



QUONONCHONTAUG CENTRAL BEACH FIRE DISTRICT

August 31, 2019

Dear Greetings!

As promised an update.

I have been in contact with RIDOH the past few days and this morning the Public Works Committee met with Northeast Water to discuss our present water situation and a potential path forward.

According to Northeast Water extraordinary rainfall during May, June and July (over 2x the normal rainfall) have raised the water table and caused several recent TC+ water samples from our wells in July and more recently August 13th which triggered a Level 2 Assessment on August 15th.

This is not unique to us, many public water systems (PWS) in RI have experienced excessive TC+ samples leading to a record number of Level 2 Assessments being issued throughout RI by the RIDOH.

Additionally well #2 had returned EC+ on August 15th which prompted a Boil Water Advisory to be issued August 16th in conjunction with our Level 2 assessment.

The Boil Water Advisory cannot be lifted until "due diligence" has been completed on our wells by Northeast Water, a large part of which was performed as part of the required Level 2 assessment. However, we await a more intensive exploration of our wells with camera inspection of the well, screens, and casing to confirm there are no structural defects. We expect this will be done this week and, after the wells are entered by the camera, then probable heavy duty "shock" chlorination of the wells and distribution system. We still will require 3 days of acceptable water samples; i.e. TC and EC status before RIDOH will consider lifting the Boil Water Advisory.

This Boil Water Advisory is issued by RIDOH for the safety of the community, and while a nuisance, using boiled or bottled water will protect consumers from exposure to E Coli. Again I wish to point out that E Coli was only isolated from Well#2 which has been ISOLATED from the water system for well over a week and NEVER in our distribution system. Nonetheless we can only advise that you follow the Boil Water Advisory.

The Level 2 assessment from RIDOH was completed on August 20th and essentially stated the following:

- 1. Our wells, due to a recent DEM reclassification, now lie within 150 feet of newly redefined wetland. As a result we are now designated as Ground water well Under the Direct Influence of surface water or GUDI. Testing over the next year will be required to reverse the classification otherwise we will be mandated to install a RIDOH approved 4 log (99.99%) disinfection system.**
- 2. Should we experience further TC+ samples, we test each well and the distribution system monthly, which should then trigger a second Level 2 assessment within the next 12 months we will be mandated to install a RIDOH 4 log disinfection system.**
- 3. Well field areas needs to be marked to keep unauthorized personnel and dogs away from the immediate area around the wellheads. Trash was found scattered among the well fields and water system personnel reported finding dog waste in the past.**
- 4. Concern of animal burrows or dens near the wells given the dense vegetation and irregular terrain.**

Public Works committee has taken steps to address #3 and #4 as follows; we will place No Trespassing signage in the wellhead area in compliance with the Level 2 assessment; the well fields were searched as best as possible with no obvious animal dens noted and vegetation surrounding the fields will be thinned as part of a regular wellhead maintenance protocol.

Further we have instructed Northeast Water to immediately design an upgrade to our present UV disinfection system (primarily it was designed to be effective during low demand periods by treating recirculated water from the storage tank) so that it will disinfect ALL water coming from the wells prior to entering the storage tank. While a UV system can be 4 log (99.99%) effective, it is presently NOT a RIDOH approved 4 log disinfection system. It should be noted that in other states, i.e. Massachusetts, UV disinfection systems are DOH approved as 4 log disinfection for Public Water Systems. Implementation of a 4 log UV disinfection system has been presented to the committee as something which can be done fairly quickly and cost effectively with minimal modifications to our present water system and pumphouse. The PW committee feels it will protect the distribution system from any future TC+ or EC+ well samples potentially protecting the community from further boil water advisories.

We are unsure if our GUDI designation (#1 above) can be reversed, although Northeast Water is confident it will, and we are even more uncertain that we will not experience further TC+ samples within the next 12 months (#2 above). This would trigger a regulatory second Level 2 assessment as noted in #2 above. Therefore we feel there is a reasonable chance that within the the next year we may be up against a mandate from RIDOH that we

install a RIDOH approved 4 log (99.99%) disinfection system. Most of the presently RIDOH approved 4 log systems are chemical (chlorine) or membrane based which represent technical challenges given our water quality (iron) and 15 fold daily water use. In the off season we may be down to 3000 gallons of daily water use while during July we can max out at over 50,000 gallons of daily water use. Therefore, we have asked Northeast Water, and others, to immediately research and design several system options to piggyback with the 4 log UV system mentioned above should a RIDOH approved disinfection 4 log system ultimately be mandated.

You can see that much is going on within the PW Committee to address the challenges of our present, and future, situation within the regulatory requirements, limitations of our water supply and physical plant. It is the PW Committee's highest priority, and certainly also that of the community, that safe drinking water be available as quickly as possible and for the long term.

I am confident that we can achieve this.

I will continue to keep the community updated.

**Vincent Reppucci
PW Chairperson**

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