



State of Utah

SPENCER J. COX  
*Governor*

DEIDRE HENDERSON  
*Lieutenant Governor*

Department of  
Environmental Quality

Kimberly D. Shelley  
*Interim Executive Director*

DIVISION OF DRINKING WATER  
Ying-Ying Macauley, P.E.  
*Interim Director*

January 26, 2021

George B Leatham  
Saratoga Springs City  
1307 North Commerce Drive  
Saratoga Springs, Utah 84045

**Subject: System-Specific Minimum Sizing Standards;**  
Saratoga Springs City, System #25138, File #11604

Dear Mr. Leatham:

Based on the water use data submitted to the Division of Water Rights (DWRI) and an engineering study prepared by Steven Jones, P.E., the following system-specific minimum sizing standards have been set for Saratoga Springs City:

**Peak Day Source Demand (gal/day/ERC) – 375 gal/day/ERC**  
**Average Annual Demand (gal/yr/ERC) – 97,755 gal/yr/ERC (0.3 ACFT/yr/ERC)**  
**Equalization Storage (gal/ERC) – 267 gal/ERC**  
**Fire Storage (gal) – 2,180,000 gal**

These standards are effective as of the date of this letter. The Division plans to evaluate these standards every 3 years, or upon request.

### Water System Background

Saratoga Springs City has a population of approximately 33,000 with an estimated 10,221 equivalent residential connections (ERCs).

## **Minimum Sizing Standard Background**

Per Utah Code 19-4-114, the information needed for the Division of Drinking Water (the Division) to set system-specific minimum sizing standards may be based on water use data submitted to the Division of Water Rights (DWRI), or alternatively, a community water system can submit an engineering study to the Division if the water system's water use data is not representative of future use or the water system does not yet have actual water use data.

Actual water use data was available through DWRI and an engineering study was submitted to the Division by Steven Jones, P.E. with Hansen, Allen, & Luce. Which added extra equalization storage to account for variability, water loss, water quality flushing, drought contingency, secondary water backup, and fire suppression. The sizing standards were originally set March 31, 2020. The engineering study was submitted to the Division December 22, 2020. After internal review, the Division is setting system-specific minimum sizing standard for Saratoga Springs City.

## **Water Use Data Definitions**

*Peak Day Source Demand* is the total flow into a public water system to meet the demand of the water system on the day of highest water consumption in a calendar year.

*Average Annual Demand* is the total quantity of drinking water flowing into a public water system within a calendar year.

*Total Equivalent Residential Connections (ERCs)* term represents the number of residential service connections and the number of equivalent residential connections for non-residential connections (commercial, industrial, institutional connections).

*Minimum Equalization Storage* requirement is a volume that is equivalent to the amount of water needed to meet the average day culinary demand for public water systems. Equalized storage per ERC is calculated by dividing the Average Annual Demand per ERC data by the number of operational days in a year.

*Fire Storage* was set based on information from the Master Plan dated July 19, 2018, where the Local Fire Authority provided fire storage requirements.

## **Storage Capacity**

Based on your systems storage facilities and the storage minimum sizing requirement established in this letter, your system is with the minimum storage capacity requirements.

George B. Leatham  
Page 3 of 3  
January 26, 2021

## Source Capacity

The Division is missing source safe yield documentation for Well #2 (WS002) and Well #3 (WS003). A safe yield is based on three years of source daily flow data for a spring [R309-515-7(5)(b)] and an aquifer drawdown test for a well [R309-515-6(10)(c)]. Work with the Division to get these source safe yields established so that an accurate source capacity analysis can be done.

If you have any questions regarding this letter, please contact Dani Zebelean, of this office, at (385) 278-5110, me, at (385) 515-1464.

Sincerely,



Michael Newberry, P.E.  
Engineering Manager

DZ/mrn/mdb

cc: Jason Garrett, Utah County Health Department, jasong@utahcounty.gov  
Steve Jones, P.E. Hanson Allen & Luce, sjones@hansenallenluce.com  
George B. Leatham, Saratoga Springs City, gleatham@saratogaspringscity.com  
Dani Zebelean, Division of Drinking Water, dzebelean@utah.gov  
Michael Newberry, P.E., Division of Drinking Water, mnewberry@utah.gov  
Coy Porter, Office of the State Fire Marshal, coyporter@utah.gov

DDW-2021-001470