

MEMORANDUM

To: Ed Evans, Town Manager

From: Douglas Chapman, PE

Date: February 5, 2018

Subject: Blowing Rock – Water Treatment Plant Isolation Valve

The Blowing Rock water treatment plant was completed in the late 1970s, and has served as the sole water supply since that time. Treated water is stored at the facility in a 0.5 million gallon clearwell, from where it is pumped, via the high service pumps at the plant, to the water storage tank on Greenhill. When the plant was built, a new 12-inch water line was constructed south along US 321 to Possum Hollow Road, then along Possum Hollow Road toward the tank. In the construction plans for the water plant project, a valve is shown on the main water line just after it leaves the building. Sometime after the plant was built, an expanded parking area and retaining wall were installed. During that work it appears that this main valve was lost. Consequently, when the water plant needs to be isolated from the water system, a valve has to be closed on the 12-inch water line at Possum Hollow Road. In concert with Town staff, we are recommending that a new valve be inserted in the main water line.

The importance of this main valve has been heightened recently, with completion of the US 321 widening and the Foley Center at Chestnut Ridge. Prior to the US 321 widening, all customers (outside of the water plant) north of Possum Hollow were served by the original 8-inch water line along US 321. With the road construction, those few customers were switched to the 12-inch, so the 8-inch could be abandoned. Further, and even more critical, is service to the Foley Center. If water is turned off at Possum Hollow road to isolate the plant, the Foley Center can only receive water from Boone, through the emergency water interconnect. Installing a valve between the water distribution system and the water plant will alleviate this issue, allowing the Foley Center and other nearby customers to be served from the Greenhill water tank, which generally maintains 3 – 5 days water supply.



To address these concerns, McGill recommends installation of a new valve within the main water plant line. This valve can be inserted into the water line, without taking the water line out of service, thus avoiding down time. The installation will require a difficult excavation (deep) within the existing parking area, and the related restoration of surfaces. The estimated costs for this installation are outlined as follows:

1. Excavation and safety protection	\$15,000
2. Inserted valve	\$16,000
3. Backfill and restoration	<u>\$ 9,000</u>
Total Estimated Cost	\$40,000

This construction can be accomplished with Town oversight, by securing one contractor for excavation and backfill, one contractor for inserting the valve, and one contractor to pave the parking lot back. No permits should be needed for this work.

If you have any questions please contact me at (828) 328-2024.

E n g i n e e r i n g • P l a n n i n g • F i n a n c e

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