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10	SUBURBAN WATER SYSTEMS
11	DOCKET NO. A.23-01-001
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16	REBUTTAL TESTIMONY OF
17	CONSTANCE E. HEPPENSTALL
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19	CONCERNING
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21	FORECASTED USE PER CUSTOMER WATER DEMAND
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23	(CORRECTED)
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34	BEFORE THE
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36	PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
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45	ORIGINAL
46	SEPTEMBER 5, 2023
47	CORRECTED
48	SEPTEMBER 29. 2023
49	

1		BEFORE THE
2 3 4		PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
5 6		RE: SUBURBAN WATER SYSTEMS
7 8		DOCKET NO. A.23-01-001
9 10 11 12		REBUTTAL TESTIMONY OF CONSTANCE E. HEPPENSTALL
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14	Q1.	Please state your name and address.
15	A1.	My name is Constance E. Heppenstall. My business address is 1010 Adams
16		Avenue, Audubon, PA.
17	Q2.	Are you the same Constance E. Heppenstall that sponsored direct testimony
18		in this proceeding?
19	A2.	Yes, I am.
20	Q4.	What is the purpose of your rebuttal testimony?
21	A4.	The purpose of my testimony is to discuss the Public Advocates Office (Cal
22		Advocates) Report on Sales & Operational Revenues, Rate Design and BAMA (the
23		"Report") as it relates to the Company's per customer sales forecasts.
24	Q5.	Please summarize the Report's position regarding the projected sales per
25		customer.
26	A5.	The Report recommends that Suburban use the 5-year average forecast of sales
27		per customer for all customer classes.
28	Q6.	How did the Report calculate the forecast for the residential and business
29		classes?
30	A6.	The Report states that they used a 5-year average, including 2022 sales, to
31		determine the per customer sales. However, nowhere in the Report does Cal

1 Advocates show their calculations, including what was used for 2022 sales. In 2 Footnote 24, the Report cites the source of the 2022 sales as included in Attachment 1-2. However, Attachment 1-2 is only one page of monthly customer 3 sales, not the total sales for the residential and business class. Cal Advocates 4 5 provided no other information such as supporting workpapers. When we followed up with Cal AdvocatesCounsel Shanna Foley, requesting supporting workpapers, 6 on August 16, 2023 Ms. Foley responded that "The other witnesses [including Chris 7 Ronco, PAO's demand forecasting witness] did not develop workpapers." Therefore 8 9 I have no way of evaluating Cal Advocates' water demand forecast workproduct.

10 Q7. Does the Report address more recent customer usage in 2022 and beyond?

A7. No. The Report fails to mention that in 2022, the year after Suburban's forecast
period ending in 2021, the average annual residential customer usage was well
below Suburban's New Committee Method ("NCM") Forecast while the business
customer usage was slightly higher. The average for San Jose Hills was 153.12
and for Whittier/La Mirada was 155.28, well below Suburban's forecast for 2022 of
167.2 and 165.8.

- 18 Moreover, the following graphs<sup>1</sup>
- 19 showing the residential trend for the
- 20 year ending July 2023 reflect even
- 21 further continuing declines. The
- 22 ending of Stage 2 conservation
- surcharges on April 30, 2023
- amounted to little more than a speed



<sup>&</sup>lt;sup>1</sup> <u>The Twelve Month Moving Average Use Per Customer San Jose Hills graph originally incorrectly used</u> <u>actual data from the Whittier/La Mirada service area. It has been corrected with actual data from the</u> <u>San Jose Hills service area.</u>

1		bump in breaking the declining trend. These graphs suggest that not only is Cal			
2		Advocates' demand forecast significantly overstated, but to a lesser degree so is			
3		my forecast. Most recent SJH usage is 143.97 CCF, WLM usage is 144.69 CCF.			
4					
5		My forecast is clearly conservative.	Twelve Month Moving Average Use Per Customer		
6		In sum, as Cal Advcoates'	Whittier/La Mirada		
7		recommended forecast levels are	180		
8		unsupported and based on recent			
9		trends is grossly overstated. I	165		
10		recommend that the Commission	155 Stage 1 Conservation Surcharge		
11		reject PAO's recommended sales	130 Enced y a pay base continues to 145 Plummet		
12		forecasts.	A A A A A A A A A A A A A A A A A A A		
13			Actual SWS Proposed 165.8 CCF — PAO Proposed 171.4 CCF		
14					
15					
16					
17	Please explain how Suburban calculated forecasted sales.				
18	A8.	In its filing, Suburban used the 5-year a	average for industrial and public authority		
19		customers' sales but used the New Committee Method ("NCM") forecast, which			
20		included a multi-variable regression forecast to determine the sales per customer			
21		for the residential and business classes. This NCM forecast was described in my			
22		direct testimony and fully shown in Attachment A, Demand Forecast Study			
23		("Demand Study") attached to my direct testimony.			
24	Q9.	What is Cal Advocates' argument that the NCM Methodology is			
25		inappropriate?			

A9. Cal Advcoates cites several reasons to reject the NCM Forecast. First, they claim that the results of the Demand Study reflect declining usage, which they claim is not supported by the data. This is not true. Figures 1 through 4 on pages 1-3 to 1-4 of the Demand Study show per customer sales graphically for the years 2010 through 2021 (and usage has further declined in 2022). These figures clearly show an overall decline in usage per customer over the last 10 years.

Second, the Report shows a comparison of the results of the NCM forecast of 7 total sales as compared to actual historic usage and claims that this proves that the 8 9 NCM regression analysis is incorrect. However, Cal Advocates, in their example, 10 has only shown the years 2018 and 2021. In fact, based on Attachment 1 to my 11 rebuttal testimony, that in 2018 the per customer annual usage predicted by the NCM Forecast for the residential class is higher than actual, rather than lower as 12 shown in the Report. It is not clear in the Report how Cal Advocates calculated the 13 annual usage using the NCM Forecast as this was not supported in their 14 15 workpapers. In Attachment 1, I show per customer usage rather than the total usage supplied by Cal Advocates as the number of customers vary each year. It is 16 clear from Attachment 1 that the total forecast over 10 years shows the exact same 17 per customer annual usage as actual, which one would expect using a regression 18 analysis. As expected, in some years the forecasted usage is higher and, in some 19 20 years, it is lower but overall, the NCM Forecast is accurate as compared to historic 21 data. See Attachment 1.

Third, Cal Advocates references the low P-values related to average monthly temperatures as proof that the NCM method is not sound. However, this is a false argument as I use twelve temperature variables, one for each month. When measured up against the entire model, one would not expect high predictability between any singular month against the entire model, which contains all months.

1 For example, one would not expect the temperature in January to affect water 2 usage in July. In the Demand Study, the temperature variable is only included in the forecasted calculation when it is the present month. For example, if one was 3 forecasting usage in July, the coefficient of temperature variables for all other 4 5 months are set to null. Currently, the NCM multivariable model (which includes temperature variables for each month) has an R Square of 0.89 for WLM residential 6 customers. This can be interpreted as the variables included in the NCM Forecast 7 explain 89% of variation in historic customer usage. While no individual temperature 8 9 variable has a P-value less than 0.05 (see explanation above for why this is), the 10 inclusion of these variables in the model, collectively, are critical. If we ran the 11 analysis without the temperature variables for WLM residential customers, the R Square value would drop to 0.61. 12

Finally, Cal Advocates points to Decision 20-08-047 for the factors that the Company must consider in its forecasts:

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(a) Impact of revenue collection and rate design on sales and revenue
 collection;

18 (b) Impact of planned conservation programs;

19 (c) Changes in customer counts;

20 (d) Previous and upcoming changes to building codes requiring low flow
21 fixtures and other water-saving measures, as well as any other relevant
22 code changes;

(e) Local and statewide trends in consumption, demographics, climate
 population density, and historic trends by ratemaking area; and

25 (f) Past Sales Trends.

26

The Demand Study takes into account all these items (except changes in customer counts, which are forecasted by Suburban based on the 5-year average) as the forecasting is based on how these issues, such as the effects of past conservation programs, previous changes to building codes, local and historic trends in consumption and past sales trends, are reflected in the historic data that built the analysis. However, the forecast cannot include the impact of future events, which cannot be forecasted with certainty at this time as they are unknown.

In addition to citing the above factors, the Report states "(a)dditionally, the Commission concluded forecasts must include drought year sales data in forecasts" and referenced page 18 of Decision 20-08-047. I ran a revised regression analysis that included the drought data and the resulting per customer usage was lower than the original regression analysis that excluded the drought data, (which is not unexpected) again proving that my methodology of projected per customer usage in the filing is conservative.

	WLM RESIDENTIAL	SJH RESIDENTIAL	WLM BUSINESS	SJH BUSINESS
Annu	al Predictive Per Customer Usage	e- with Drought Months	Included in Regressio	n Analysis
20	22 162.82	163.23	900.79	934.96
20	23 159.78	159.48	884.23	924.69
20	24 156.73	155.73	867.67	914.42
Annu	al Predictive Per Customer Usage	e w/o Drought Months Ir	ncluded in Regression	Analysis (a)
20	22 165.80	167.20	914.80	955.00
20	23 162.80	163.10	900.00	947.20
20	24 159.80	159.00	885.10	939.10
Differ	ence			
20	22 (2.98)	(3.97)	(14.01)	(20.04)
20	23 (3.02)	(3.62)	(15.77)	(22.51)
20	24 (3.07)	(3.27)	(17.43)	(24.68)

(a) Source: Demand Forecast, Attachment A to Heppenstall's Direct Testimony.

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## 1 Q10. Please summarize your position.

2	A10.	Cal Advocates failed to document its recommendations. My NCM Forecast, which I
3		fully documented in my direct testimony, accurately projects future use per
4		customer as supported by subsequent declining residential customer usage in
5		2022. I recommend the Commission accept my demand forecast projections for
6		both residential and business classes of customers.
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