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July 14, 2021

Crestview Mutual Water Company
328 Valley Vista Drive
Camarillo, CA 93010

Attn.: Mr. Robert Eranio, Consulting General Manager

Re: Water Rate Analysis - Development of New Water Well vs. Increased Purchase of Water from Calleguas

Dear Mr. Eranio,

Meridian Consultants is pleased to submit this report to Crestview Mutual Water Company (Crestview).

This report provides a review of the costs and impacts on rates to shareholders to meet water demand requirements for future water production. The basis of this review is the comparison of the development of a new water well to replace an offline well and to supplement an existing well that may be at risk of going dry, versus the purchase of water from Calleguas Municipal Water District (Calleguas) to meet the future water demands.

Executive Summary

Future water costs and resultant rates for shareholders will be dependent on whether Crestview proceeds with meeting future demands starting in 2022 by either 1) constructing a replacement well (Well #7) for Well #5 (stand-by since 2007) to deliver groundwater along with continuing the pumping of groundwater from existing Well #6 and supplementing that with the purchase of water from Calleguas (**Scenario #1**) OR 2) proceeding with the continuation of only pumping groundwater from Well #6 at its available capacity and purchasing additional water from Calleguas to meet demands (**Scenario #2**).

As confirmed in this report, if Crestview does not construct Well #7, its shareholders would experience an additional cost of \$82.3 million over the next 50-years for water. This would result in an additional average annual cost of \$2,655 per shareholder (or average \$221.29/month) for the 50-year life cycle period.

The impacts to future costs of Crestview shareholders for **Scenario #1** (2022 Well #6 & Well #7 with GMA Allocation and Calleguas Purchased Water) and **Scenario #2** (2022 Well #6 and Calleguas Purchased Water) were determined for 2022 and then for a 50-year lifecycle.

The estimated monthly costs to shareholders for 2022 are:

Scenario #1	\$49.93 per month
Scenario #2	\$146.98 per month

For the 50-year life cycle period (2022 to 2071), the total estimated blended cost for each scenario is:

- **Scenario #1** (Well #6 & Well #7 blended with Calleguas Water) is \$60,935,325 or an average annual cost of \$1,966 (\$163.80/month) per shareholder, and
- **Scenario #2** (Well #6 and the purchase Calleguas Water) is \$143,754,325 or an average annual cost of \$4,621 (or \$385.09/month) per shareholder.

Background

Crestview operates groundwater wells to provide for ongoing needs of its current 620 shareholders; this currently includes Well #4 and Well #6. Crestview has an annual allocation of 814.632 acre-feet (AF) of ground-water by the Fox Canyon Groundwater Management Agency (FCGMA). To reduce expenses, Crestview operates local wells from late March until the annual groundwater allocation by the FCGMA is pumped, which is usually in late November. During other periods, Crestview purchases water from Calleguas Municipal Water District.

The optimum operation of a water distribution system is to use gravity to deliver water from a source located higher in elevation than that of recipients. The Crestview water system consists of reservoirs to perform that function, assisted by pumping stations to supplement gravity where needed. The Crestview service area has a wide difference in elevations and, therefore, various Zones have been designated in light of those differences and the entire water system has been developed and operated as such.

Well #6 has a peak production capacity of 913.296 acre-feet per year (AFY) or (76.1 AF/month); however, the sustainable yield for Well #6 is estimated to be 433 AFY. While Well #6 has a peak production capacity, Crestview does not operate it at such levels due to poor basin recovery and the development of a pumping depression under the Camarillo Hills, which would worsen if the facility were used at full capacity.

Well #4, drilled in 1985, which has historically produced approximately 60 percent of Crestview's groundwater water supply, has decreased to approximately 20 percent due to decreasing groundwater levels; it is believed that Well #4 may go "dry" in the near future,

unless groundwater levels recover. Between September 2018 and November 2018, water levels in Well #4 declined 2 feet per month. When Well #4 was shutoff last winter, there were only 12 feet of water before the well pump would break suction. From the end of November to February 2019, the water table recovered or increased only 2.5 feet, to 95 feet below sea level.

Anticipating the need for a new safe, secure, dependable, affordable and lifesaving water source, Crestview began planning for a new water well (Well #7) in 2015 to supplement Well #4. This was done to ensure shareholders could count on an adequate water supply to meet demands, as well as provide critical fire support, prevention and suppression.

Crestview supplements its groundwater with purchased water from Calleguas. The annual allocation of Tier 1 water from Calleguas is 401 AF.

In 2021, Crestview anticipates pumping groundwater 794.53 AF of water from Wells #4 and #6, and supplementing this with purchased water of 166.63 AF from Calleguas. In 2021, the Calleguas purchases are not expected to exceed the 401 AF Tier 1 allocation.

When Crestview pumps water from Well #6 as the sole source, or purchases water from Calleguas, 50 percent of the of the supply is boosted (pumped) to the upper Zone (Zone 3).

Water Rate Analysis

Methodology

This report compares the potential future costs related to the development and operation of Well #7 (as a supplement for Well #4's lost production and replacement to Well #5) to offset the cost of water purchased from Calleguas in conjunction with the pumping of Well #6 versus the continued pumping of Well #6 with the purchase of water from Calleguas.

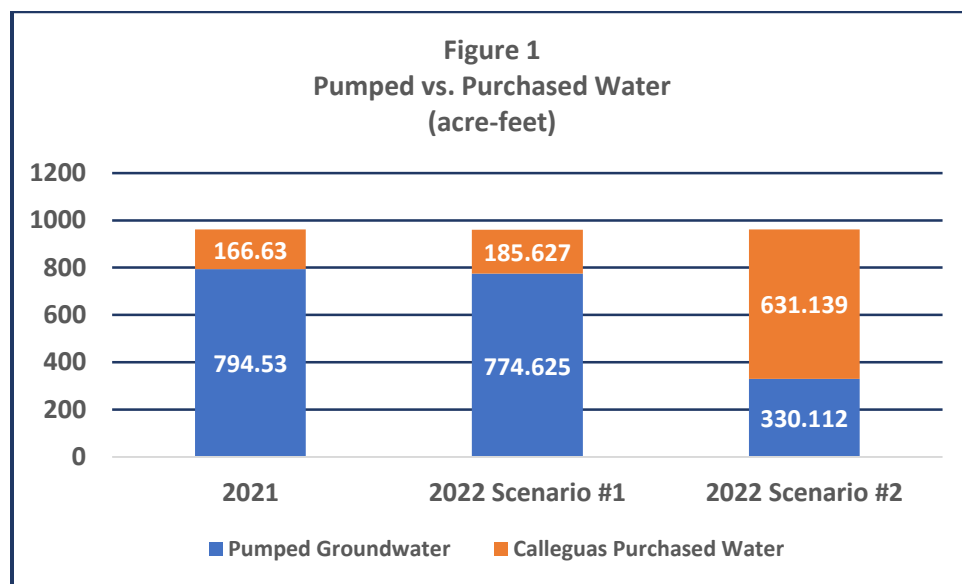
The development of Well #7 would include the continued operation of Well #6 and supplemented, as needed, with water purchased from Calleguas. As Crestview does not "blend" water, groundwater and purchase from Calleguas does not occur during the same time. As such, this analysis considers the use of pumped water first over the purchase of water from Calleguas.

The scenarios considered in this review consist of the following:

- **Scenario #1** (2022 - Well #6 and Well #7 within the FCGMA allocation and Calleguas purchased water): the total water supply was 961.252 AF with 185.627 AF (19.3%) purchased from Calleguas and 775.625 AF (80.7%) pumped from groundwater.
- **Scenario #2** (2022 - Well #6 and Calleguas purchased water): the total water supply was 961.252 AF with 631.139 AF (6.7%) purchased from Calleguas and 330.112 AF (37.3%) pumped from groundwater.

As noted, each of the scenarios varies as to the amount of groundwater pumped and that purchased from Calleguas. Water supply was determined based on Crestview's actual and projected demands for 2021; this included a total supply of 961.16 AF with 166.63 AF (17.3%) purchased from Calleguas and 794.53 AF (82.7%) pumped from groundwater.

The comparison of the 2021 demands, and those of Scenario #1 and Scenario #2 for 2022 are shown in **Figure 1: Pumped vs. Purchased Water** shown below.



The future costs for each scenario has been estimated using the Crestview budget and forecast for 2021, and assumes that each scenario would begin in January 2022. As such, a monthly baseline has been completed for 2022. Life cycle costs for each scenario have been projected over a 50-year period (2022 to 2071).

The cost to permit, construct and install Well #7 (estimated now to be \$3 million) has been included and amortized over a 50 year period (\$60,000 per year); this has been applied only to the Scenario #1 that includes Well #7.

Based on these, the potential monthly costs for each for the 620 existing shareholders has been estimated. The analysis of costs considered 2022 as the base year and the 50-year (2022 to 2071) life cycle costs for each scenario. Costs for operation and maintenance (O&M), booster pumping and purchase of water were escalated for inflation by 3.5 percent annually; this is

consistent with the escalation used by Calleguas for Tier1 and Tier 2 rates,¹ and 3.5 percent for the cost of electricity, fuel and other costs related to O&M.^{2,3}

For evaluation purposes, the future demand (2022 and beyond) was assumed to be constant with 2021 demand and projections. In addition, future demand was maintained constant with the allocations for Crestview established by FCGMA for groundwater and Calleguas for Tier 1 purchased water. The analysis for both scenarios assumed that Crestview would pump groundwater before purchasing water. Because the District does not blend water, if the demand exceeded the monthly production the combination of Well #6 and Well #7 (Scenario 1) or the peak production for Well #6 (Scenario #2) for groundwater pumping, the additional required monthly supply was then assumed to be purchased from Calleguas.

The cost of water purchased from Calleguas was based on the current 2021 rates for Tier 1 (\$1,507/AF) and Tier 2 (\$1,549/AF) adjusted annually for inflation. The cost of O&M was based on Crestview's 2021 budget for pumping of \$197/AF of groundwater pumped also adjusted annually for inflation.

Finally, the cost to boost water (either Calleguas purchased water or pumped groundwater from well #6) was based on Crestview's 2021 cost to booster 50 percent of the supply to the upper Zone (Zone 3) of \$58/AF with a monthly fixed cost of \$240 both adjusted annually for inflation.

Assumption and calculation for each scenario are provided in **Appendix A: Crestview Water Rate Review Analysis Spreadsheets**.

Water Rate Cost Impacts / Findings

The impacts to future costs to Crestview shareholders for **Scenario #1** (2022 Well #6 & Well #7 with GMA Allocation and Calleguas Purchased Water) and **Scenario #2** (2022 Well #6 and Calleguas Purchased Water) were determined for 2022 and then for a 50-year lifecycle.

The estimated monthly costs to shareholders for 2022 are:

Scenario #1	\$49.93 per month
Scenario #2	\$146.98 per month

1 Calleguas Municipal Water District, 2020 Adopted Water Rate, Tier 1 change: 3.4%, Tier 2 change 3.3%.

2 U.S. Bureau of Labor Statistics, 12-month Percentage Change, Consumer Price Index, Selected categories, March 2021 (not seasonally adjusted). Overall energy services are forecast to increase 4.1% with electricity increasing 2.5% and natural gas 9.8%. 12-month percentage change, Consumer Price Index, selected categories (bls.gov) accessed April 13, 2021.

3 Trading Economics. The annual inflation rate for energy in the US is the highest reading since August of 2018 with main upward pressure coming from energy commodities (13.2% vs 3.7% in February), gasoline (22.5% vs 1.6%), electricity (2.5% vs 2.3%) and utility gas service (9.8% vs 6.7%). United States Inflation Rate | 1914-2021 Data | 2022-2023 Forecast | Calendar (tradingeconomics.com)

The monthly total cost for each scenario is shown in **Figure 2: Scenario #1 (Calleguas Purchased Water vs. Wells # 6 & #7 w/Calleguas Purchased Water) and Scenario #2 (2022 Cost Comparison Well #6).**

For the 50-year life cycle, the monthly costs increase for each scenario is shown in **Table 1: Monthly Costs for Scenario #1 and Scenario #2 – 50 Year Lifecycle 2022-2071**, and **Figure 3: Average Monthly Cost Comparison of Scenario #1 (Wells #6 & #7 with Calleguas Purchased Water) vs. Scenario #2 (Well #6 & Calleguas Purchased Water).**

For the 50-year life cycle period (2022 to 2071), the total estimated blended cost for each scenario is:

- **Scenario #1** (Well #6 & Well #7 with Calleguas Water) is \$60,935,325 or an average annual cost of \$1,966 (\$163.80/month) per shareholder, and
- **Scenario #2** (Well #6 and purchase Calleguas Water) is \$143,754,325 or an average annual cost of \$4,621 (or \$385.09/month) per shareholder.

This results in an additional cost of \$82.3 million for water by not constructing an additional well (Well #7) to pump groundwater, and would result in an additional average annual cost of \$2,655 per shareholder for the 50-year life cycle period.

Table 1
Monthly Costs for Scenario #1 and Scenario #2
50 Year Lifecycle 2022 - 2071

Year	Scenario #1	Scenario #2
	2022 Well #6 & Well #7 with GMA Allocation and Calleguas Purchased Water	2022 Well #6 and Calleguas Purchased Water
2022	\$49.93	\$146.98
2026	\$57.30	\$168.67
2031	\$68.05	\$200.32
2036	\$80.82	\$237.92
2041	\$95.99	\$282.58
2046	\$114.01	\$336.61
2051	\$135.41	\$398.60
2056	\$160.82	\$473.42
2061	\$191.00	\$562.27
2066	\$147.85	\$667.80
2071	\$175.61	\$793.61

Limitations

The peer review is based on cost information provided by Crestview Mutual Water Company and that obtained from available online data sources. This report has been prepared according to the methodology noted herein by Meridian Consultants. Meridian Consultants makes no warranties expressed or implied as a result of this analysis.

Meridian Consultants is pleased to have had the opportunity to assist Crestview Mutual Water Company on this matter.

Respectfully submitted,

Meridian Consultants, LLC



Joe Gibson
Partner

Attachment: **Appendix A - Crestview Water Rate Review Analysis Spreadsheets**

Figure 2 -2022 Cost Comparison Scenario #1 (Wells # 6 & #7 w/Calleguas Purchased Water) vs. Scenario #2 (Well #6 & Calleguas Purchased Water)

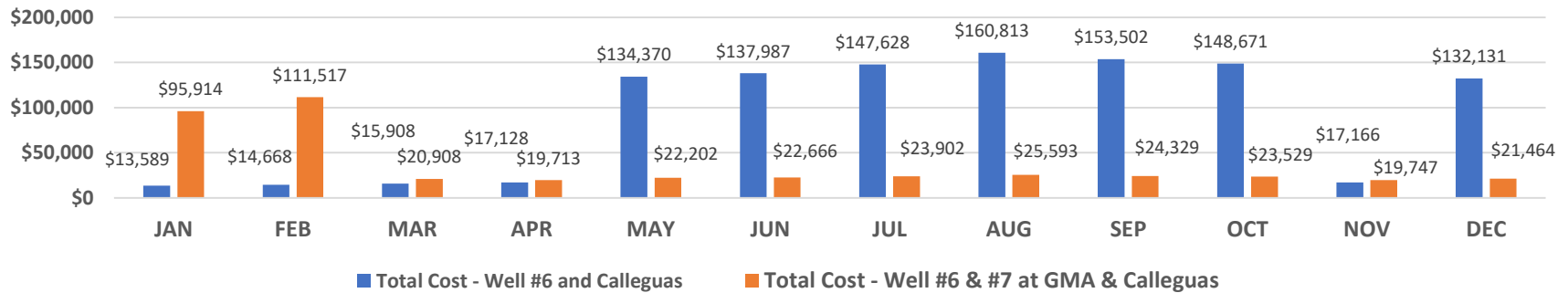


Figure 3 - Average Monthly Cost Comparison of Scenario #1 (Wells #6 & #7 with Calleguas Purchased Water) vs, Scenario #2 (Well #6 & Calleguas Purchased Water)

