

October 10, 2024

The City of Douglas depends on three primary water sources to meet the community's needs: Little Boxelder Spring, Sheep Mountain Well #1, and the Douglas Water Treatment Plant. While each source is vital, the Water Treatment Plant (WTP) has faced operational challenges since a 2008 retrofit reduced its capacity. This has limited its ability to provide water year-round. The current city council is taking proactive leadership, making tough decisions to address past shortcomings while also preparing the city's water infrastructure for future growth.

### **Little Boxelder Spring (LBES)**

The Little Boxelder Spring is Douglas's primary water source, providing approximately 75% of the city's water. It can produce up to 1,200 gallons per minute (GPM) and is the most cost-efficient source, with water costing just \$0.20 per 1,000 gallons. In service since 1923, the spring has undergone several upgrades, including the replacement of its 17-mile transmission line in 2020, to ensure it continues delivering reliable, safe water.

### **Sheep Mountain Well #1 (SMW #1)**

Sheep Mountain Well #1 supplies about 20% of the city's water, producing up to 1,000 GPM. Water from this source costs \$0.88 per 1,000 gallons. The well was originally drilled in 1990 to assist the Ridgewater subdivision with water quality issues but has since become an integral part of Douglas's overall water supply. The well typically goes offline in early October for maintenance, but unusually dry conditions have kept it running this year. The city has been using 2.2 million gallons of water per day (MGD), while Little Boxelder Spring is producing only 1.4 MGD, creating a shortfall of 700,000 gallons per day. To manage this, the city has asked residents to limit outdoor irrigation until repairs on the Sheep Mountain tank are complete. The tank is expected to return to service by mid-October.

### **Douglas Water Treatment Plant (WTP)**

The Douglas Water Treatment Plant contributes around 5% of the city's water, producing up to 500 GPM, but it is the most expensive source, with water costing \$7.54 per 1,000 gallons. Built in 1978, the plant underwent a major retrofit in 2008. Unfortunately, this upgrade came with significant drawbacks. The plant's design capacity was reduced from 2.5 million gallons per day (MGD) to 2.0 MGD, a 20% reduction in output.

This retrofit also led to operational challenges. The plant now functions only during the warmer months, from May to September, when water temperatures allow for effective chlorine disinfection. Even then, poor water quality from the North Platte River further limits its capacity to just 0.7 MGD on favorable days. This reduction in output and seasonal limitations have made the WTP less reliable and much more expensive to operate than the city's other water sources. The current city council is actively addressing these issues, recognizing the need to fix past decisions while preparing the city for future growth.

### **City's Water Production Capacity**

As of now, repairs to the Sheep Mountain tank are on track, and the well and tank are expected to be fully operational by mid-October. In the meantime, residents are asked to continue conserving water to help maintain a balance between supply and demand.

Douglas can produce approximately 3.4 million gallons per day when the treatment plant is fully operational and about 2.8 million gallons per day without it. Managing this capacity effectively is crucial, especially with the limitations posed by the treatment plant's reduced output and the challenges of seasonal water demands.

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Recognizing these challenges, the city council is not only addressing immediate concerns—such as the ongoing repairs to the Sheep Mountain tank—but is also looking ahead to ensure the city’s water infrastructure can support future growth. This leadership is helping Douglas move forward, readying the community for new development while ensuring reliable water service for residents today.

Professionally,

Kim Pexton  
Mayor, City of Douglas

