staining or sediment in laundry, ice machines, dishwasher, bathtubs, or hot water tanks.**
- If you water appears dirty after the designated flushing period:
 - Run a cold water tap closest to your meter (usually found in the basement or a first floor sink) for a few minutes up to 15 minutes.
 - Keep the tap open until the water runs clear. If you have trouble seeing if the water is clear, fill a light or white colored cup or container to view the water. If the water coming from the tap is not clear after running for 15 minutes, wait 15-30 minutes and try again.
 - Do not run a tap that has a water filter connected to it or the sediment may clog your filter.
 - Avoid running a hot water tap because it could draw sediment into your hot water tank.
 - If you inadvertently drew discolored water into your home and the staining of clothes or fixtures does occur, rust removal products are available at most home products stores and may be available from your water supplier.

When (time of day) is flushing normally conducted?

Flushing may be done at any time depending on the situation, particularly if there has been a water main break that requires emergency flushing during off hours. However, in many communities planned flushing for distribution system maintenance is more commonly done during daylight when it is safer for staff to work on the streets. Daylight also provides better visibility to see discolored water being flushed out of the system and when water is running clear. Customers should understand that the schedule for flushing may change (perhaps with little to no notice) based on the progress of the crews.

What time of year is flushing typically conducted?

Flushing is typically conducted in the spring and the fall but flushing can be conducted at any time it is needed and safe to do so. During the summer, it may be necessary for some water suppliers to flush certain locations to remove stagnant water to ensure that the water is adequately disinfected to the limits of their piping system. In warmer weather disinfectants in the water are consumed more rapidly than in the winter, creating the need to flush even during drought conditions.

How will you be affected?

There may be a slight drop in pressure or noticeable discoloration of the water from the minerals and sediments that are being flushed out. During the flushing operation in your neighborhood, you will be able to see crews flushing the water mains through fire hydrants and ends of water main pipes commonly called blow-offs. Crews will usually direct the water being flushed into appropriate areas to avoid sediment erosion or localized pooling of water, but you may notice water on the street or roadway. In some communities, the fire department may be the crew operating the fire hydrants during the flushing operation. There may also be traffic and parking changes because specific hydrants will be used to discharge water.

What about water pressure and safety?

Flushing may cause short-term pressure fluctuations; however, specific water pressure is required to be maintained within the system. If you experience little to no water pressure during flushing, you should contact your water supplier.

How long does it typically take to clean the water mains on each street?

Typically it takes 30 minutes to 60 minutes to flush the water mains on each street.

What should I do if my water is discolored after flushing of water mains?

Water is often discolored after water main flushing, but this should not last long. In the event customers draw discolored water into the home, flush a cold tap for a few minutes, up to 15 minutes. As a precaution, prior to using hot water run the cold water tap to ensure discolored water is not drawn into the hot water tank.

What should I do if the water is still discolored after three to four hours?

Contact your local water supplier. For a list of Massachusetts PWSs see the contacts section of <https://www.mass.gov/lists/drinking-water-health-safety>.

What if you notice a chlorine smell?

It is normal for there to be an increased amount of chlorine in the water during flushing, because the velocity the water is moving through the pipes shortens the travel time from the treatment plant. Systems that normally do not use chlorine may add it during flushing. Customers can easily remove the chlorine taste and smell by filling an open container with water and keeping it in the fridge for drinking as chlorine will dissipate.

Is water main cleaning a waste of water?

No, this is a normal and necessary part of maintaining a safe and reliable drinking water supply, and in some instances the water is returned to the aquifer, rivers or streams from which it was withdrawn as groundwater recharge or surface water runoff.

Is it possible to capture and reuse the water being flushed?

In most cases, it is not feasible to capture and reuse the water being flushed due to the high velocities and volume of water being released. If you are running water to clear out your own pipes after flushing, you can capture that water and use it for watering plants.

What if discolored water gets into the hot water tank?

If you are sure that sediment got into your hot water tank, use the clean out tap at the bottom of the tank to remove any settled material. Follow the instructions which came with the tank to drain the tank and be careful of the hot water.

What if you don't have a hot water tank – you have an on-demand water heater?

The hot water should run clear when the cold water is clear.

Do most public water suppliers have similar water main cleaning programs?

MassDEP recommends that all public water suppliers have a routine flushing program. These programs are considered the best way to improve water quality and increase the reliability of the water distribution system.

Are there particular situations when MassDEP requires a public water system to implement a flushing program or flush certain segments of a system?

After a public health order has been issued for bacteria or some other contaminant of concern, MassDEP may require a water supplier to implement a flushing program to remove the contaminant and to notify its consumers to flush their household and building lines. For information on consumer flushing after a Boil Water Order see <https://www.mass.gov/service-details/consumer-information-on-boil-orders>.

How is routine flushing impacted by drought conditions?

During times of drought, suppliers may consider delaying routine water main flushing, if such delay will not adversely affect water quality. Suppliers with mandatory flushing schedules consult with MassDEP to discuss the possibility of delaying scheduled water main flushing to protect the availability of the supply.

For more information:

For questions on individual PWS flushing programs please contact your local PWS. For a list of Massachusetts PWSs see the contacts section of <https://www.mass.gov/lists/drinking-water-health-safety>.

You may also contact the MassDEP Drinking Water Program at program.director-dwp@state.ma.us or 617-292-5770.



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PROJECT SUMMARY & UPDATE

INVITEES: Town of Great Barrington
FROM: Dave Prickett, P.E., President, DPC Engineering, LLC
DATE/TIME: Monday, October 15, 2018
RE: **Water Systems Management Framework Project**

Water in Great Barrington: The majority of Great Barrington residents have public water service. For those properties not on wells, public water service is provided by one of the two private companies: Great Barrington Fire District (GBFD) or Housatonic Water Works (HWW). GBFD serves approximately 1,643 customers (4,000 residents). GBFD is a self-governing quasi-private water district, and sets its rates, which are a combination of usage and property taxes, at Public Rate Hearings. HWW serves approximately 865 customers (1,400 residents). HWW is a privately-owned and its consumption-based rates are governed by the Massachusetts Department of Public Utilities. Both GBFD and HWW systems are required to meet the standards of the Massachusetts Department of Environmental Protection.

Goals for Water Systems Management Framework Project: The Project included five key goals: (1) Summarize existing water supply/production and distribution infrastructure for both water utilities; (2) Summarize baseline customer costs and management frameworks for both water utilities; (3) Identify potential capital needs/concepts for the renewal of existing distribution system (piping) assets in both water utilities; (4) Identify potential inter-connection infrastructure needs and conceptual costs for a theoretical merger to a single water utility; and (5) Estimate potential separate and merged capital plans and unit costs per customer, incorporating engineering assumptions, to assess affordability for discussion purposes.

Preliminary Observations Relative to Project Goals: Relative to the five Project goals: (1) GBFD lacks excess water supply capacity and HWW appears to have available excess water supply capacity; (2) HWW residential customers use less water than GBFD residential customers, and annual residential water user costs per household in HWW are higher than those in GBFD; (3) the HWW distribution system is older and has more robust renewal needs than that of the GBFD distribution system; (4) an inter-connection between the two water utilities is relatively straightforward, including pressure regulating features to control the two different pressure zones; and (5) on a very preliminary basis, the concept of a merged water utility results in a larger single customer base, and may allow for economies of scale for both management costs and cost sharing for capital needs.

Next Steps: The Draft Summary Memorandum is being updated based on preliminary observations from Town staff, and will be presented to the Selectboard later this month. It is important to note that this is the first of many steps in exploring this concept. If representatives, interested parties and residents decide to continue the discussion and review the considerations related to a potential combined water utility, or alternative ownership structure, additional steps will be needed. We note that this process can be time consuming, and often takes several years from concept to implementation.

Michael Lanoue, Chair
Peter Stanton, Vice Chair
Ruby Chang, M.D.
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TOWN OF GREAT BARRINGTON MASSACHUSETTS

Rebecca Jurczyk
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BOARD OF HEALTH

August 9, 2018

The Health Department would like to announce the recommended resources if residents are concerned with the water service in their home.

If you have a complaint or a concern regarding a public or private water system please contact: The Department of Environmental Protection's Drinking Water Program of Western Massachusetts. The DEP Drinking Water Program oversees water quality and enforces the standards set forth by the Commonwealth of Massachusetts for all public and private water systems. The contact information for Western Mass Division of the Drinking Water Program is as follows:

- Douglas Paine- (413) 755-2281, Douglas.Paine@state.ma.us
- Kimberly Longridge- (413) 755 2215, Kimberly.longridge@state.ma.us
- Deirdre Doherty- (413) 755-2148, Deirdre.Doherty@state.ma.us

Available in the Great Barrington Health Department: **Water testing kits are available in the Health Department, 20 Castle Street, Great Barrington, MA 01230 Monday- Friday 8:30AM- 4:00PM** or by appointment after business hours. For additional questions regarding water tests or testing costs please contact Housatonic Basin Sampling and Testing directly at (413) 248-4622.

- Water kits include bottles for testing bacteria, e. coli, lead, and copper. E. coli tests cost \$40.00 and must be taken directly to Housatonic Basin Sampling & Testing for immediate testing due to a short shelf life. The address for drop off is: 80 Run Way, Lee, MA, 01238. The lead, copper, or iron tests cost \$20.00 each and can either be brought back to the Health Department or brought directly to Housatonic Basin Sampling and Testing.
- Bottles are also available for a comprehensive test referred to as the Tri-Town test. The Tri-Town tests water samples for: lead, nitrate, nitrite, sodium, sulfates, chloride, iron, manganese, pH, total dissolved solids, hardness, and turbidity. The Tri-Town test is \$150.00.

If you have any additional questions or would like to discuss concerns please contact the Health Department at (413) 528-0680, rjurczyk@townofgb.org

update 10/12/18

Housatonic Water Works

I. Status Update - UAO-WE-18-00004151 issued August 10, 2018.

This is the Unilateral Order issued by MassDEP following its August 9th inspection.

Section III. Disposition and Order. Tasks of Paragraphs 6.A-H of the UAO have been completed.

1. Housatonic Water Works submitted information on its chlorine analyzer operation.
2. Installation of new water treatment plant chlorine equipment and storage tank connections completed.
3. MassDEP final inspection of water treatment plant equipment/tank connection completed. Final Inspection and Conditional Approval letter sent October 5, 2018.
4. The modifications of the water treatment plant operation are not yet online as of Friday October 12, 2018. Revised monthly monitoring will occur once it is online.

II. Status Update - ACOP-WE-18-00000813 concluded August 23, 2018.

This is the Consent Order with MassDEP requiring corrosion control to address Lead and Copper.

Section III. Disposition and Order. Task in Paragraph 8.A. still pending.

1. Housatonic Water Works submitted its permit application for corrosion control treatment to address lead and copper.
2. MassDEP reviewed the permit, has communicated with Housatonic and is requiring additional items or changes in the proposed approach with a written response due October 12, 2018.

III. Status Update – Sampling Required by August 2, 2018 email.

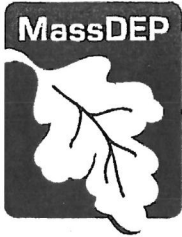
MassDEP required Special Water Quality Monitoring and a Report on breaks within the distribution system in email correspondence dated August 2, 2018

1. Housatonic Water Works submitted the report on water breaks in its distribution system.
2. Housatonic Water Works contracted for independent sampling for both field analyses and laboratory results. Samples and field measurements were taken at the entry point and at 2 locations in the distribution system on the two week scheduled required by MassDEP. At this time, Housatonic is continuing with the sampling under MassDEP direction.
3. The sampling results have been consistent with the results that one would expect from a small surface water supply in Western Massachusetts.
4. On September 5th, one location did not show a measurable chlorine residual. Housatonic had the contractor return on September 7th to measure chlorine residuals at both locations and the September 7th results showing water residual present at both locations measured.
5. On August 8, 2018, the entry point manganese level was 0.06 mg/L (the secondary standard is 0.05 mg/L). Sample results in the system that day were both below the secondary standard at 0.045 and 0.0141 mg/L.

IV Technical Review of permit for Corrosion Control treatment, 9/12/2018.

1. Alarm plans missing
2. Plans to show vent line diameter, overflow line, update other documents.

I



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Unilateral Order

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

August 10, 2018

Mr. James Mercer
Housatonic Water Works
80 Maple Street, Suite 1
Great Barrington, MA 01230

Re: Great Barrington - DWP
Housatonic Water Works
PWS ID# 1113003
Unilateral Order #00004151

Dear Mr. Mercer:

The Massachusetts Department of Environmental Protection's ("MassDEP") has determined that your water system is in noncompliance with various requirements of the Drinking Water Regulations and that immediate action is necessary to address that noncompliance.

If you fail to take any action set forth in this Order by the prescribed deadline, or if you otherwise fail to comply with the requirements of this Order, you could be subject to legal action, as described in this Order.

Pursuant to M.G.L. c. 111, § 160, MassDEP may issue such orders as it deems necessary to ensure delivery of fit and pure drinking water to all consumers. MassDEP reserves its rights to exercise this authority, if it determines that additional actions not required by this Order are necessary to ensure that the water provided to consumers is fit for human consumption.

If you have any questions regarding this matter, please contact Deirdre Doherty at 413-755-2148 or Deirdre.Doherty@state.ma.us.

Respectfully,

Brian D. Harrington
Deputy Regional Director
Bureau of Water Resources

Encl.: Unilateral Order #00004151

cc: DEP DWP-Boston
DEP DWP WERO

Certified Mail Return Receipt #7017 0660 0000 1536 4338

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This information is available in alternate format. Call the MassDEP Diversity Office at 617-556-1139. TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

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**COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In the matter of:

**Housatonic Water Works
Company**

**UNILATERAL
ADMINISTRATIVE ORDER**

File # 00004151

I. THE PARTIES

1. The Massachusetts Department of Environmental Protection (“MassDEP” or “the Department”) is a duly constituted agency of the Commonwealth of Massachusetts established pursuant to M.G.L. c. 21A, §7. MassDEP has its principal office located at One Winter Street, Boston, Massachusetts 02108, and its Western Regional Office at 436 Dwight Street, Springfield, Massachusetts 01103.
2. Housatonic Water Works Company (“PWS”) is a company with its principal offices located at 80 Maple Avenue, Great Barrington, Massachusetts, 01230. Housatonic owns and operates a community public water system, which is a type of Public Water System, as defined in 310 CMR 22.02, in Great Barrington, Massachusetts.¹ Housatonic Water Works’ mailing address is also 80 Maple Avenue, Great Barrington, Massachusetts, 01230.

II. STATEMENT OF FACTS AND LAW

3. The Department is charged with administration and enforcement of the requirements of the Federal Safe Drinking Water Act, 42 U.S.C. § 300f et seq. and the regulations promulgated thereunder by the United States Environmental Protection Agency (“EPA”). MassDEP implements and enforces statutes and regulations of the Commonwealth of Massachusetts for the protection of the public drinking water supply, including, without limitation, M.G.L. c. 111, § 5G and § 160, M.G.L. c. 25G § 15, and 310 CMR 22.00 (“the Massachusetts Drinking Water Regulations”).

The Massachusetts Drinking Water Regulations apply to all Public Water Systems in the Commonwealth. The regulations define a Public Water System as “a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.” A Public Water System includes: “any collection,

¹ A Supplier of Water is considered: (i) a Community Water System if it has 15 or more service connections used by year-round residents and/or regularly serves 25 or more year-round residents; (ii) a Non-transient Non-community water system if it has 15 or more service connections and/or regularly serves 25 or more of the same persons approximately four or more hours per day, four or more days per week, more than six months or 180 days per year; or (iii) a Transient Non-community Water System if it has 15 or more service connections and/or serves water to 25 or more different persons at least 60 days of the year.

treatment, storage, and distribution facilities under control of the operator of such a system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control that are used primarily in connection with such system.”

The Department’s authority to issue this Unilateral Administrative Order (“Order”) and to set deadlines for compliance are conferred by the foregoing and by M.G.L. c. 111, § 2C.

4. The following facts have led to the issuance of this Order:

A. PWS owns and operates a Community Public Water System serving approximately 1,400 people in the Great Barrington village of Housatonic. The PWS is supplied by a single surface water reservoir subject to the requirements of the Surface Water Treatment Rule (SWTR). A filtration and disinfection system originally constructed in 1939 and upgraded in 1997 provides treatment of the reservoir at a level requiring continuous operation unless MassDEP issues an exemption from this requirement based on system controls and automation. MassDEP conducts inspections to assess PWS’s compliance with the SWTR.

B. Within a May 9, 2016 Administrative Consent Order (ACOP-WE-15-5D012), PWS agreed to make improvements in operation and to install modifications to achieve more consistent and reliable compliance with the Surface Water Treatment Rule (SWTR), including PWS chlorine disinfection treatment operation, chlorine measurements and calculating and reporting SWTR contact time inactivation (CT).

The Order specifically required PWS to use accurate and appropriate data in determining compliance with the Surface Water Treatment Rule disinfection treatment requirements including: treated water pH values, treated water temperature readings, minimum chlorine residual prior to first customer at time of peak hourly flow and to use the above information and the appropriate disinfection tables to document adequate disinfection through the submittal of the required monthly treatment forms.

C. Currently, PWS’ water from the chlorine contact basin flows back to the water filter plant where it can either flow to the distribution system or be pumped to the storage tank. Under this configuration only the contact time within the contact basin can be applied to CT compliance calculations.

D. On August 31, 2017, PWS submitted a WS25 Treatment Plant Modifications permit application. Piping modifications were proposed to allow the PWS to withdraw the unrestricted flow rate of its high lift pump through the contact basin plus the additional contact time which can be provided by the 1.0 MG water storage tank to determine SWTR CT compliance.

E. MassDEP issued a Conditional Approval dated November 15, 2017 and required accurate CT calculations and appropriate chlorine analyzers for measurements in its conditions.

- F. PWS submitted the proposed equipment required in the above November 15, 2017 Conditional Approval on June 18, 2018 within a WS34 Chemical Addition Permit Application for corrosion control treatment.
- G. During July and August 2018, PWS customers complained of extended periods of discolored water and odors, including but not limited to strong chlorine odors (“pool like”) in the water followed by periods of “pond like” odors.
- H. During this time, MassDEP continued to receive complaints and to have regular communications with the PWS.
- I. During this time, reports of water quality indicate the drinking water quality did not meet the secondary drinking water requirements associated with aesthetics and odor.
- J. All routine bacteria samples collected on July 24th and prior to that have been free of bacteria.
- K. The PWS conducted additional bacteria sampling in the system at 3 locations in the distribution system on 7/31/18 and all results were free of bacteria.
- L. On August 3, 2018, MassDEP directed the system to conduct additional sampling in the area of disruption by no later than August 6th. The additional sampling required was (1) Field analyses for: pH, Chlorine residual, Turbidity and (2) lab analyses for Total Dissolved Solids, Color, Iron, Manganese, and Alkalinity. The owner identified sample locations acceptable to MassDEP and collected the samples for analysis. The results are expected to assist MassDEP in further understanding the system and any potential water quality issues.
- M. MassDEP’s August 3, 2018 sampling requirements provide that the sampling requirements must continue every 2 weeks until further direction is provided by MassDEP.
- N. On August 9, 2018, two Engineers from MassDEP met with the PWS and reviewed the PWS operations. MassDEP staff observed the following:
 - a. The water was warm; the operator reported July water as warm: 23°C to 28.7°C (84°F).
 - b. The operator failed to maintain PWS’ chlorine analyzer in accordance with manufacturer standards, specifically, the analyzer was not receiving consistent flow. The analyzer was receiving slugs and therefore PWS’ chlorine analyzer was not providing accurate readings of the water treatment operations. The equipment was not maintained in accordance with 310 CMR 22.20A.
 - c. The current operation allows for water to enter the distribution system either by going through the storage tank or directly from the water filter plant. Water entering

- the distribution system directly from the water filter plant presently has additional chlorine added to it when entering the distribution system, while the water entering from the tank does not receive additional chlorination.
- d. Demand within the distribution system dictates whether water is drawn from the tank or if it comes directly from the filtration plant.
 - e. When the operator set the water system to send water from the tank to the distribution system, the recorded chlorine residuals dropped quickly. PWS' automated response triggered additional chlorine added to the water entering the distribution system. This additional chlorine may result in spikes of chlorine.
 - f. The spikes in chlorine are consistent with complaints describing times of "pool like" odors and times of "pond like odors".
 - g. The chlorine spikes may also cause disruption within the distribution system which is consistent with the color and other aesthetic issues that were identified within complaints received by MassDEP.
 - h. The operations as described do not provide consistent and reliable treatment of drinking water and result in inconsistent dosages of chlorine.
- O. MassDEP engineers reviewed instrument calibration with the operator and appropriate QA/QC for in-line and bench top equipment.
- P. MassDEP engineers also reviewed flushing procedures with PWS, including processes to assure adequate flushing velocities, installation of blow offs on dead ends, metering techniques to measure unaccounted-for water, and taking chlorine samples during the flushing events. PWS flushing process was not consistent with the American Water Works Association (AWWA) techniques.
- Q. In addition to meeting with the PWS, the MassDEP engineers visited several customers within the area of disruption, including sites that were the subject of the complaints to MassDEP. At the customer sites:
- a. Water quality in the distribution system appeared clear.
 - b. In addition, staff checked for visual turbidity and odor.
 - c. Customers reported that the discoloration was better that day than it has been.
 - d. Customers provided documentation through pictures of discolored water from the previous weeks.
 - e. Staff collected field samples of water and conducted field analyses for chlorine. Adequate levels of chlorine were detected in the distribution system in MassDEP field samples collected on August 9, 2018.
- R. On July 26, 2018, the PWS reported that a significant break had been discovered and repaired on Grove Street. The PWS estimated that the repair has resulted in a water usage reduction within the system of approximately 30%. In a subsequent conversation, PWS stated that the break was in a customer's service line on Grove Street and was discovered by the property owner when the leak broke out at the surface. A significant leak can cause disruption to the distribution system.

S. The PWS has conducted directional flushing of the PWS distribution system including August 1, 2018 through August 8, 2018.

5. The foregoing facts constitute violations of the following statutes and regulations

A. Massachusetts Drinking Water Regulation 310 CMR 22.20A(5)(a) states in part: "Only the analytical method(s) specified in 310 CMR 22.20A(5)(a), or otherwise approved by EPA, may be used to demonstrate compliance with the requirements of 310 CMR 22.20A(2), 310 CMR 22.20A(3), and 310 CMR 22.20A(4). Measurements for pH, temperature, turbidity, and residual disinfectant concentrations must be conducted by a certified operator...2. Public Water Systems must measure Residual Disinfectant Concentrations with one of the following methods in the following table. Residual Disinfectant Concentrations for free chlorine and combined chlorine also may be measured by using digital meter versions of DPD colorimetric test kits. Suppliers serving less than or equal to 3,300 persons may use non-digital meter DPD colorimetric test kits. Free chlorine and total chlorine may be measured continuously by adapting a specified chlorine residual method for use with a continuous monitoring instrument provided the chemistry, accuracy, and precision remain the same. Instruments used for continuous monitoring must be calibrated with a grab sample measurement at least every five days, or with a protocol approved by the Department."

B. Massachusetts Drinking Water Regulation 310 CMR 22.03(1) states "No source of water used by a Public Water System, no system of water supply used by a Public Water System, and no treatment facilities or treatment works used by a Public Water System shall be deemed by the Department to be safe, fit, or pure, or in any other way approved; and no Supplier of Water, or other Person subject to a requirement of 310 CMR 22.00 shall supply drinking water to the users of a Public Water System, including without limitation for emergency use; unless that Public Water System complies with 310 CMR 22.00. In the event of a violation of 310 CMR 22.00, the Department may establish a schedule for compliance within an administrative consent order or other enforceable document that may include interim measures that the Supplier of Water must take. It shall be a violation of 310 CMR 22.00 to fail to comply with:

- (a) any provision or requirement of 310 CMR 22.00;
- (b) a schedule for compliance, including any interim measures required by the Department in an administrative consent order or other enforceable document; or
- (c) any term or condition of a permit, written approval, registration, certification or order issued by the Department pursuant to M.G.L. c. 111, § 160 or 310 CMR 22.00."

C. Massachusetts Drinking Water Regulation 310 CMR 22.04(7) states "Each Supplier of Water shall operate and maintain its system in a manner that ensures the delivery of safe drinking water to consumers. In determining whether a Supplier of Water is properly operating and maintaining a Public Water System, the Department will apply the standards for Public Water Systems set forth in the Drinking Water Program's *"Guidelines and Policies for Public Water Systems."*

III. ORDER

6. For the reasons and pursuant to the authority stated above, the Department hereby orders that:
- A. Within 72 hours of this Order, PWS shall ensure operation of the chlorine analyzer(s) is consistent with manufacturer requirements, to include that sufficient and consistent flow through the analyzer is provided. PWS shall review operations manual requirements on a weekly basis and maintain a log of PWS maintenance and calibration of chlorine analyzers.
 - B. At the earliest reasonable date, and in no event more than 21 days from the date of this Order, PWS shall install a continuously recording chlorine analyzer on the existing 8" pipe in the water filter plant from the contact basin.
 - C. At the earliest reasonable date, and in no event more than 21 days from the date of this Order, PWS shall install a continuously recording chlorine analyzer and flow meter on the 12" pipe from the storage tank at the entry point to the distribution system. Chlorine and flow readings during peak hourly flow, together with storage tank levels from the existing tank level recorder, can then be used to calculate Contact Time (CT) compliance.
 - D. At the earliest reasonable date, and in no event more than 21 days from the date of this Order, MassDEP requires that the new 6" diameter water main to the 1.0 MG storage tank be pressure-tested and disinfected in accordance with Chapter 9 of the MassDEP DWP Guidelines for Public Water Systems and AWWA Standards prior to connecting to the tank.
 - E. At the earliest reasonable date, and in no event more than 21 days from the date of this Order, PWS shall submit to MassDEP, written procedures for calculating CT compliance prior to placing the modifications in service. PWS shall demonstrate compliance, using the CT provided in each segment (the chlorine contact basin and its pumped flow rate and the 1.0 MG storage tank and its gravity flow rate). PWS shall calculate the CT daily using peak hourly flow and continuously monitored residual chlorine levels. The SWTR Form I shall be completed and submitted monthly for each segment and the Form H, which is the summation of the CT provided in each segment, shall be completed and submitted monthly to demonstrate total inactivation.
 - F. PWS design and installation shall comply with all requirements of the Drinking Water Regulations, including, Chemical Safety Control for Critical Chemical Feed Systems set forth at 310 CMR 22.04(14).
 - G. PWS shall revise its existing Operations and Maintenance Manual to include provisions for the operations of the newly installed equipment, including the in-line (flow through) analyzer, including but not limited to a written log for the operation and reading of the chlorine analyzers, including the flow through the chlorine analyzers.
 - H. PWS shall notify MassDEP of the completion of the actions required in paragraphs III6 A through 6G above and the completion and readiness for the final inspection pursuant to

the WS 25 Treatment Plant Modifications permit Conditional Approval dated November 15, 2017.

- I. Upon MassDEP inspection and PWS receipt of MassDEP's written final approval, PWS shall place the treatment plant modifications described in the Conditional Approval dated November 15, 2017, on-line.
- J. PWS shall fully complete all required monthly operations reporting and water quality monitoring required for compliance with 310 CMR 22.00. Specifically PWS shall calculate the CT daily using peak hourly flow and continuously monitored residual chlorine levels. The SWTR Form I shall be completed and submitted monthly for each segment and the Form H, which is the summation of the CT provided in each segment, shall be completed and submitted monthly to demonstrate total inactivation.

7. Failure to comply with this Order may constitute grounds for further legal action. You are hereby advised that, if you fail to comply with this Order, M.G.L. c. 111, § 160 provides for fines and civil penalties of up to \$25,000 and by imprisonment for up to one year for each day during which each violation covered by this Order continues or is repeated. The PWS is further advised that if it fails to comply with this Order, M.G.L. c. 21A, § 16 provides for civil administrative penalties of up to \$25,000, plus the economic benefit realized for such noncompliance. The Department reserves the right to exercise the full extent of its legal authority, including without limitation, pursuit of criminal prosecution or civil action, court-imposed civil penalties, and/or administrative penalties assessed by the Department.

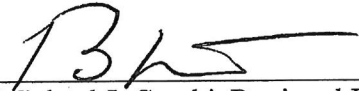
IV. APPEAL RIGHTS AND TIME LIMITS

8. Pursuant to M.G.L. c. 111, §§ 147 and 163, whoever is aggrieved by this Order may, within three (3) days after service of the Order upon him/her, give written notice of appeal to MassDEP and file a petition for a jury in the superior court in the county where the premises affected are located, and, after notice to MassDEP, may have a trial in the same manner as other civil cases are tried by jury. If by mistake of law or fact or by accident such person fails within said three (3) days to apply for a jury, and if it appears to the court that such failure was caused by such mistake or accident, and that such person has not, since the service of the Order upon him/her, violated it, such person may apply for a jury within thirty (30) days of such service. Pursuant to M.G.L. c. 111, § 163, any such aggrieved person must comply with this Order while the appeal is pending, unless otherwise authorized in writing by MassDEP.

Housatonic Water Works
Administrative Order
File # 00004151
WERO Tracking Number #: UAO-WE-18-00004151
Page 8 of 8

SO ORDERED:

Department of Environmental Protection,

By:  Date: 8/10/18
Michael J. Gorski, Regional Director
MassDEP, Western Regional Office
436 Dwight Street
Springfield, Massachusetts 01103

*Brian D.
Hornum
Fm*

W:\BWR\WS\Enforcement & Compliance\UAOs\Housatonic 1113003UAOSWTR2018-08-09

Jennifer Tabakin

From: Doherty, Deirdre (DEP) <deirdre.doherty@mass.gov>
Sent: Thursday, August 2, 2018 11:07 AM
To: James J. Mercer (housatonicwater@gmail.com)
Cc: Paine, Douglas (DEP); Wanat, Catherine (DEP); Longridge, Kimberly (DEP); Harrington, Brian (DEP)
Subject: Housatonic Water Works Follow-up Water Quality and Water Main Break/Leak

Mr. Mercer:

MassDEP has reviewed the water quality samples (bacteria results), the customer concerns and the report of the repair of a water main leak/break at Housatonic Water Works (HWW).

MassDEP is now requiring follow-up water quality monitoring and a report on water main leaks/breaks at this time:

1. MassDEP requires HWW to provide MassDEP a report on the water main leaks and breaks which have occurred at the public water system since January 2015. The report should include information on the location, material of construction of the main, an estimate of the volume of water and/or disruption of water system hydraulics due to the leak/break, the time to repair the leak/break. Service line breaks are not considered part of this review. The report must be submitted by August 20, 2018.
2. MassDEP requires HWW to collect distribution water quality samples/field analyses at two locations roughly marking the area of water quality customer concerns. One location shall be 249 North Plain Road, if the owner is agreeable to the monitoring and another location at the other end of North Plain Road or the area before the recently identified leak/break on Grove Street. The Post Office is not to be used for this sampling (as noted above, regular moderate use is required for this sampling). HWW shall propose appropriate location(s) to MassDEP by no later than 3 p.m. Friday August 3, 2018. MassDEP will review the proposed locations.
3. The water quality monitoring shall occur every two weeks, until MassDEP determines in writing that it may cease. The first sample rounds shall be collected no later than Monday August 6, 2018.
4. The two locations shall be monitored with appropriate methods in accordance with 310 CMR 22.00., for:
 - a. Field analyses for: pH, Chlorine residual, Turbidity.
 - b. Laboratory analyses for Total Dissolved Solids, Color, Iron, Manganese, Alkalinity.
5. The analyses shall be completed within 1 week of collection, with a report issued by the certified laboratory to HWW within 24 hours of analyses completion. HWW shall provide the laboratory and field analyses in writing to MassDEP within 24 hours of its receipt of the report.

The analytical and field analyses reports shall be provided to MassDEP by fax (413) 784-1149 and/or by email to all of the following three addresses:

Deirdre.Doherty@state.ma.us
Douglas.Paine@state.ma.us
Catherine.Wanat@state.ma.us

If you have any questions, please contact me at (413) 755-2148.

Deirdre Doherty

Drinking Water/Municipal Services Section Chief
MassDEP Western Region
(413) 755-2148

II



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

Matthew A. Beaton
Secretary

Martin Suuberg
Commissioner

Consent Order

August 23, 2018

Jim Mercer
Housatonic Water Works Company
80 Maple Avenue
Great Barrington, MA 01230

Re: Great Barrington
Housatonic Water Works
PWS ID# 1113003
#00000813

Dear Mr. Mercer,

Enclosed is your original executed Administrative Consent Order with Penalty (ACOP).

MassDEP notes for your clarification that, on July 12, 2018, the Administrative Review time period for the BRPWS34 permit application had passed. See paragraph II.5.M., of this Order.

If you have any questions regarding this issue, please contact Douglas Paine at (413) 755-2281.

Respectfully,

Deirdre Doherty
Drinking Water / Municipal Services Chief
Bureau of Water Resources

Cc: MassDEP-Boston ; Great Barrington Board of Health

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**COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In the matter of:
Housatonic Water Works Company

Enforcement Document Number:
00000813
Issuing Bureau: BWR
Issuing Region/Office: WERO
Issuing Program: DWP
Primary Program Cited: DWP
PWS ID # 1113003

**ADMINISTRATIVE CONSENT ORDER WITH PENALTY
AND
NOTICE OF NONCOMPLIANCE**

I. THE PARTIES

1. The Department of Environmental Protection (“Department” or “MassDEP”) is a duly constituted agency of the Commonwealth of Massachusetts established pursuant to M.G.L. c. 21A, § 7. MassDEP maintains its principal office at One Winter Street, Boston, Massachusetts 02108, and its Western Regional Office at 436 Dwight Street, Springfield, Massachusetts 01103.

2. Housatonic Water Works Company (“Respondent”) is a company with its principal offices located at 80 Maple Avenue, Great Barrington, Massachusetts, 01230. Respondent’s mailing address for purposes of this Consent Order is also 80 Maple Avenue, Great Barrington, Massachusetts, 01230.

II. STATEMENT OF FACTS AND LAW

3. MassDEP has primary enforcement responsibility for the requirements of the Federal Safe Drinking Water Act, 42 U.S.C. §300f et seq., and the regulations promulgated there under. MassDEP implements and enforces statutes and regulations of the Commonwealth of Massachusetts for the protection of the public drinking water supply, including, without limitation, M.G.L. c. 111, §5G and §160, and the Drinking Water Regulations at 310 CMR 22.00; the Cross Connections, Distribution System Protection Regulations at 310 CMR 22.22; and the Underground Injection Control Regulations at 310 CMR 27.00. MassDEP, pursuant to M.G.L. c. 111, §160, may issue such orders as it deems necessary to ensure the delivery of fit and pure drinking water by public water systems to all consumers. MassDEP, pursuant to M.G.L. c. 111, §5G, may require by order the provision and operation of such treatment facilities as it deems necessary to ensure the delivery of a safe water supply to all consumers.

MassDEP’s Drinking Water Regulations at 310 CMR 22.02 define a public water system as “a system for the provision to the public of water for human consumption, through pipes or other constructed conveyances, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year.” Regulation 310 CMR 22.02 defines “Community Public Water System” as “a Public Water System which serves at least 15 service connections used by year round residents or regularly serves at least 25

year round residents.” The regulation also defines a supplier of water as “any person who owns or operates a public water system.”

MassDEP has authority under M.G.L. c. 21A, § 16 and the Administrative Penalty Regulations at 310 CMR 5.00 to assess civil administrative penalties to persons in noncompliance with the laws and regulations set forth above.

4. Respondent is a Supplier of Water as defined in 310 CMR 22.02. Respondent owns and operates a Community Public Water System serving approximately 1,400 people located in the Great Barrington village of Housatonic, Massachusetts.

5. The following facts and allegations have led MassDEP to issue this Consent Order:

- A. Respondent’s September 2015 sampling for lead and copper demonstrated an exceedance of the copper Action Level of 1.3 mg/l. Respondent’s 90th percentile copper value from its ten sample locations was 1.4 mg/l. MassDEP addressed the exceedance within an October 21, 2015 letter, putting Respondent on an increased monitoring frequency beginning in 2016, and requiring the collection of additional water-quality data.
- B. Respondent’s June 2016 lead and copper sampling demonstrated an exceedance of the lead Action Level of 0.015 mg/l, with a lead 90th percentile value of 0.018 mg/l. MassDEP addressed the exceedance within a July 22, 2016 letter requiring that Respondent conduct additional water-quality monitoring and that an evaluation of corrective actions be conducted by completing and submitting a “Desktop Evaluation for Corrosion Control Treatment Recommendations” (Desktop Evaluation). The completed Desktop Evaluation was to be submitted by December 31, 2016.
- C. Respondent’s November 2016 lead and copper sampling demonstrated an exceedance of the lead action level, with a lead 90th percentile value of 0.019 mg/l. MassDEP addressed the exceedance within a December 19, 2016 letter, which restated the requirement that Respondent submit a Desktop Evaluation by December 31, 2016 and added a requirement that Respondent submit a permit application proposing corrosion-control treatment by June 30, 2017.
- D. On January 3, 2017, Respondent submitted a substantially complete Desktop Evaluation recommending the installation of corrosion-control treatment using a series of proposed chemicals for pH adjustment and blended phosphates.
- E. Within an April 5, 2017 letter, MassDEP conditionally approved Respondent’s proposals included within its Desktop Evaluation. Within the letter, MassDEP required that Respondent submit a basis-for-design report for the corrosion-control strategy by May 15, 2017, and restated that Respondent submit a permit application by June 30, 2017.
- F. Respondent’s June 2017 lead-and-copper sampling demonstrated an exceedance of the lead action level, with a lead 90th percentile value of 0.0169 mg/l. MassDEP addressed the exceedance within a July 26,

2017 letter, which stated that Respondent had not submitted its basis-for-design report and its permit application by the required deadline, and that these failures would be subject to an enforcement action.

- G. On November 3, 2017, Respondent submitted the required basis-for-design report for its proposed corrosion-control treatment.
- H. Within a February 9, 2018 sanitary-survey-inspection report (inspection conducted on November 30, 2017), MassDEP noted Respondent's failure to submit the required corrosion-control-treatment permit by the June 30, 2017 deadline, and noted that the failure was a violation of Massachusetts Drinking Water Regulation 310 CMR 22.06(B).
- I. Massachusetts Drinking Water Regulation 310 CMR 22.06B(1)(d)1 states: "All water systems shall install and operate optimal corrosion control treatment as defined in 310 CMR 22.02."
- J. Massachusetts Drinking Water Regulation 310 CMR 22.06B(3)(e) states: "Installation of Optimal Corrosion Control. Each system shall properly install and operate throughout its distribution system the optimal corrosion control treatment designated by the Department under 310 CMR 22.06B(3)(d)."
- K. On June 11, 2018, the Department received Respondent's BRPWS34 permit application proposing installation of a conditionally approved corrosion-control-treatment system.
- L. On June 19, 2018, the Department received Respondent's application fee associated with its BRPWS34 Permit Application.
- M. On July 12, 2018, Respondent's BRPWS34 permit application was deemed administratively complete.

III. DISPOSITION AND ORDER

For the reasons set forth above, MassDEP hereby issues, and Respondent hereby consents to, this Order:

- 6. The parties have agreed to enter into this Consent Order because they agree that it is in their own interests, and in the public interest, to proceed promptly with the actions called for herein rather than to expend additional time and resources litigating the matters set forth above. Respondent enters into this Consent Order without admitting or denying the facts or allegations set forth herein. However, Respondent agrees not to contest such facts and allegations for purposes of the issuance or enforcement of this Consent Order.
- 7. MassDEP's authority to issue this Consent Order is conferred by the Statutes and Regulations cited in Part II of this Consent Order.
- 8. Respondent shall perform the following actions:
 - A. Within one hundred eighty (180) days of MassDEP approval of Respondent's BRPWS34 permit application, Respondent shall complete installation of its corrosion-control-treatment system, and shall provide written notice to MassDEP that the treatment system is operational.

In the Matter of: Housatonic Water Works Company
ACOP # 00000813

Page 4 of 7

9. Except as otherwise provided, all notices, submittals and other communications required by this Consent Order shall be directed to:

Douglas Paine, Drinking Water Program
Massachusetts Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

Such notices, submittals and other communications shall be considered delivered by Respondent upon receipt by MassDEP.

10. Actions required by this Consent Order shall be taken in accordance with all applicable federal, state, and local laws, regulations and approvals. This Consent Order shall not be construed as, nor operate as, relieving Respondent or any other person of the necessity of complying with all applicable federal, state, and local laws, regulations and approvals.

11. For purposes of M.G.L. c. 21A, § 16 and 310 CMR 5.00, this Consent Order shall also serve as a Notice of Noncompliance for Respondent's noncompliance with the requirements cited in Part II above. MassDEP hereby determines, and Respondent hereby agrees, that any deadlines set forth in this Consent Order constitute reasonable periods of time for Respondent to take the actions described.

12. Respondent shall pay to the Commonwealth the sum of five thousand seven hundred fifty dollars (\$5,750.00) as a civil administrative penalty for the violations identified in Part II above. MassDEP hereby agrees to suspend payment of the entire penalty amount; provided, however, that if Respondent violates any provision of this Consent Order, or further violates any of the regulations cited in Part II above within one (1) year of the effective date of this Consent Order, Respondent shall pay to the Commonwealth the full amount of five thousand seven hundred fifty dollars (\$5,750.00) within thirty (30) days of the date MassDEP issues Respondent a written demand for payment. This paragraph shall not be construed or operate to bar, diminish, adjudicate, or in any way affect, any legal or equitable right of MassDEP to assess Respondent additional civil administrative penalties, or to seek any other relief, with respect to any future violation of any provision of this Consent Order or any law or regulation.

13. Respondent understands, and hereby waives, its right to an adjudicatory hearing before MassDEP on, and judicial review of, the issuance and terms of this Consent Order and to notice of any such rights of review. This waiver does not extend to any other order issued by the MassDEP.

14. This Consent Order may be modified only by written agreement of the parties hereto.

15. The provisions of this Consent Order are severable, and if any provision of this Consent Order or the application thereof is held invalid, such invalidity shall not affect the validity of other provisions of this Consent Order, or the application of such other provisions, which can be given effect without the invalid provision or application, provided however, that MassDEP shall have the discretion to void this Consent Order in the event of any such invalidity.

16. Nothing in this Consent Order shall be construed or operate as barring, diminishing, adjudicating or in any way affecting (i) any legal or equitable right of MassDEP to issue any additional order or to seek any other relief with respect to the subject matter covered by this Consent Order, or (ii) any legal or equitable right of MassDEP to pursue any other claim, action, suit, cause of action, or demand which MassDEP may have with

respect to the subject matter covered by this Consent Order, including, without limitation, any action to enforce this Consent Order in an administrative or judicial proceeding.

17. This Consent Order shall not be construed or operate as barring, diminishing, adjudicating, or in any way affecting, any legal or equitable right of MassDEP or Respondent with respect to any subject matter not covered by this Consent Order.

18. This Consent Order shall be binding upon Respondent and upon Respondent's successors and assigns. Respondent shall not violate this Consent Order and shall not allow or suffer Respondent's directors, officers, employees, agents, contractors or consultants to violate this Consent Order. Until Respondent has fully complied with this Consent Order, Respondent shall provide a copy of this Consent Order to each successor or assignee at such time that any succession or assignment occurs.

19. In addition to the penalty set forth in this Consent Order, if any (including any suspended penalty), if Respondent violates any provision of the Consent Order, Respondent shall pay stipulated civil administrative penalties to the Commonwealth in the amount of \$300 per day for each day, or portion thereof, each such violation continues.

Stipulated civil administrative penalties shall begin to accrue on the day a violation occurs and shall continue to accrue until the day Respondent corrects the violation or completes performance, whichever is applicable. Stipulated civil administrative penalties shall accrue regardless of whether MassDEP has notified Respondent of a violation or act of noncompliance. All stipulated civil administrative penalties accruing under this Consent Order shall be paid within thirty (30) days of the date MassDEP issues Respondent a written demand for payment. If simultaneous violations occur, separate penalties shall accrue for separate violations of this Consent Order. The payment of stipulated civil administrative penalties shall not alter in any way Respondent's obligation to complete performance as required by this Consent Order. MassDEP reserves its right to elect to pursue alternative remedies and alternative civil and criminal penalties which may be available by reason of Respondent's failure to comply with the requirements of this Consent Order. In the event MassDEP collects alternative civil administrative penalties, Respondent shall not be required to pay stipulated civil administrative penalties pursuant to this Consent Order for the same violations.

Respondent reserves whatever rights it may have to contest MassDEP's determination that Respondent failed to comply with the Consent Order and/or to contest the accuracy of MassDEP's calculation of the amount of the stipulated civil administrative penalty. Upon exhaustion of such rights, if any, Respondent agrees to assent to the entry of a court judgment if such court judgment is necessary to execute a claim for stipulated penalties under this Consent Order.

20. Respondent shall pay all civil administrative penalties due under this Consent Order, including suspended and stipulated penalties, by certified check or cashier's check made payable to the Commonwealth of Massachusetts, or by electronic funds transfer. If payment is made by certified check or cashier's check, Respondent shall clearly print on the face of its payment Respondent's full name, the enforcement document number appearing on the first page of this Consent Order, and the Respondent's Federal Employer Identification Number, and shall mail it to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
P.O. Box 3982

In the Matter of: Housatonic Water Works Company
ACOP # 00000813

Page 6 of 7

Boston, Massachusetts 02241-3982

In the event Respondent fails to pay in full any civil administrative penalty as required by this Consent Order, then pursuant to M.G.L. c. 21A, § 16, Respondent shall be liable to the Commonwealth for up to three (3) times the amount of the civil administrative penalty, together with costs, plus interest on the balance due from the time such penalty became due and attorneys' fees, including all costs and attorneys' fees incurred in the collection thereof. The rate of interest shall be the rate set forth in M.G.L. c. 231, § 6C.

21. Failure on the part of MassDEP to complain of any action or inaction on the part of Respondent shall not constitute a waiver by MassDEP of any of its rights under this Consent Order. Further, no waiver by MassDEP of any provision of this Consent Order shall be construed as a waiver of any other provision of this Consent Order.

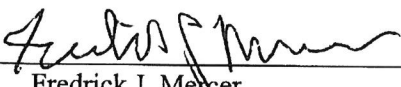
22. To the extent authorized by the current owner, Respondent agrees to provide MassDEP, and MassDEP's employees, representatives and contractors, access at all reasonable times to the Housatonic Water Works Company and its Public Water System for purposes of conducting any activity related to its oversight of this Consent Order. Notwithstanding any provision of this Consent Order, MassDEP retains all of its access authorities and rights under applicable state and federal law.

23. This Consent Order may be executed in one or more counterpart originals, all of which when executed shall constitute a single Consent Order.

24. The undersigned certify that they are fully authorized to enter into the terms and conditions of this Consent Order and to legally bind the party on whose behalf they are signing this Consent Order.

25. This Consent Order shall become effective on the date that it is executed by MassDEP. Respondent's obligations under this Consent Order shall cease upon Respondent's completion of all actions and payments required pursuant to Paragraphs 8 through 12 of this Consent Order.

Consented To:
HOUSATONIC WATER WORKS COMPANY


By: 
Fredrick J. Mercer
President
314 North Plain Road
Housatonic, MA 01230

Date: 8/8/18

In the Matter of: Housatonic Water Works Company
ACOP # 00000813

Page 7 of 7

Issued By:
DEPARTMENT OF ENVIRONMENTAL PROTECTION

By: 
Michael J. Gofski
Regional Director
MassDEP
436 Dwight Street
Springfield, MA 01103

Date: 8/23/18

IMPORTANT INSTRUCTIONS

For Payment to Lockbox and for Return to MassDEP of the signed ACOP (two (2) copies)

- 1) Send the two (2) signed copies of the ACOPs (NOT the Payment) to the address below
MassDEP will return to you a signed duplicate original for your records.)

Massachusetts Department of Environmental Protection
436 Dwight Street
Springfield, MA 01103

- 2) DO NOT INCLUDE ANY PAYMENT with the two (2) signed copies of this Administrative Consent Order with Penalties (ACOP).
- 3) DO NOT SEND THE SIGNED ACOP to the COMMONWEALTH LOCKBOX that is referenced in par. 20 of the ACOP.

The Commonwealth Lockbox is ONLY for payments, as referenced above.

MassDEP cannot receive any documents sent to the Lockbox.

Sampling Required

III

Jennifer Tabakin

From: Doherty, Deirdre (DEP) <deirdre.doherty@mass.gov>
Sent: Thursday, August 2, 2018 11:07 AM
To: James J. Mercer (housatonicwater@gmail.com)
Cc: Paine, Douglas (DEP); Wanat, Catherine (DEP); Longridge, Kimberly (DEP); Harrington, Brian (DEP)
Subject: Housatonic Water Works Follow-up Water Quality and Water Main Break/Leak

Mr. Mercer:

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Deirdre.Doherty@state.ma.us
Douglas.Paine@state.ma.us
Catherine.Wanat@state.ma.us

If you have any questions, please contact me at (413) 755-2148.

Deirdre Doherty

Drinking Water/Municipal Services Section Chief
MassDEP Western Region
(413) 755-2148



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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September 12, 2018

Mr. James Mercer
Housatonic Water Works
80 Maple Avenue, Suite 1
Great Barrington, MA 01230

Re: Great Barrington - DWP
Housatonic Water Works
PWS ID# 1113003
BRP WS 34 Chemical Addition Retrofit
Corrosion Control Treatment
Technical Deficiency
Transmittal # X280114

Dear Mr. Mercer,

The Massachusetts Department of Environmental Protection (MassDEP) received the above referenced permit application on June 18, 2018. The application was completed and submitted by James Ericson, P.E. of Lenard Engineering, Inc.

Based on the information submitted in the application and previous correspondence from MassDEP requiring supporting information on the selection of its corrosion control strategy, MassDEP has determined that the application is Technically Deficient. MassDEP has completed its Technical Review of the submitted permit and has determined that it is **Technically Deficient** and that further supporting information is required before MassDEP can approve your permit.

Background

HWW maintains an existing surface water treatment system that consists of an intake structure, slow sand filters, sodium hypochlorite injection and chlorine contact in a clearwell.

Housatonic Water Works (HWW) has been experiencing detections of both lead and copper above the Lead and Copper rule action levels since 2016. In January, HWW submitted the results of a Desktop Evaluation for corrosion control study that was approved by MassDEP in April 2017. In June 2017, lead and copper sampling at HWW revealed further exceedances of the lead Action level. On May 21, 2018, MassDEP issued an Administrative Consent Order with penalty to HWW for failing to implement corrosion control treatment in a timely manner and requiring HWW to implement optimal corrosion control treatment within 120 days.

Application Summary

The application was submitted by Lenard Engineering, Inc. on June 18, 2018. The application proposes that HWW install bulk chemical tanks and chemical feed pumps to raise the pH using concentrated sodium hydroxide and polyphosphate, and to replace its liquid sodium hypochlorite injection system.

Each of the chemical injection installations (sodium hypochlorite, sodium hydroxide, and blended phosphate) will be controlled by its own chemical pump control station. The specifications for the chemical pump control stations indicate that the following will be provided:

- Model will be CTI Dynamix Model #XPCS-G-398-PC4-1
- Hand-Off-Auto switch
- Remote start capability via PLC, SCADA or other device
- Emergency Stop buttons
- Panel mount alarms (visual and audio)
- Panel mounted analog timer
- “On” status and “In Auto” status to be connected with SCADA
- Twist lock plugs

The results of the Desktop Evaluation by Lenard Engineering indicated that the raw water pH is highly variable and varies by season. The results of pH monitoring in January and October ranged between 7.0 and 7.8, while the pH monitoring results during November and December were 5.7 and 6.6. More recent pH testing results were above 8.0. The recommendation to install soda ash injection in the Desktop Evaluation study was based only on the higher pH ranges, not the lower pH results from November and December. This application proposes instead to install sodium hydroxide injection, which is recommended for lower raw pH ranges.

✓ The proposed corrosion control treatment system will consist of both sodium hydroxide and phosphate injection. A 120-gallon bulk storage tank will store the concentrated sodium hydroxide. Bulk sodium hydroxide will be delivered into the tank through a lockable chemical fill station outside the building. Sodium hydroxide will be transferred to a 10-gallon day tank using a manually actuated transfer pump. The plans show that the bulk hydroxide tank will have an overflow, a 2” vent pipe that extends outside, and a 2” fill pipe. The chemical addition checklist indicates that the tank will have audible and visual alarms for high tank level, but the submitted plans and specifications do not indicate that level sensors or alarms will be installed.

The sodium hydroxide will be injected into the discharge of the clearwell pumps that travels directly into the storage tank (to be installed). A continuous pH analyzer will be provided to analyze sample water from a sample line connected the water main 200 feet from the WTP. The chemical addition checklist indicates that interlocks will be provided with station flow and pH, but the plans and specifications submitted do not indicate that alarms will be installed. Two chemical feed pumps will be provided to be compatible with sodium hydroxide (Blue White Flex Pro A2). The pumps will inject 20% sodium hydroxide into the clearwell pump discharge line which will be directly connected to the storage tank. The pumps will be flow-paced which will satisfy the critical chemical requirement that the pumps are interlocked with flow. The flow signal will be generated by a new flow meter Seametrics model EX800 series. The chemical feed pumps will be equipped with anti-siphon protection, ball and check valves, safety chains and pressure relief valves.

Specific interlocks between the sodium hydroxide chemical feed pumps with the clearwell pumps are not indicated in the plans or specifications. The specifications do indicate that the sodium hydroxide pumps are to be interlocked with continuous pH analyzer high pH alarm to alarm and shut down the pumps, but not the WTP flow.

The phosphate injection system will consist of a single 120-gallon bulk tank and a 10-gallon day tank. A manually-operated transfer pump will be dedicated to transferring between the bulk tank and the day tank. Two chemical feed pumps will be provided.

The existing liquid sodium hypochlorite injection system will be replaced to make room for the additional chemical injection installation. The existing hypochlorite storage tank and associated secondary

containment will be removed and replaced with a smaller 275-gallon double-walled bulk storage tank. The new tank will be equipped with a 2" liquid fill line to an external lockable fill station. The specifications indicate that the vent line will be supplied as shown, however, neither a vent nor an overflow line are shown in the plans.

The additional information required by MassDEP/DWP is described below.

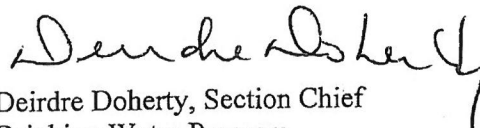
1. **MassDEP requires HWW to provide a bulk storage tank vent line with a diameter of at least 150% of the influent line (3") as required by the Guidelines (Chapter 6.1.11.1.5) and submit updated plans showing the vent diameter.**
2. **MassDEP requires HWW to provide a bulk storage tank overflow line as required by the Guidelines (Chapter 6.1.11.2.2) and submit updated plans showing the overflow line specifics.**
3. **MassDEP requires that HWW provide bulk chemical storage tank alarms in accordance with the Guidelines (Chapter 6.1.11.2). Bulk chemical storage tanks must have audio and visual alarms for high liquid levels. Although the Checklist indicates that an alarm will be provided, the plans submitted do not include description of any bulk chemical storage alarms. **MassDEP requires that the appropriate controls with alarms be installed on the three bulk chemical storage tanks and plans submitted showing the specifics of how the alarms will be installed and how they function.****
4. **The permit checklist indicates full compliance with Critical Chemical control (Chapter 6), but plans do not completely address the interlocks between the WTP flow, lift pumps, continuous analyzers (Cl and pH) and chemical the feed pumps. MassDEP requires that HWW submit plans and specifications that show all the interlocks necessary to comply with the critical chemical control regulations and guidelines (310 CMR 22.04(14) and Chapter 6 of the Guidelines) for both chlorine residual and pH, for high and low conditions, and a narrative of how the interlocks will function and how they will be tested on a regular basis.**
5. **MassDEP requires that HWW specify the operating alarm and shutdown settings. The low pH alarm be set no lower than 7.2 (raw water pH is stated to be 7.2 or lower) and the WTP should shutdown whenever the pH is greater than 10.0.**
6. **No target pH or phosphate concentrations were proposed in the application. MassDEP requires that HWW provide an evaluation of its proposed target pH and phosphate concentrations.**
7. **MassDEP requires that HWW revise its Emergency Response, and its Operations and Maintenance plans to reflect the addition of corrosion control treatment, including specific actions to take whenever an alarm condition occurs.**
8. **MassDEP requires that the safety eyewash water supply provide warmed water in compliance with the Guidelines.**

Alarms
Needed/
Plans to be
submitted

Following receipt of the required information, MassDEP has 24 days to complete a second Technical Review or approve the application. Should the application, based on submittal of the additional information, be deemed incomplete a second time, the application will be denied in accordance with 310 CMR 4.04(2)(b)1.c.

If you have any questions regarding this matter, please contact Jim Bumgardner 413-755-2270 or email at james.bumgardner@state.ma.us.

Respectfully,



Deirdre Doherty, Section Chief
Drinking Water Program
Bureau of Resource Protection

Cc: James Ericson, P.E., Lenard Engineering, Inc., P.O. Box 1088, Glastonbury, CT 06088
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DEP DWP- Boston
DEP DWP WERO : Jim Gibbs, Cathy Wanat, Jim Bumgardner

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