

A Case for Pine Meadows Mutual Water Company's Need to Annex with Mountain Regional Water Special Service District

The Pine Meadow Mutual Water Company's (PMMWC) Board of Directors has elected to evaluate the option of annexing the company's water facilities with those of the adjacent Mountain Regional Water Special Service District (Mountain Regional) to ensure a long-term sustainable supply of drinking water on the ranch. This paper provides the regulatory and growing demand framework for this decision.

Company Requirement:

According to State regulations "Water systems (i.e., PMMWC) must demonstrate that it has adequate technical (including adequate sources), managerial, and financial capacity before it may provide water for human consumption." This requirement is presumed ongoing once established.

As the ranch is currently developed, the PMMWC will provide service to +/- 800 connections at build-out. Currently, there are 432 meters installed on the system.

Drinking Water Source:

Section R309-510-7 of the State regulations state that:

- a) The company must demonstrate that it has at least two water sources that combined produce sufficient water to meet at least the "peak day demand" as defined in R309-510-7 (Table 510-1) or an approved reduced quantity as approved by the State of Utah Drinking Water Division. The State standard for indoor residential use is 800 gallon/day per connection.
- b) "The water system's source capacity shall also be able to provide one year's supply of water, which is the average yearly demand." The average yearly demand is defined in Table 510-1 as 146,000 gallon/year per connection.

While the Company owns the water shares sufficient to meet the state regulation, it has not been successful at finding and developing the actual water sources. Historically, PMMWC has explored and spent significant resources to find and develop new water sources without success. Currently, PMMWC's primary sources of water are three deep wells. Originally, the wells produced 50–75 gallons per minute (gpm). Now, due to severe drought, like many diminishing water sources in Utah, the combined production rate has decreased to the current rate of +/-30-gpm or 43,200 gallons/day (gpd).

Regulatory requirements relative to the quantity of water that PMMWC's sources should produce are:

By basic rule: (UAC R309-510-7)

This rule states that source capacity should meet water demands under two conditions.

Peak Daily Demand - Residential Indoor Use:

PMMWC requirement ¹ 640,000-gpd (444 gpm)

Average Yearly Demand – Residential Indoor Use:

PMMWC requirement 116,800,000 gal/yr.

By the Rules basic requirement, PMMWC is deficient by the following amount:

PMMWC Deficit (Peak Daily Demand)²:

640,000-gpd - 43,200-gpd = 596,800-gpd

PMMWC Deficit (Average Yearly Demand):

116,800,000-gal/yr.-15,768,000-gal/yr. = 101,032,000-gal/yr.

As an alternate as approved by the State, the Rule allows for a reduced source requirement based on usage and unique conditions. Due to past use experience, and imposed water restrictions, PMMWC received approval for a reduced source requirement of 291-gpd or 106,215 gal./yr. resulting in the following requirements:

Alternate Quantity UDDW Approval:

Peak Daily Demand - Residential Indoor Use:

Peak Daily Demand (582-gpd/conn)

PMMWC requirement 465,600 gpd (323 gpm)

Average Yearly Demand – Residential Indoor Use:

PMMWC requirement 84,972,000 gal/yr.

PMMWC Deficit (Peak Daily Demand):

465,600-gpd - 43,200-gpd = 422,400-gpd

PMMWC Annual Deficit:

84,972,000-g/yr. - 15,768,000-gal/yr.= 69,204,000-gal/yr.

How has Pine Meadows/Forest Meadows subsisted up until now on such a small quantity of water?

The ranch was developed without a water system and the original dwellings were built as “bring your own water” cabins. This created a minimalist attitude for the use of water that has carried over until the present time. After a few cabins were built, dedicated individuals created the first limited community water system. As more cabins were built the PMMWC was formed and the state-of-the-art storage and distribution system the ranch enjoys today was installed. By enforcing the “no outside watering” policy and continuing to promote the minimalist use attitude, the ranch uses well below the regulatory requirement. Last year the ranch used about 6.7

¹ Based on 800 connections at build-out.

² Deficit calculations are based on current production rates

Formatted: Indent: First line: 0.5"

million gallons. This demonstrates phenomenal water conservation, however, during peak use periods demand outpaces what the company's sources can produce and draws the storage tanks to critical water levels. To address the shortage, in recent years the company has entered into an informal agreement to purchase wholesale water from Mountain Regional Water District to supplement PMMWC's system in exchange for the head capacity in the PMMWC tank to serve some of Mountain Regional's upper elevation users. This agreement has served the ranch well until now.

As larger cabins are built, more are used full time, water production diminishes, and the minimalist attitude wanes; the company is becoming substantially more reliant on supplemental water. Mountain Regional has indicated that their intent is that if excess water is available, continued sale to PMMWC is viable, however, service to their users must take priority. Because water resources in the State are over-allocated, any new development in the Park City area will need to connect to the Mountain Regional system, therefore there is no guarantee of excess water being available to PMMWC in the future.

To secure a sustainable water supply Mountain Regional and PMMWC have conceptually agreed to explore annexation of the PMMWC facilities into the Mountain Regional network. If found to be favorable this will ensure the long-term sustainability of culinary and fire suppression water on the ranch. Both from a health and well-being standpoint, and to maintain home values, a reliable supply of fresh, clean drinking water is imperative. For this reason, the PMMWC Board is exploring the option of annexation with Mountain Regional.