



AGENDA ITEM #: 21-133  
COUNCIL MTG OF: November 2, 2021  
FROM: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director  
OFFERED BY: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director  
PREPARED BY: M. Fowler, Public Works Director; T. Carrier, Deputy Public Works Director  
SUBJECT: Arsenic Treatment System: Autumn Woods Community Water System

STAFF REPORT  
*Public Hearing 11/6/21*

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#### PURPOSE

The purpose of this document is to present to the Council, for their consideration, a proposal to construct an arsenic treatment system at the Town's Autumn Woods Community Water System.

#### TOWN ADMINISTRATOR COMMENTS:

The Town has an obligation to provide clean water to its residents and, due to the State's downward adjustment of acceptable arsenic levels, must provide a solution to this problem. It is recommended that the cost of this work be funded within the existing Water Division budget.

#### BACKGROUND

Derry owns and operates a community water system in the Autumn Woods (AW) neighborhood of Derry (off English Range Rd.) which consists of 29 single family homes. There are two bedrock wells which provide water to these homes. The AW CWS has historically remained in compliance with the EPA's maximum contaminant limit (MCL) for arsenic of 10 parts per billion (10 ppb). Arsenic at AW has ranged between 5 and 7 ppb between 2014 and 2020.

Effective July 1, 2021, New Hampshire implemented a new stricter limit of 5 ppb. The arsenic levels at AW for the last 12 months average 6 ppb. As a result, NH DES has issued a Notice of Violation to the Town for exceeding the water quality standards and is requiring public notification to the residents.

#### DISCUSSION

Neither altering the operation of the AW wells nor adding cartridge filters has lowered the arsenic to meet the new MCL. Two alternatives were assessed to address the MCL violation: extending public water to AW or installing treatment. The most cost-effective solution is to install a new arsenic absorption system within the existing pumphouse. Concurrent with this work, we are recommending the installation of a new level transducer, well pump and variable frequency drive on each of the two wells and to clean, repair and epoxy coat the existing atmospheric and pneumatic storage tanks.

#### FISCAL IMPACT

The engineers' estimate for the recommended work is \$280,000. Current rates for the NH Drinking Water State Revolving Loan Fund are 0.785% for a 10-year note. (1.256% for 20 years). Based on the 10-year note, the annual payment of \$30K for 10 years would have a \$0.06 impact on current water rates or 1.5% on the average residential bill (\$5/yr.).

RECOMMENDED ACTION BY COUNCIL

It is recommended that the Council authorize the recommended work to meet the new NH DES drinking water quality standard for arsenic.

SUGGESTED MOTION:

Please see Resolution #2021-074 for action after the November 16, 2021 public hearing (2/3 vote of the majority of the Council required).