



Town of Johnstown

TOWN COUNCIL AGENDA COMMUNICATION WORK SESSION

AGENDA DATE: April 12, 2021

SUBJECT: Taste & Odor

ATTACHEMENTS: 1. Microbac Laboratory Services White Paper
2. Spreadsheet

PRESENTED BY: Marco Carani, PW Director

In an effort to address taste and odor complaints received from our residents, the Town contracted with Burns and McDonald in December 2020, to begin a study to evaluate our best alternatives to improve the aesthetics of the Town's drinking water. While the taste and odor issues do not impact water quality as measured by the State, it does impact the enjoyability of the water and both the Council and Staff are committed to making improvements that change the residents perception of the water we provide. To support this initiative, funds were appropriated by Council in FY 2021, based on a best guess by Staff, regarding how to deliver improved water taste on either an interim or permanent bases. This interim basis would be dependent on the long-term vision for the expansion of the water treatment plant, also scheduled to begin design in FY 2021.

Burns and McDonald are near completion of their analysis and will be presenting their findings with recommendations on how to improve the water quality before the warm water season approaches. The warmer months are significant contributors which impact of taste and odor, as it enables for the productions of geosmin and MIB (see attached laboratory white paper).

Burns and McDonald will also provide information on long-term alternatives in an effort for Staff to understand what Council would desire/consider in terms of ultimate solutions to this issue. Burns and McDonald are one of the finalist for our water treatment expansion. As Council provides Staff with the direction desired on water facility and quality outcomes, we have asked Burns and McDonald to provide some high level information related to alternatives of the plant while contemplating the characteristics of water desired.

The objectives from this worksession item are to:

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1. Understand from Council if the recommendation of a GAC system and its ancillary components are supported by Council or if other alternative methods are preferred.
2. Understand from Council, what the long-term outcomes for water taste and odor issues are for our community based on preliminary ideas from Staff and Burns and McDonald.
3. Direct Staff with the final objective for the short and or long term

Options that will be discussed:

Granular Activated Carbon (GAC) 80% removal. Temp or Long Term

A GAC system is especially suited for the removal of dissolved organic compounds responsible for poor taste and odor in drinking water.

Ultrasonic Buoy. At Town Lake.

This buoy activates the optimal ultrasonic treatment frequencies according to the water conditions and type of algae present. This reduces existing algae and prevent the growth of new algae.

OZONE with Bio Active Filtration (BAF) 95% removal. Long Term

A BAF system is a cost-effective treatment process that provides the foundation for controlling taste & odor, it removes Disinfection byproducts and other contaminants which increase water stability and quality. This system has a higher up-front cost but a lower annual cost compared to GAC. Removal of taste & odor using BAF would be in the 95% range.

Goal is to hit the 7 ng/l. 7 is limit for detection

GAC with Buoy. 9ng/l

Ozone BAF. 4 to 6 ng/l

or lower which this system give us the best option at 4-6 NG/L or 4 to 6000 PPT