

Docket	:	<u>A.26-01-001</u>
Exhibit Number	:	<u>Cal Adv - #</u>
Commissioner	:	<u>Matthew Baker</u>
Administrative Law Judge	:	<u>Amin Nojan</u>
Public Advocates Office	:	
Witness(es)	:	<u>Chris Ronco</u>



PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

**REPORT ON SALES, REVENUES,
RATE DESIGN AND DECOUPLING**

Suburban Water Company's
General Rate Case Application 26-01-001
Test Year 2027

San Francisco, California
April 15, 2026

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MEMORANDUM

The Public Advocates Office at the California Public Utilities Commission (“Cal Advocates”) examined application material, data request responses, and other information presented by Suburban Water Systems (“Suburban”) in Application (“A.”) 26-01-001 to provide the California Public Utilities Commission (“Commission” or “CPUC”) with recommendations in the interests of ratepayers for safe and reliable service at the lowest cost. This Report is prepared by Mr. Chris Ronco. Mr. Suliman Ibrahim is Cal Advocates’ project lead for this proceeding. Mr. Hani Moussa is the oversight supervisor. Mr. Corwin Hockema is the legal counsel.

Although every effort was made to comprehensively review, analyze, and provide the Commission with recommendations on each ratemaking and policy aspect presented in the Application, the absence of any particular issue from Cal Advocates’ testimony does not imply agreement or disagreement with the underlying request, methodology, or policy position related to that issue.

Chapter #	Description	Witness
1	Sales and Revenues	Chris Ronco
2	Rate Design	Chris Ronco
3	Decoupling	Chris Ronco

1 **CHAPTER 1 SALES & REVENUES**

2 **I. INTRODUCTION**

3 An accurate water sales forecast is vital for just and reasonable rates. Over- or
4 under-forecasting sales results in an inaccurate total sales figure for Suburban to meet its
5 revenue requirement, leading to inaccurate customer rates. In developing its
6 recommendations, Cal Advocates reviewed Suburban’s Results of Operations, testimony,
7 historical data, and data requests responses.

8 **II. SUMMARY OF RECOMMENDATIONS**

9 The Commission should adopt the following recommendations for Suburban’s
10 sales and revenues Test Year (“TY”) forecast:

- 11 • A 5-year average connection growth forecast for each customer class
12 by meter size.
- 13 • A weighted 5-year average of sales per customer from 2020-2025
14 for all customer classes.
- 15 • \$1,069,042 in revenues from Non-Tariffed Products & Services
16 (“NTP&S”) attributed to ratepayers.

17 These recommendations produce more accurate forecasts of sales and revenues for
18 Suburban’s Whittier La Mirada (“WLM”) and San Jose Hills (“SJH”) service areas.

19 **III. ANALYSIS**

20 Suburban proposes a total sales TY forecast of 8,284,010 Centum Cubic Feet
21 (“CCF”) for SJH and 6,987,104 CCF for WLM. This total consists of sales to multiple
22 customer classes across the two service areas. To forecast total TY sales, Suburban
23 forecasts the number of customers and per-customer sales. Total sales are the result of the
24 number of connections times the sales per connection.

25 Suburban forecasts the TY connection count using the 5-year average growth rate
26 from 2020 to 2024 by meter size and customer class. Both service areas have minimal

1 connection growth, aside from the recent Sativa acquisition in WLM,¹ and the 5-year
2 average accurately captures this trend. This forecast is also in accordance with the Rate
3 Case Plan (“RCP”),² therefore the Commission should adopt Suburban’s connection
4 count forecast.

5 For all non-residential and non-business customer classes, Suburban proposes a 5-
6 year average of 2020-2024 sales per connection to forecast TY sales.³ For residential and
7 business connections, Suburban proposes to use an econometric model regressing 15
8 years of data.⁴ Both methods are flawed and predict unrealistically low sales per
9 connection. These methods lead to lower sales totals for Suburban to recover its revenue
10 requirement and create unnecessarily high rates for Suburban ratepayers in the TY.

11 A. Sales

12 Suburban’s econometric model forecasts residential and business sales by
13 regressing sales per connection on variables including temperature, rainfall, and the price
14 of water, using 15 years of historical data. The model controls for demand shock events
15 that affect water consumption, such as drought restrictions and the COVID lockdown
16 mandate.⁵ This forecast method results in the TY residential and business customer sales
17 below in **Table 1-1**.

18

¹ Suburban correctly removes the Sativa connections from the average growth calculation.

² D.07-05-062, page A-23.

³ Suburban’s Results of Operation Model, Tab: “MODEL”, Table 4-1.

⁴ Direct Testimony of Thomas W. Chesnutt, Attachment: “Suburban Water Systems 2026 GRC: Econometric Demand Analysis and Sales Forecast”.

⁵ Suburban Water Systems 2026 GRC: Econometric Demand Analysis and Sales Forecast, at 14.

1 **Table 1-1: Suburban’s Total Residential and Business Sales Forecast (CCFs)**

	2023	2024	2027	% Change
WLM				
Residential	4,413,953	4,888,299	4,735,539	-3.13%
Business	1,752,971	1,842,015	1,745,172	-5.26%
SJH				
Residential	5,651,689	6,069,371	5,640,448	-7.07%
Business	1,988,899	2,040,061	2,000,856	-1.92%

2
 3 As shown in **Table 1-1**, despite all four customer classes increasing sales from
 4 2023 to 2024,⁶ Suburban’s model projects decreases from 2024 to the TY.

5 This model does not consider three factors that impact the sales per connection:
 6 1) expected service area population growth, 2) the recently acquired Sativa connections
 7 skew consumption per connection data, and 3) limits to improvements in customer water
 8 use efficiency. Excluding these factors results in an over-simplified regression model,
 9 which may lead to an inaccurate sales per customer forecast because of an incorrect
 10 statistical relationship for sales per customer.⁷ A weighted 5-year average of sales per
 11 customer avoids this faulty methodology.

12 **1. Suburban Does not Consider Service Area Population**
 13 **Growth**

14 Suburban’s service connections have remained relatively stagnant.⁸ However, a
 15 key distinction in sales forecasting is the difference between the number of service area
 16 connections and the service area population. The number of connections may remain
 17 relatively stable despite population changes. Although the two often correlate,⁹ they are

⁶ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 4-6A and 4-6B.

⁷ California Learning Resource Network, <https://www.clrn.org/what-is-underfitting-in-machine-learning/>, accessed on March 9, 2026.

⁸ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 4-2 and 4-3.

⁹ Sustainable Cities and Society, Forecasting municipal water demands: Evaluating the impacts of

1 not the same. **Figure 1-1** below shows a table from Suburban’s 2020 Urban Water
2 Management Plan (“UWMP”).

3 **Figure 1-1: Suburban’s Projected Population Growth¹⁰**

Table 2.3: Population Breakdown per Service Area – Current and Projected

Service Areas		2020	2025	2030	2035	2040	2045
San Jose Hills	San Jose Hills	168,843	170,523	172,221	173,935	175,666	177,414
	Glendora	5,249	5,301	5,354	5,407	5,461	5,515
	Covina Knolls	1,437	1,451	1,466	1,480	1,495	1,510
	Subtotal	175,529	177,276	179,040	180,822	182,622	184,440
Whittier / La Mirada	Whittier	66,045	66,565	67,089	67,617	68,150	68,686
	La Mirada	56,793	57,240	57,691	58,145	58,603	59,064
	Subtotal	122,838	123,805	124,780	125,763	126,753	127,751
Total		298,367	301,081	303,820	306,585	309,375	312,191

4
5
6 As shown by Suburban’s projections, the population for both service areas is
7 expected to increase. A growing population means the number of customers per
8 connection in both Suburban’s service areas will increase. Suburban’s regression model
9 does not account for persons per connection, despite the utility’s expectation of
10 population growth. Failing to consider the population growth means the regression model
11 does not fully capture the increase in usage that an increase in customers per connection
12 will cause. Without accounting for population growth, in addition to connection growth,
13 the model is too simple to establish a statistical relationship for future sales per
14 connection.

population growth, climate change, and conservation policies on water end-use, [Forecasting municipal water demands: Evaluating the impacts of population growth, climate change, and conservation policies on water end-use - ScienceDirect](#) , accessed March 9, 2026.

¹⁰ Suburban’s 2020 UWMP, at 2-4.

1 **2. Suburban Does not Consider Sativa Customers' Effect on**
2 **Sales**

3 In 2024, Suburban acquired the Sativa water system and integrated the system into
4 its WLM service area.¹¹ The customers served by the Sativa system were initially on a
5 flat rate per month before Suburban transitioned them to the standard WLM customer
6 rates.

7 In 2024, Sativa residential customers in the WLM service area had an average
8 usage of 143.46 CCF annually per connection.¹² All other WLM residential customers in
9 2024 had an average usage of 152.4.¹³ While the reason for the difference in sales per
10 customer is unknown, it is apparent Sativa customers had different usage behaviors than
11 Suburban's existing WLM residential customers. Suburban does not use a variable to
12 determine which customers are Sativa customers and thus does not account for this
13 distinction in consumption for the WLM regression. Like failing to consider population
14 growth, failing to account for differences in Sativa connections and non-Sativa WLM
15 connections may also lead to an oversimplified regression model.

16 **3. Suburban's Regression Model Does not Consider Demand**
17 **Hardening**

18 Suburban's sales per connection regression model forecasts a decrease in sales for
19 both service areas. From 2024 to 2029, the model forecast would result in a 12.15%
20 reduction for SJH residential customers, 6.93% reduction for WLM residential
21 customers, 5.00% reduction for SJH business customers, and 8.18% reduction for WLM
22 business customers.¹⁴

23 This reduction fails to consider that there is a limit to how much customers can
24 reduce their usage. In a known and researched phenomenon called "demand hardening",

¹¹ Attachment 1-1: CPUC Approval of Sativa Acquisition.

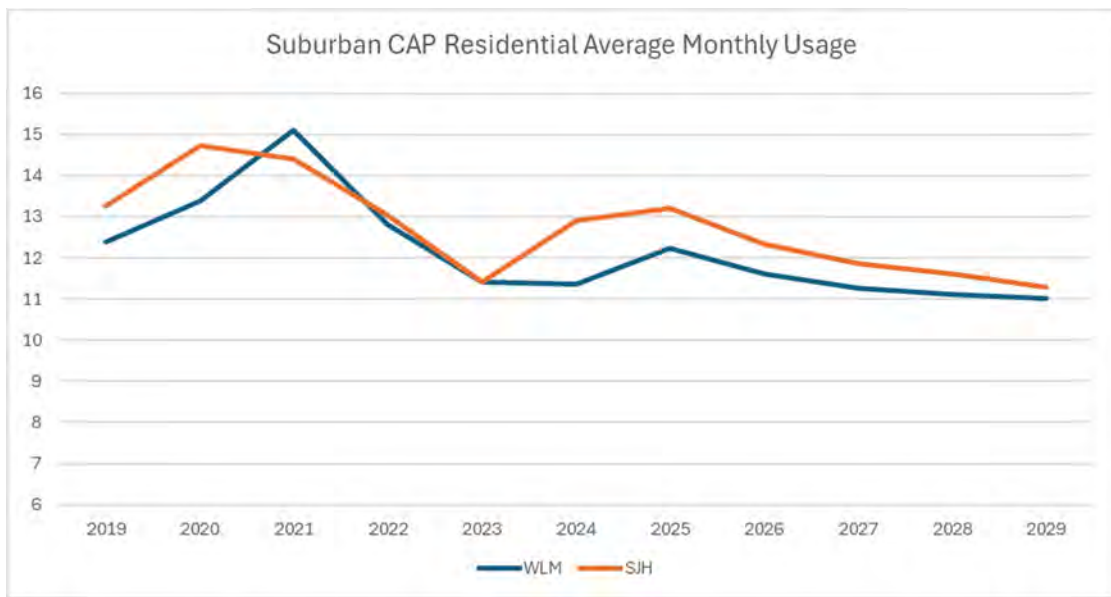
¹² Suburban's Results of Operation Model, Tab: "MODEL", Table 4-4B.

¹³ Suburban's Results of Operation Model, Tab: "MODEL", Table 4-1.

¹⁴ Suburban's Results of Operation Model, Tab: "MODEL", Table 4-1.

1 customers' improvements in water use efficiency eventually begin to level off.¹⁵ The
 2 regression model fails to recognize demand hardening and instead projects consistent and
 3 continuing reductions in sales per customer. This assumption does not consider low
 4 water-use customers, including low-income, who may be unable to reduce their use.
 5 **Figure 1-2** shows the average per month usage for Customer Assistance Program
 6 ("CAP") ratepayers from 2019-2025 and Suburban's forecast for 2026-2029 based on its
 7 proposed sales per connection.^{16 17 18}

8 **Figure 1-2: Suburban's Forecast of CAP Average Monthly Usage (CCF)¹⁹**



9

¹⁵ Measures to Reduce the Economic Impacts of a Drought-Induced Water Shortage in the SF Bay Area, [Microsoft Word - SFPUC Phase II Report 5-3-7 FINAL.doc](#), accessed March 9, 2026.

¹⁶ Attachment 1-2: Suburban's Response to Cal Advocates' DR SIB-002, Question 22.b. Files "SIB-001 22.B Revised Response - WULM+Active vs Inactive" and "SIB-001 22.B Revised Response - WUSJ+Active vs Inactive"

¹⁷ Attachment 1-3: Suburban's Response to Cal Advocates' DR CR8-001, Question 1.b. Files "Usage Data WULM 2019-2023" and Files "Usage Data WUSJ 2019-2023"

¹⁸ Attachment 1-4: Suburban's Response to Cal Advocates' DR CR8-003, Question 1.a. Files "1. CR8-003 - Usage Data WULM 2025" and "CR8-003 - Usage Data WUSJ 2025"

¹⁹ Since Suburban does not project TY sales based on CAP or non CAP customers, a ratio of the average CAP customer monthly usage from 2021-2025 compared to average total residential monthly usage was multiplied by the Suburban's forecasted monthly residential usage for years 2026-2029.

1 **Figure 1-2** shows Suburban anticipates SJH CAP customers to decrease their
2 usage by 4.75%, from their lowest usage, in 2023, to 2029. **Figure 1-2** also shows that
3 Suburban anticipates WLM CAP customers to decrease their usage by 3.04% from their
4 lowest usage in 2024 to 2029.

5 Low-income customers, many of whom are CAP customers, spend a higher
6 portion of their income on utilities than other customers.²⁰ Suburban’s sales forecast does
7 not account for the limits on the reduction in CAP customer usage or for the eventual
8 demand hardening by all Suburban customers.

9 **4. Weighted Five-Year Average Avoids Faulty Statistical**
10 **Relationships**

11 Suburban’s forecast methodology attempts to establish a statistical relationship
12 between sales per customer and various variables.²¹ However, as discussed in *Sections 1*
13 *and 2*, the regression model is over-simplified and does not consider variables that would
14 affect the dependent variable of sales per connection. The regression attempts to establish
15 a statistical relationship for projected sales per connection. Instead of attempting to
16 establish a statistical relationship between variables and sales per connection, the forecast
17 should use established numbers to project sales. The Commission should adopt the
18 following five-year weighted formula, which is based on the most recent usage patterns
19 of Suburban customers:

20 *TY Sales per Customer*

21
$$= \frac{(Sales_{2025} * 5) + (Sales_{2024} * 4) + (Sales_{2023} * 3) + (Sales_{2022} * 2) + (Sales_{2021} * 1)}{(5 + 4 + 3 + 2 + 1)}$$

22 The weighted five-year formula results in the sales per customer for years 2025-
23 2029: 151.49 CCF per connection for SJH residential customers, 917.95 CCF per
24 connection for SJH business customers, 149.62 CCF per connection for WLM residential

²⁰ D.22-08-023, at 48.

²¹ Direct Testimony of Thomas W. Chesnutt, Attachment: “Suburban Water Systems 2026 GRC: Econometric Demand Analysis and Sales Forecast”.

1 customers and 899.98 CCF per connection for WLM business customers. The weighted
2 five-year average prevents a faulty statistical relationship and gives more consideration to
3 the most recent trend in sales. Giving more weight and consideration in the sales forecast
4 to the most recent years is essential for Suburban’s service areas since past years, further
5 removed, such as 2021 and 2022, experienced low monthly precipitation levels for heavy
6 rainfall seasons in California.²² These factors affected monthly sales and the most recent
7 data of these factors should be given more consideration in a forecast.

8 **5. A Weighted 5-Year of Non Residential and Non Business**
9 **Customers Gives More Consideration to More Recent**
10 **Data**

11 In addition to the flaws in Suburban’s forecast model for residential and business
12 customers, a 5-year average of sales per connection for other classes does not account for
13 recent usage trends. The 5-year average treats all years of sales data as equal, regardless
14 of recent use changes. A weighted 5-year average is more appropriate and gives more
15 consideration to the most recent data. Therefore, the Commission should adopt the
16 weighted 5-year average of 2021-2025 sales per connection forecast for all Suburban’s
17 customer classes.

18 **6. The Recommend Sales per Customer Forecast Results in**
19 **Higher Total Sales**

20 The recommended changes to the sales per connection forecasts result in the
21 differences in **Table 1-2**.

22

²² Attachment 1-5: National Oceanic and Atmospheric Administration (“NOAA”) precipitation data for Downtown LA

1 **Table 1-2: Comparison of Sales per Connection TY Forecasts (CCF)**

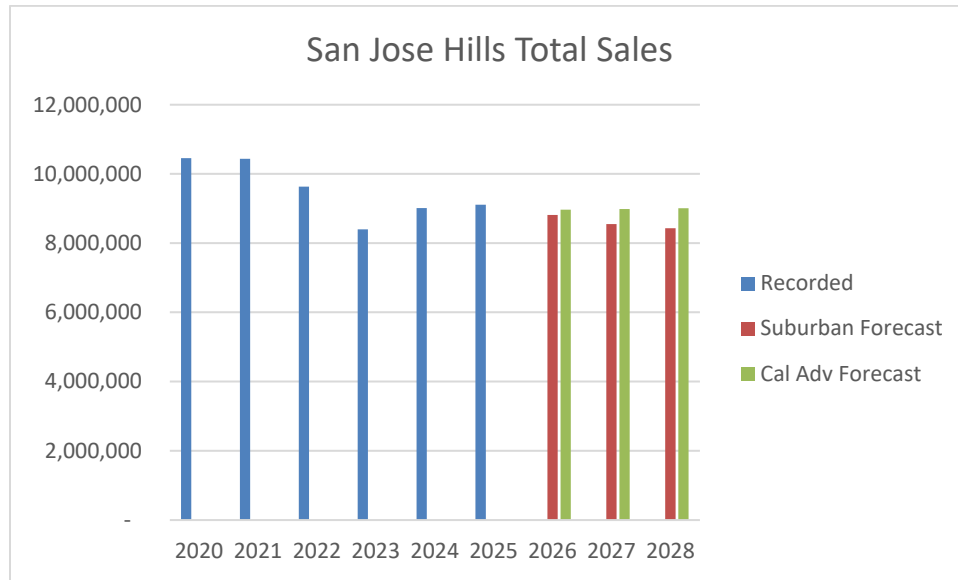
	Suburban	Cal Adv
WLM		
Residential	144.80	149.62
Business	858.00	899.98
Industrial	7186.00	7885.31
Public Authority	2871.00	2908.69
Resale	441.00	343.59
Construction	673.00	468.68
SJH		
Residential	140.80	151.49
Business	858.00	917.95
Industrial	16267.00	15871.51
Public Authority	2217.00	1471.07
Construction	319.00	258.59
Recycled	6327.00	5900.63

2
 3 Differences in sales per connection result in differences in total sales, as shown in
 4 **Figures 1-3 and 1-4.**

5

1

Figure 1-3: Total San Jose Hill Sales (CCF)



2

3

4

Figure 1-4: Total Whittier La Mirada Sales (CCF)



5

6

7 Cal Advocates' per-connection forecast increases total sales by 253,884 CCF for

8 WLM and 453,811 for SJH. Residential sales increase by 157,742 CCF for WLM and

9 428,241 CCF for SJH. This higher, more realistic, and accurate forecast should be

10 adopted because it reduces ratepayer bills, as the resulting revenue requirement for this

1 GRC is recovered over a larger customer sales amount. At present rates, Suburban sales
2 forecasts result in a TY total metered water service revenue of \$100,728,979. Cal
3 Advocates sales forecast results in TY total metered water service revenue of
4 \$103,903,581. The Commission should adopt the revenue at present rates from Cal
5 Advocates' sales instead of Suburban's proposed sales which will lead to rates being
6 higher than necessary.

7 **B. Other Water Revenues**

8 Suburban's other water revenues are alternative revenue sources not directly
9 related to providing water to its ratepayers. These revenues reduce the total revenue
10 requirement that must be recovered from water sales. Therefore, any under-forecasting
11 leads to customer rates being higher than necessary. Suburban's other water revenues fall
12 into two categories: miscellaneous services and Non-Tariffed Products and Services.

13 Suburban offers three different Non-Tariffed Products and Services ("NTPS").²³
14 Suburban leases out cell towers, performs recycled water operations, and offers a service
15 to its ratepayers called the Lifeline Maintenance Program. A utility may offer an NTPS if
16 it meets conditions set forth by the Commission, and it must share the revenue between
17 its ratepayers and shareholders appropriately.²⁴ Suburban forecasts \$215,432 in revenues
18 for ratepayers and \$809,501 for shareholders. Additionally, Suburban forecasts \$192,643
19 in miscellaneous service revenues.²⁵ These services consist of penalties, reconnect fees,
20 return check charges, and backflow charges, and the full amount of revenues from these
21 services is allocated to ratepayers.²⁶

22 The forecasted sum of the NTPS and miscellaneous revenues of \$408,075 is
23 inaccurate because it does not account for program growth. Additionally, Suburban's
24 forecast amount is a result of violating the Commission's rules for NTPS programs.

²³ Suburban's Results of Operation Model, Tab: "NTP&S".

²⁴ D.12-01-042, Appendix A. Rule X.

²⁵ Suburban's Results of Operation Model, Tab: "MODEL", Table 4-7.

²⁶ Attachment 1-6: Suburban's Response to Cal Advocates' DR CR8-002, Question 1.a.

1 **1. Lifeline Maintenance Plan Program Customer Growth**

2 Suburban’s Lifeline Maintenance Plan Program (“Lifeline Program”) is a program
3 in which enrolled customers can have Suburban repair the portion of the water pipe that
4 is typically not the utility’s responsibility to repair.²⁷ Revenue from this program comes
5 from a monthly enrollment fee. Suburban forecasts TY revenue from this NTPS as the
6 recorded revenue from 2024. Suburban’s forecast is unreasonable and understated
7 because it ignores consistent growth in program enrollment.

8 For the past 5 years, customer enrollment in the Lifeline Program enrollment
9 increased consistently.²⁸ However, Suburban uses the most recent enrollment number for
10 its TY forecast, which means Suburban does not forecast growth, despite the historical
11 trend. The Commission should adopt a TY revenue forecast that accounts for the upward
12 enrollment trend. To assume customer enrollment growth in proportion to the total
13 customer growth, the Commission should adopt a 5-year average forecast for customer
14 enrollment growth to forecast TY enrollment of the program which is 274 customers
15 enrolled annually. This forecast results in 12,235 customers enrolled in the program for
16 the TY 2027.

17 The enrollment cost for the Lifeline Program is \$6.97 a month.²⁹ This cost
18 multiplied by 12,325 customers increases the TY Lifeline Program revenues to
19 \$85,277.95 monthly. This is an increase from Suburban’s estimate of \$74,833.87
20 monthly.

21 **2. Suburban’s Lifeline Maintenance Plan Program Violates**
22 **Commission’s Guidance for NTPS**

23 In addition to Suburban’s inaccurate forecast of its revenues from the Lifeline
24 Program, the program itself violates the Commission’s guidance for what constitutes a
25 NTPS and how to operate a NTPS.

²⁷ Attachment 1-7: Lifeline Maintenance Plan terms and conditions.

²⁸ Attachment 1-8: Suburban’s Response to Cal Advocates’ DR CR8-002, Question 3.a, File: “3.a Lifeline Program”.

²⁹ Attachment 1-7: Lifeline Maintenance Plan terms and conditions.

1 The Commission requires utilities to track all costs incurred due to NTPS in
2 separate costs accounts.³⁰ Suburban fails to do so for crew labor costs associated with the
3 Lifeline Program.³¹ Suburban claims the entire labor cost of bringing labor crew out for
4 the Lifeline Program is recovered in its enrollment cost of \$6.97 per month.³² However,
5 this is not possible to know because Suburban does not track the labor time or costs
6 incurred for the Lifeline Program. Without doing so, Suburban cannot know how much
7 labor is associated with this program.³³ Without proper record keeping separating the
8 Lifeline Program labor from normal operations labor, Suburban cannot ensure the labor
9 conducted for the NTPS is not funded through tariffed rates. This is a direct violation of
10 the Commission’s requirement that shareholders absorb the costs of NTPS, not
11 ratepayers.³⁴

12 Due to Suburban violating the Commission’s guidance on NTPS for the Lifeline
13 Program, the Commission should treat the program as a miscellaneous revenue source as
14 opposed to an NTPS. This would attribute the entire amount of revenue generated from
15 the program to ratepayers, instead of just 10%.³⁵ This, in addition to the increase in
16 program enrollment, increases the total NTPS revenue attributed to ratepayers to
17 \$1,069,042.

18 **Table 1-3** compares the reduction in the revenue requirement Suburban’ proposes
19 from its other water revenues and Cal Advocates’ recommended reduction.

³⁰ D.12-01-042, at A-13, Rule X.D. “Cost Allocation. All costs, direct and indirect, including all taxes, incurred due to NTP&S projects shall not be recovered through tariffed rates. These costs shall be tracked in separate accounts and any costs to be allocated between tariffed utility services and NTP&S shall be documented and justified in each utility's rate case. More specifically, all incremental investments, costs, and taxes due to non-tariffed utility products and services shall be absorbed by the utility shareholders, i.e., not recovered through tariffed rates.”

³¹ Attachment 1-6: Suburban’s Response to Cal Advocates’ DR CR8-002, Question 3.b.

³² Attachment 1-6: Suburban’s Response to Cal Advocates’ DR CR8-002, Question 3.b.

³³ Attachment 1-6: Suburban’s Response to Cal Advocates’ DR CR8-002, Question 3.a.

³⁴ D.12-01-042, Rule X.D.

³⁵ D.12-01-042, at A-13.

1 **Table 1-3: Revenue Requirement Reductions from Other Water Revenues**

	Suburban’s Proposed	Cal Adv’s Recommended
Misc. Revenues	\$192,643	\$192,643
NTPS Revenues	\$215,432	\$1,069,042
TOTAL	\$408,075	\$1,261,685

2
3 The recommended change to the NTPS revenue forecast changes the impact of
4 other water revenues on the revenue requirement from a decrease of \$408,075 to a
5 decrease of \$1,261,685, resulting in an additional \$856,610 of ratepayer savings.

6 **IV. CONCLUSION**

7 Suburban’s sales and revenues TY forecasts are inaccurate and would result in
8 unjust and unreasonable rates. The Commission should adopt the recommended changes
9 to Suburban’s sales and revenues forecasts throughout this chapter to ensure that
10 forecasts are as accurate as possible.

11

LIST OF ATTACHMENTS FOR CHAPTER 1

Attachment #	Title
Attachment 1-1	CPUC Approval of Sativa Acquisition
Attachment 1-2	<p>RESPONSE to A2601001 Cal PA DR SIB-001 (Hardcoded Data),</p> <p>Excel Files:</p> <p>SIB-001 22.B Revised Response - WULM+Active vs Inactive</p> <p>SIB-001 22.B Revised Response - WUSJ+Active vs Inactive</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-3	<p>RESPONSE to Cal PA DR CR8-001 (Billing Data),</p> <p>Excel Files:</p> <p>Usage Data WULM 2019</p> <p>Usage Data WULM 2020</p> <p>Usage Data WULM 2021</p> <p>Usage Data WULM 2021</p> <p>Usage Data WULM 2023</p> <p>Usage Data WUSJ 2019</p> <p>Usage Data WUSJ 2020</p> <p>Usage Data WUSJ 2021</p> <p>Usage Data WUSJ 2022</p> <p>Usage Data WUSJ 2023</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-4	<p>RESPONSE to Cal PA DR CR8-003 (2025 Billing Data & Customer Class)</p> <p>Excel files:</p> <p style="padding-left: 40px;">1. CR8-003 - Usage Data WULM 2025</p> <p style="padding-left: 40px;">1. CR8-003 - Usage Data WUSJ 2025</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-5	Downtown LA Weather
Attachment 1-6	RESPONSE to Cal PA DR CR8-002 (Rev. & Rate Design)
Attachment 1-7	Lifeline Maintenance Plan Terms and Conditions

Attachment #	Title
Attachment 1-8	3a. Lifeline Program

1

1 **CHAPTER 2 RATE DESIGN**

2 **I. INTRODUCTION**

3 A properly designed rate structure promotes conservation and equity through rates,
4 while ensuring recovery of the utility’s revenue requirement. In developing its
5 recommendations, Cal Advocates reviewed Suburban’s Results of Operation, testimony,
6 historical data, and data requests responses.

7 **II. SUMMARY OF RECOMMENDATIONS**

8 The Commission should adopt the following recommendations for Suburban’s
9 residential customer rate design and Customer Assistance Program (“CAP”) program:

- 10 • Maintain the 30/70 revenue allocation split between fixed and quantity
- 11 charges
- 12 • Tier 1 breakpoint set at 10 CCF per month for all residential customers
- 13 • Tier 2 breakpoint at 34 CCF per month for all residential customers
- 14 • Tier 2 rates set at the Single Quantity Rate (“SQR”) for all tariff areas
- 15 • Tier 1 rates set at reduced differentials of the SQR for all tariff areas
- 16 • Tier 3 rates set at 150% of the SQR for all tariff areas
- 17 • Maintain the current CAP credit of \$10.74 per month

18 These recommendations create a rate design structure that benefits CAP and low
19 water use customers and provides revenue stability for Suburban.

20 **III. ANALYSIS**

21 Suburban requests three changes to its current rate design 1) increase the amount
22 of its revenue requirement recovered via fixed charges from 30% to 40%; 2) transition
23 from a two-tier quantity rate structure for residential customers to a three-tier structure
24 and 3) transition the CAP credit to 50% of the fixed charge for ¾ inch meters. Suburban’s
25 proposed rate design harms CAP and low water use ratepayers and may affect revenue
26 stability.

1 **A. Revenue Allocation**

2 Suburban requests to transition from recovering 30% of its revenues via fixed
3 charges to 40% of its revenues from fixed charges. Doing so, as Suburban points out in
4 its previous GRC, will harm low-income customers: “Suburban concluded that even a
5 modest proportionate increase in the fixed charge from 30% would produce undue
6 hardship for low income customers who are often low water users, and that undue
7 hardship could not be easily remedied by adjustment to low income programs.”³⁶

8 Unlike some Class A water utilities, Suburban’s CAP customers consistently use
9 less water compared to Suburban’s other residential customers.^{37 38 39} Transitioning to a
10 higher percentage of a fixed charge rate will increase the portion of bills that CAP
11 customers cannot reduce with low usage. Suburban claims this ten percentage point
12 increase in revenue from fixed charges is to mitigate revenue instability caused by the
13 three-tier rate design the Commission required this GRC^{40 41} and high fixed costs.⁴²

14 Revenue is more stable under a properly designed three-tier rate structure and
15 instability caused from a shift from two three tiers is mitigated with Suburban’s current
16 Monterey-Water Revenue Adjustment Mechanism (“M-WRAM”). Additionally, while
17 D.16-12-026 does call for a *gradual* shift to higher amounts of revenue allocated from
18 fixed charges, Suburban fails to consider the context of the decision.

³⁶ A.23-01-001, Results of Operation (Final Application) at. 12-3.

³⁷ Attachment 1-2: Suburban’s Response to Cal Advocates’ DR SIB-002, Question 22.b. Files “SIB-001 22.B Revised Response - WULM+Active vs Inactive” and “SIB-001 22.B Revised Response - WUSJ+Active vs Inactive”

³⁸ Attachment 1-3: Suburban’s Response to Cal Advocates’ DR CR8-001, Question 1.b. Files “Usage Data WULM 2019-2023” and Files “Usage Data WUSJ 2019-2023”

³⁹ Attachment 1-4: Suburban’s Response to Cal Advocates’ DR CR8-003, Question 1.a. Files “1. CR8-003 - Usage Data WULM 2025” and “CR8-003 - Usage Data WUSJ 2025”

⁴⁰ Direct Testimony of David Mitchell at. 15.

⁴¹ D.24-12-030, Ordering Paragraph 36.

⁴² Direct Testimony of David Mitchell at. 4.

1 **1. D.16-12-026 Does not Apply to Suburban**

2 Suburban fails to consider the context of D.16-12-026 with its proposal for a 40%
3 revenue allocation. Considering the full context of the decision and Suburban’s specific
4 circumstances, the Commission’s decision does not apply to Suburban.

5
6 *40/60 Revenue Allocation Prevents Large WRAM Surcharges*

7 In D.16-12-026, the Commission stated:

8 “We find that an additional benefit of increasing rate recovery through
9 fixed charges is the reduced reliance on quantity charges to collect
10 authorized revenues, and consequent decreases in amounts necessarily
11 recovered from WRAMs or surcharges. Since the adoption of the
12 WRAM, WRAM utilities have experienced large WRAM balances,
13 leading to long recoveries in customer bills...”⁴³

14 The Commission found that higher fixed charges helped with large Water
15 Revenue Adjustment Mechanism (“WRAM”) balances, which required utilities to add
16 surcharges on customer rates. However, the extreme burden the pilot program WRAM
17 placed on ratepayers is not a concern for Suburban since it has a Monterey-WRAM (“M-
18 WRAM”),⁴⁴ referred to incorrectly as the WRAM in its preliminary statement.⁴⁵
19 However, Suburban requests to impose this burden onto all ratepayers with the Revenue
20 Stability Mechanism Balancing Account (“RSMBA”).⁴⁶ The Commission will avoid the
21 issue of large surcharge amounts if it rejects Suburban’s request for the RSMBA, which
22 is essentially the full WRAM that the Commission has now repeatedly rejected for other
23 Class A water utilities.⁴⁷

24

⁴³ D.16-12-026, at 55.

⁴⁴ Direct Testimony of Carmelitha Bordelon, at 15.

⁴⁵ Suburban’s Preliminary Statement: F.

⁴⁶ Direct Testimony of Carmelitha Bordelon, at 14-16.

⁴⁷ For the various reasons the Commission should reject the RSMBA, see Chapter 3.

1 Suburban has a Low Fixed Cost Ratio

2 In D.16-12-026, the Commission found that water utilities' fixed costs were
3 generally about 70% of total costs.⁴⁸ Suburban does not follow this general trend, with
4 fixed costs only at 52% of total costs in 2024.⁴⁹ Suburban even forecasts a decrease in the
5 percent of its fixed costs from 2024 to the TY 2027.⁵⁰

6 Additionally, Suburban's 52% of fixed costs is an overestimate of its actual fixed
7 costs. For example, Suburban includes expense accounts such as "Employee's Benefits –
8 Welfare & Education"⁵¹ in its 52% estimate, which seem to contain expenses that are not
9 appropriate for ratepayers to bear.⁵² ⁵³ Suburban also fails to properly conduct a screening
10 process for all accounts for any one-time or non-recurring expenses.⁵⁴ The Commission
11 requires exclusion of such expenses from a utility's revenue requirement.⁵⁵ Without a
12 proper vetting or screening process, all expense account totals reported in the file
13 "DR_CR8-002_Q5a_2024_Fixed_Cost" may contain expenses that Suburban will not
14 incur in the future.⁵⁶ The Commission did not consider Suburban's lack of screening
15 expenses when it considered fixed costs, nor its low percentage of fixed costs in D.16-12-
16 026. Suburban does not provide evidence its fixed costs circumstances are in line with the
17 decision's findings.

⁴⁸ D.16-12-026, at 53.

⁴⁹ Attachment 1-6: Suburban's Response to DR CR8-002, Question 5.a.i.

⁵⁰ Attachment 2-1: Suburban's Response to DR CR8-002, Question 5.a.i, File "DR_CR8-002_Q5a_2024_Fixed_Cost"

⁵¹ Row 1577 of "DR_CR8-002_Q5a_2024_Fixed_Cost".

⁵² "In a normal general rate case, the utility must demonstrate the reasonableness of every dollar in its revenue requirement" – D.96-12-066, at. 5.

⁵³ See Testimony of Daphne Goldberg, Cal Advocates Report on O&M, A&G, Recycled Water.

⁵⁴ Attachment 2-2: Suburban's Partial Response to DR DKG-001, Question 2.

⁵⁵ D.04-06-018, at 12.

⁵⁶ Standard Practice U-26.

1 Service Charges Should Increase Gradually

2 The Commission noted that fixed charge increases should be gradual.⁵⁷ A 10
3 percentage-point increase in fixed revenues is not gradual, as recommended by the
4 Commission.

5 Suburban’s specific circumstances do not match the conditions considered in
6 D.16-12-026, and therefore, the Commission should not adopt its request to increase
7 revenue allocation of fixed charges from 30% to 40%.

8 **2. An Additional Rate Tier Does not Affect Total Residential**
9 **Revenue Stability**

10 Suburban’s claim of revenue instability from a three-tier rate design is
11 unreasonable given its existing M-WRAM, or Conservation Adjustment for Rate Tiers
12 (“CART”). The CART allows recovery of revenue loss from differences in tier sales
13 compared to sales under the Single Quantity Rate (“SQR”).

14 The Commission required San Gabriel Valley Water Company (“San Gabriel”) to
15 transition from two to three tiers in its 2022 GRC.⁵⁸ San Gabriel’s service area borders
16 Suburban’s,⁵⁹ and the service areas experience similar economic and weather factors. San
17 Gabriel also uses CART.⁶⁰ San Gabriel, a Class A water utility with similar climate,
18 socioeconomic, and tier restructuring factors, does not anticipate any changes in total
19 sales but expects changes in the percentages of tier sales.⁶¹ San Gabriel expects that
20 CART will mitigate shifts in revenue allocation between tiers. CART allows a utility to
21 recover any differences in residential tier usage.

22 Similarly, the CART mechanism will protect Suburban against any changes in tier
23 revenues, so Suburban is protected from risk of revenue instability between tier usage
24 from increasing the number of tiers from two to three. Instability within tier usage is

⁵⁷ D.16-12-026, at 56.

⁵⁸ D.24-03-005, Ordering Paragraph 3.

⁵⁹ Suburban’s 2020 UWMP, Figure 1.3 and San Gabriel’s 2020 UWMP, Figure 1.

⁶⁰ San Gabriel’s Preliminary Statement: H1.

⁶¹ Attachment 2-3: A.25-01-001, EXHIBIT SG-4 (Reiker), at 49-50.

1 minimized with the recommended adjustments to Suburban’s proposed rate design in this
2 Chapter. The Commission should disregard Suburban’s claims the transition from two to
3 three tiers poses a significant risk to the utility’s total revenue stability and the CART
4 does not provide protection for tier revenue stability.

5 **3. Tier Residential Revenues are More Stable Under a**
6 **Properly Designed Three-Tier Rate Structure**

7 The SQR is the rate a utility would charge with no conservation block block-rate
8 design structure. Simply put, the SQR equals the revenue to recover from residential
9 quantity sales, divided by the forecasted residential sales (i.e., an average or standard
10 quantity rate). Setting a quantity rate equal to the SQR, typically tier 2 rates,⁶² is standard
11 practice for the other Class A water utilities with existing three or more tier structures.
12 Usage revenues are most stable under a block-rate structure when a quantity rate that
13 captures a large share of sales is set at the SQR because the SQR reflects the average cost
14 of a unit of water.

15 As discussed in *Section C* of this Chapter, Suburban currently cannot employ an
16 SQR because of the limitations with a two-tier design. However, Suburban’s proposed
17 three-tier design which would allow for a middle tier priced at the SQR, inexplicably
18 does not. Cal Advocates’ rate differentials, which employ an SQR at tier 2 rates, provide
19 greater revenue stability for usage revenues than Suburban’s current and proposed rate
20 designs.

21 **B. Tier Breakpoint**

22 Suburban currently has two tiers for all residential customer quantity rates, with
23 the tier break points dependent on the meter size. **Table 2-1** shows the current tier
24 breakpoints for all customers and Suburban’s proposed tier breakpoints at CCFs of usage
25 for a three-tier structure.
26

⁶² D.24-03-042, Appendix 1, at 7.

1

Table 2-1: Suburban’s Current and Proposed Tier Breakpoints

Meter Size	Current	Proposed ⁶³
5/8” x 3/4”	20	12, 22
3/4”	20	12, 22
1”	28	16, 32
1 – 1/2”	70	35, 80
2”	233	115, 238
3”	321	160, 330

2

3 While Suburban claims that maintaining tier breakpoints for different meter sizes
4 promotes equity, preserves conservation signals, and ensures revenue stability,⁶⁴ their
5 proposal actually increases the risk of revenue instability by overcomplicating the tier
6 sales forecasting process and failing to have any tier priced at the actual average cost (i.e.
7 the SQR).

8 The number of customers with different meter sizes is not consistent over the
9 years for Suburban and using meter rates to set tier differentials conflates total monthly
10 consumption with instantaneous flow rates. If the tier quantity usage revenues collected is
11 dependent on forecasted meter size, it creates another opportunity for revenue forecasts to
12 be inaccurate. **Table 2-2** below shows the changes in the recorded number of residential
13 meter sizes between years, going back to 2019.

14

⁶³ Suburban’s Results of Operation Model, Tab: “MODEL”, Table 12-6.

Attachment 1-6: Suburban’s Response to DR CR8-002, Question 5.b.

1 **Table 2-2: Annual changes in recorded number of residential meter sizes**

Meter Size ⁶⁵	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024
WLM⁶⁶					
5/8" x 3/4"	-3	-2	-17	113	7
1"	6	6	97	-26	17
1 – 1/2"	1	-1	1	2	0
2"	0	0	0	0	0
3"	0	0	0	0	0
SJH⁶⁷					
5/8" x 3/4"	31	-24	-40	30	5
1"	58	24	34	200	72
1 – 1/2"	-23	-2	28	-3	2
2"	-1	0	-1	0	0
3"	-1	0	0	1	0

2
3 No other Class A water utility uses tier break points that differ by meter size.
4 There is no reasonable basis to reward or penalize residential customers that may be
5 otherwise similarly situated for different monthly consumption simply because of the size
6 of their connection. Doing so needlessly creates volatility in tier usage revenues due
7 simply to changes in meter sizes between years. To promote revenue stability, the
8 Commission should adopt a three-tier rate design with the same tier break points for all
9 residential customers.

⁶⁵ **Table 2-2** combines 5/8" x 3/4" and 3/4" meter numbers because Suburban uses the same tier breakpoints for them.

⁶⁶ Suburban’s Results of Operation Model, Tab: “MODEL”, Table 4-3A.

⁶⁷ Suburban’s Results of Operation Model, Tab: “MODEL”, Table 4-2A.

1 Additionally, based on 2025 billing data, 12 CCFs is too high for a tier 1
 2 breakpoint and 22 CCFs is too low for a tier 2 breakpoint. **Table 2-3** shows the
 3 percentage of tier sales with tier break points set at 12 and 22 CCFs.

4
 5 **Table 2-3: 2025 Tier Usage with 12 and 22 CCF Breakpoints⁶⁸**

	Total Res. Usage	Tier 1 %	Tier 2 %	Tier 3 %
WLM				
Tariff Area 1	528,725	76.15%	16.02%	2.49%
Tariff Area 2	4,556,789	67.67%	18.83%	13.50%
Tariff Area 3	28,734	33.99%	20.13%	45.88%
SJH				
Tariff Area 1	3,125,127	72.54%	18.09%	9.37%
Tariff Area 2	2,468,603	61.21%	18.66%	19.32%
Tariff Area 3	674,464	58.10%	19.32%	22.37%

6
 7 With a tier 2 breakpoint of 22 CCFs, tier 3 captures a relatively large portion of
 8 residential usage for several of Suburban’s Tariff Areas. Tier 3 rates are meant to capture
 9 high usage to incentivize high user customers to use less water and provide discounted
 10 rates to low usage. Based on the current tier percentages, too much of Suburban’s
 11 residential usage would face tier 3 rates. A wider tier 2 would resolve this issue. By
 12 increasing the tier 2 breakpoint to 34 CCFs, and decreasing the tier 1 breakpoint to 10
 13 CCFs, Suburban’s three-tier rate design would capture essential usage in tier 1,⁶⁹ and
 14 allow a larger portion of usage to be charged at the SQR.

⁶⁸ Attachment 1-4: Suburban’s Response to Cal Advocates’ DR CR8-003, Question 1.a. Files “1. CR8-003 - Usage Data WULM 2025” and “CR8-003 - Usage Data WUSJ 2025”

⁶⁹ The Commission defines essential usage as 6 CCFs monthly. R.18-07-006, Affordability Metrics Implementation.

1 **C. Quantity Rate Differentials**

2 **Table 2-4** below contains the SQR at Suburban’s proposed rates and proposed
 3 sales forecast, and **Table 2-5** contains Suburban’s proposed tier rates, which show
 4 Suburban does not propose to set any rate at its SQR.

5 **Table 2-4: SQR Based on Suburban’s Proposed Sales and Proposed Revenues**

	Sales ⁷⁰	Revenues ⁷¹	SQR ⁷²
WLM			
Tariff Area 1	362,365	\$1,572,676	\$4.34003
Tariff Area 2	4,344,518	\$20,017,422	\$4.60751
Tariff Area 3	28,655	\$145,305	\$5.07084
SJH			
Tariff Area 1	2,814,010	\$13,507,339	\$4.80003
Tariff Area 2	2,211,960	\$11,013,678	\$4.97915
Tariff Area 3	614,478	\$3,182,848	\$5.17976

6
7 **Table 2-5: Suburban’s Proposed Tier Rates**

	Tier 1	Tier 2	Tier 3
WLM			
Tariff Area 1	\$4.26302	\$4.73645	\$5.26272
Tariff Area 2	\$4.42487	\$4.91591	\$5.46200
Tariff Area 3	\$4.70562	\$5.22859	\$5.80991
SJH			
Tariff Area 1	\$4.63278	\$5.14753	\$5.71948
Tariff Area 2	\$4.73684	\$5.26316	\$5.84795
Tariff Area 3	\$4.96906	\$5.52118	\$6.13464

⁷⁰ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 4-6A and 4-6B.

⁷¹ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 12-7B and 12-7F.

⁷² The SQR equals the sales divided by revenues.

1 **1. Suburban’s Current Two-Tier Rate Design is Less**
2 **Revenue Stable**

3 The following mathematical example demonstrates how Suburban’s current two-
4 tier rate design limits its ability to set any tier rate at the SQR and the transition to three-
5 tiers will provide more revenue stability. A rate structure with a rate set at the SQR
6 provides the most revenue stable possible in a rate design, since it’s the rate a utility
7 would have with a flat rate structure.

8 Mathematical Example

9 A water utility has the following two tier rate design:

- 10 • Tier 1 rates for up to 8 CCFs of usage. This captures 60% of the
11 utilities’ residential water usage.
- 12 • Tier 2 rates for any usage above 8 CCFs. This captures 40% of the
13 utility’s residential usage.
- 14 • The utility forecasts \$10,000 in usage revenues
- 15 • The utility forecasts 500 total CCF sales
- 16 • The resulting SQR is \$20⁷³

17 To maintain revenue neutrality,⁷⁴ the following equation must equal \$10,000,
18 because the following equation is the requirement for any tier rate differentials to meet:

19 *(Tier 1 rates * 60% of 500) + (Tier 2 rates * 40% of 500) = \$10,000*

20 Attempting to set either tier rate, in this instance tier 1 rates, at the SQR results in
21 the following:

22 $(\$20 * 300 \text{ CCF}) + (\text{Tier 2 rates} * 200 \text{ CCF}) = \$10,000$

23 $\$6,000 + (\text{Tier 2 rates} * 200) = 10,000$

24 $\text{Tier 2 rates} * 200 = \$4,000$

25 $\text{Tier 2 rates} = \$20$

⁷³ \$10,000 divided by 500 CCF.

⁷⁴ Revenue neutrality is achieved when the utility collects the same amount of revenue with multiple quantity rates as it would under a single quantity rate.

1 If you set a tier rate at the SQR, the equation requires the other tier rate be set
2 equal to the SQR, which is counterinitiative to an increasing block rate design. This is a
3 mathematical restriction of a tier 2 rate design. Introducing a third tier removes that
4 restriction. Consider the following changes to the example.

- 5 • Tier 1 rates set for up to 6 CCFs of usage. This captures 30% of usage.
- 6 • Tier 2 rates set from 6 to 15 CCFs of usage. This captures 60% of usage.
- 7 • Tier 3 rates set for any usage above 15 CCFs. This captures 10% of usage.
- 8 • The utility has the same revenues of \$10,000 and sales of 500 CCF

9
10 The revenue neutrality equation is now:

$$11 \quad (Tier\ 1\ rates * 30\% \text{ of } 500) + (Tier\ 2\ rates * 60\% \text{ of } 500) + (Tier\ 3\ rates * 10\% \text{ of } 500) = \$10,000$$

12
13 Setting tier 2 rates at the SQR results in the following:

$$14 \quad (Tier\ 1\ rates * 150\ CCF) + (\$20 * 300\ CCF) + (Tier\ 3\ rates * 50\ CCF) = \$10,000$$

$$15 \quad (Tier\ 1\ rates * 150\ CCF) + \$6,000 + (Tier\ 3\ rates * 50\ CCF) = \$10,000$$

$$16 \quad (Tier\ 1\ rates * 150\ CCF) + (Tier\ 3\ rates * 50\ CCF) = \$4,000$$

17
18 Tier 1 and tier 3 rates can now be set to reach the remaining \$4,000 usage
19 revenues. Tier 1 rates at a lower rate than the SQR to benefit low use customers and tier 3
20 rates higher than the SQR to promote conservation.

21 The above example demonstrates how with a two-tier rate design, a utility cannot
22 set any rates at the SQR. Being unable to do so, means the rate design is unable to set a
23 large portion of its sales at the rate it would charge without conservation rate design. This
24 major flaw with a two-tier structure means the structure will be less revenue stable than a
25 three-tier rate design, if the three-tier rate design sets a tier rate at the SQR.

26 **2. Three-Tier Rate Design with Tier 2 Rates Set at the SQR** 27 **Benefits CAP and Low Water Use Customers**

28 **Tables 2-4 and 2-5** show that Suburban does not propose any tier rates at the SQR.
29 Doing so increases the risk of revenue instability, because an appropriately sized tier set

1 at the SQR rate could capture a large portion of sales at the same rate that would be
 2 charged with no inclining blocks. Therefore, the Commission should adopt the SQRs for
 3 tier 2 rates based on the recommended sales forecast and recommended revenue
 4 requirement for each of the six tariff areas.

5 To promote conservation, tier 3 rates should be set higher than tier 2 rates. Setting
 6 tier 3 rates at 150% of the SQR will send strong price signals to Suburban’s high usage
 7 customers. This leaves tier 1 rates as the remaining variable set to maintain revenue
 8 neutrality. With tier 3 rates higher than the SQR, tier 1 rates will be lower than the SQR.
 9 This benefits low use customers since a large portion of their usage is in tier 1. **Table 2-6**
 10 summarizes the recommended tariff total sales from *Chapter 1* of this report, Suburban’s
 11 proposed revenue requirement for each tariff area based on the recommended sales
 12 forecast in *Chapter 1* and the recommended 30/70 revenue allocation, and the resulting
 13 SQR.⁷⁵

14 **Table 2-6: SQR Based on Suburban’s Proposed Revenue Requirement,**
 15 **Recommended Residential Sales Forecast and Recommended Revenue Allocation**

	Sales ⁷⁶	Revenues ⁷⁷	SQR ⁷⁸
WLM			
Tariff Area 1	374,436	\$1,881,270	\$5.02428
Tariff Area 2	4,489,235	\$23,746,816	\$5.28972
Tariff Area 3	29,610	\$170,243	\$5.74951
SJH			
Tariff Area 1	3,027,659	\$16,556,076	\$5.46828
Tariff Area 2	2,379,899	\$13,436,985	\$5.64603
Tariff Area 3	661,131	\$3,864,389	\$5.84512

⁷⁵ The SQR rates recommended by Cal Advocates are lower as they reflect a lower recommended revenue requirement.

⁷⁶ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 4-6A and 4-6B.

⁷⁷ Suburban’s Results of Operation Model, Tab: “MODEL”, Tables 12-7B and 12-7F.

⁷⁸ The SQR equals the sales divided by revenues.

SJH				
Tariff Area 1	3,125,127	65.14%	31.04%	3.82%
Tariff Area 2	2,468,603	54.69%	32.85%	11.40%
Tariff Area 3	674,464	51.63%	34.24%	13.10%

1
2 The remaining variables in the revenue neutrality equations for the tariff areas are
3 the tier 1 rates. Using the revenues in **Table 2-4**, the tier 2 and 3 rates in **Table 2-5**, and
4 the percentage of usage in **Table 2-8** results in the tier 1 rates in **Table 2-9** to maintain
5 revenue neutrality.

6
7 **Table 2-9: Rates Based on Suburban’s Proposed Revenue Requirement, the**
8 **Recommended Residential Sales, and the Recommended Revenue Allocation⁸⁰**

	Tier 1	Tier 2	Tier 3
WLM			
Tariff Area 1	\$2.99224	\$5.02428	\$7.53641
Tariff Area 2	\$4.87823	\$5.28972	\$7.93459
Tariff Area 3	\$3.36869	\$5.74951	\$8.62427
SJH			
Tariff Area 1	\$5.04612	\$5.46828	\$8.20241
Tariff Area 2	\$4.79605	\$5.64603	\$8.46905
Tariff Area 3	\$4.99639	\$5.84512	\$8.76768

9
10 The above rates are equivalent to the tier rate differential factors **Table 2-10**,
11 independent of the adopted revenue requirement. The actual rates recommended by Cal
12 Advocates will also be dependent on adjustments to the revenue requirement. The

⁸⁰ The actual rates recommended by Cal Advocates are lower as they reflect a lower recommended revenue requirement.

1 presentation of rates in the above table allows for a direct comparison of only the
 2 proposed rate design on customer rates.

3 **Table 2-10: Recommended Tier Rate Differentials**

	Tier 1	Tier 2	Tier 3
WLM			
Tariff Area 1	59.55572% of SQR	SQR	150% of SQR
Tariff Area 2	92.22086% of SQR	SQR	150% of SQR
Tariff Area 3	58.59098% of SQR	SQR	150% of SQR
SJH			
Tariff Area 1	92.27994% of SQR	SQR	150% of SQR
Tariff Area 2	84.94553% of SQR	SQR	150% of SQR
Tariff Area 3	85.47970% of SQR	SQR	150% of SQR

4
 5 The above recommended tier rates promote equity for low water users while
 6 maintaining revenue stability.

7 **D. Special Request No. 2: CAP Memorandum Account and**
 8 **CAP Credit**

9 In Special Request No. 2, Suburban proposes to change its current CAP credit
 10 from a flat credit of \$10.74 per month to 50% of the 3/4th inch meter charge.⁸¹ The
 11 Commission should reject this request. Given Cal Advocate’s recommendation to retain

⁸¹ Direct Testimony of David Mitchell, at. 8. At the time of Suburban’s application filing, the CAP credit was \$9.04. However, as of 2025 it is \$10.74.

1 the revenue allocation from fixed revenues at 30% and reductions to Suburban’s
2 proposed revenue requirement, CAP ratepayers will benefit more from a credit
3 independent of meter charges. A fixed credit of \$10.74, along with the recommendations
4 to tier breakpoints and tier differentials discussed above, will benefit CAP ratepayers.

5 Non-CAP customers must receive a surcharge to fund the \$10.74 CAP credit.
6 With Suburban’s proposal, the surcharge is \$0.195 per CCF.⁸² Suburban used its
7 recommended sales forecast and the number of CAP customers as of August 2025, plus a
8 1% enrollment growth to estimate the \$0.195 surcharge.⁸³ The updated calculations for
9 the \$10.74 fixed credit use the recommended sales per customers in *Chapter 1*, and the
10 most recent number of CAP customers.⁸⁴ This results in a \$0.153 per CCF surcharge. The
11 Commission should adopt the resulting surcharge of \$0.153 per CCF for Non-CAP
12 customers to fund the \$10.74 CAP surcredit.⁸⁵ This surcredit should increase annually by
13 the same adopted annual revenue requirement percent increases, after the TY.

14 In Special Request 2, Suburban also requests to amortize its CAP Memorandum
15 Account balance with a one-year surcharge of \$0.098 per CCF. This surcharge is based
16 on Suburban’s CAP Memorandum Account Balance of \$1,362,918 and Suburban’s
17 proposed sales TY sales forecast.⁸⁶ The Commission should adopt a surcharge based on
18 Suburban’s Memorandum balance of \$1,362,918 and the recommended sales forecast in
19 *Chapter 1*. The resulting recommended surcharge is \$0.099 per CCF.

⁸² Special Request #2.

⁸³ Suburban Workpaper “2026 GRC Special Request No. 2 - CAP (Updated)”, Tab: CAP 2027-2029.

⁸⁴ Attachment 1-4: Suburban’s Response to Cal Advocates’ DR CR8-003, Question 1.a. Files “1. CR8-003 - Usage Data WULM 2025” and “CR8-003 - Usage Data WUSJ 2025”

⁸⁵ Based on provided billing data, Suburban saw negative average growth of CAP customers. Therefore, no growth was added to the most recent number of CAP customers for the surcharge calculation.

⁸⁶ Suburban Workpaper “2026 GRC Special Request No. 2 - CAP (Updated)”, Tab: CAP (6_2022 – 8_2025)

E. Bill Affordability Comparisons

Table 2-8 compares the average monthly bill for Non-CAP residential customers under current rates, with Suburban’s proposed rates and rate design for SJH and Whittier.⁸⁷ The Cal Advocates recommended column considers Cal Advocate’s recommended rate design and revenue requirement. A monthly average of 14 CCFs was used for WLM and 13 CCFs for SJH.⁸⁸ The proposed and recommended per CCF surcharges for Non-CAP customers are applied to quantity rates. Non CAP customer surcharges are included in Suburban’s current and proposed quantity rates, and Cal Advocate’s recommended total bill calculation.

Table 2-8: Bill Comparison of Average Usage for Non-CAP Customers

	Suburban’s Current⁸⁹	Suburban’s Proposed	Cal Advocates Recommended
WLM			
Fixed Charge ⁹⁰	\$24.83	\$39.07	\$25.55
Quantity Charge			
Tier 1	\$4.196	\$4.62	\$4.120
Tier 2	\$4.617	\$5.111	\$4.467
Tier 3		\$5.657	\$6.701
Total	\$79.80	\$99.62	\$81.44

⁸⁷ Whittier La Mirada Tariff Area 2 and San Jose Hills Tariff Area 1 are used because they contain the most connections for their respected service areas.

⁸⁸ Attachment 1-4: Suburban’s Response to Cal Advocates’ DR CR8-003, Question 1.a. Files “1. CR8-003 - Usage Data WULM 2025” and “CR8-003 - Usage Data WUSJ 2025”

⁸⁹ Rates from AL 406-W-A were used for current rates. However, these rates are inaccurate for the reasons discussed in “Testimony of Suliman Ibrahim, Cal Advocates’ Executive Summary”.

⁹⁰ A fixed charge for ¾” meter is used for both service areas because it’s the most common sized meter.

SJH			
Fixed Charge	\$24.83	\$39.07	\$25.55
Quantity Charge			
Tier 1	\$4.481	\$4.633	\$4.458
Tier 2	\$5.018	\$5.148	\$4.831
Tier 3		\$5.719	\$7.247
Total	\$83.62	\$99.81	\$85.87

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Table 2-9 provides the bill comparisons, but for CAP customers. A monthly average of 12 CCFs was used for WLM and 13 CCFs for SJH.⁹¹

Table 2-9: Bill Comparison of Average Usage for CAP Customers

	Suburban's Current	Suburban's Proposed	Cal Advocates Recommended
WLM			
Fixed Charge ⁹²	\$24.83	\$39.07	\$25.55
CAP Credit	\$10.74	\$19.54	\$10.74
Quantity Charge			
Tier 1	\$3.703	\$4.425	\$4.120
Tier 2	\$4.083	\$4.916	\$4.467
Tier 3		\$5.462	\$6.701
Total	\$54.82	\$68.21	\$60.13

6

⁹¹ Attachment 1-4: Suburban's Response to Cal Advocates' DR CR8-003, Question 1.a. Files "1. CR8-003 - Usage Data WULM 2025" and "CR8-003 - Usage Data WUSJ 2025"

⁹² A fixed charge for ¾" meter is used for both service areas because it is the most common sized meter.

SJH			
Fixed Charge	\$24.83	\$39.07	\$25.55
CAP Credit	\$10.74	\$19.54	\$10.74
Quantity Charge			
Tier 1	\$4.196	\$4.633	\$4.458
Tier 2	\$4.617	\$5.148	\$4.831
Tier 3		\$5.719	\$7.247
Total	\$64.44	\$75.13	\$68.31

1
2 **Tables 2-10 and 2-11** conduct the same bill comparison but for the essential usage
3 of 6 CCFs monthly.

4
5 **Table 2-10: Bill Comparison of 6 CCF for Non-CAP Customers**

	Suburban's Current	Suburban's Proposed	Cal Advocates Recommended
WLM			
Fixed Charge ⁹³	\$24.83	\$39.07	\$25.55
Quantity Charge			
Tier 1	\$4.196	\$4.62	\$4.120
Tier 2	\$4.617	\$5.111	\$4.467
Tier 3		\$5.657	\$6.701
Total	\$50.01	\$66.79	\$51.18

6

⁹³ A fixed charge for ¾" meter is used for both service areas because it is the most common sized meter.

SJH			
Fixed Charge	\$24.83	\$39.07	\$25.55
Quantity Charge			
Tier 1	\$4.481	\$4.633	\$4.458
Tier 2	\$5.018	\$5.148	\$4.831
Tier 3		\$5.719	\$7.247
Total	\$51.72	\$66.87	\$53.22

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Table 2-11: Bill Comparison of 6 CCF for CAP Customers

	Suburban's Current	Suburban's Proposed	Cal Advocates Recommended
WLM			
Fixed Charge ⁹⁴	\$24.83	\$39.07	\$25.55
CAP Credit	\$10.74	\$19.54	\$10.74
Quantity Charge			
Tier 1	\$3.703	\$4.425	\$4.120
Tier 2	\$4.083	\$4.916	\$4.467
Tier 3		\$5.462	\$6.701
Total	\$36.31	\$46.08	\$39.53

3

⁹⁴ A fixed charge for ¾" meter is used for both service areas because it is the most common sized meter.

SJH			
Fixed Charge	\$24.83	\$39.07	\$25.55
	\$10.74	\$19.54	\$10.74
Quantity Charge			
Tier 1	\$4.196	\$4.633	\$4.458
Tier 2	\$4.617	\$5.148	\$4.831
Tier 3		\$5.719	\$7.247
Total	\$39.27	\$47.33	\$41.56

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Suburban’s revenue requirement request in this GRC and its proposed rate design will result in a \$19.82 increase in monthly bills for its average WLM customer and a \$13.39 increase for its CAP WLM customer. The recommended revenue requirement and rate design reduce these increases to \$1.60 and \$5.31, respectively.

Suburban’s revenue requirement request in this GRC and its proposed rate design will result in a \$16.19 increase in monthly bills for its average SJH customer and a \$10.69 increase for its CAP SJH customer. The recommended revenue requirement and rate design reduce these increases to \$2.25 and \$3.87, respectively.

IV. CONCLUSION

Proper rate design promotes the Commission’s goals of conservation, equity, affordability and social justice, while maintaining revenue neutrality. Suburban’s proposed rate design does not meet any of these goals. The Commission should adopt all recommendations in this Chapter to establish a rate structure and CAP credit that meet these goals.

1

LIST OF ATTACHMENTS FOR CHAPTER 2

Attachment #	Title
Attachment 2-1	Excel file: DR_CR8-002_Q5a_2024_Fixed_Cost (Excel Files Available via Email)
Attachment 2-2	PARTIAL RESPONSE #1 to A2601001 Cal PA DR DKG-001 (SIB-001 follow-up)
Attachment 2-3	A.25-01-001, EXHIBIT SG-4 (Reiker)

2

CHAPTER 3 DECOUPLING

I. INTRODUCTION

This Chapter presents Cal Advocates’ analysis and recommendations for Suburban’s request for a Revenue Stabilization Mechanism (“RSM”).⁹⁵ This request consists of three parts: the Revenue Stability Mechanism Balancing Account (“RSMBA”), the Production Expense Balancing Account (“PEBA”), and the Sales Reconciliation Mechanism (“SRM”).

Suburban’s requested RSMBA is the same mechanism as the failed pilot program Water Revenue Adjustment Mechanism (“WRAM”). The Commission rejected the WRAM for all Class A water utilities,⁹⁶ and continues to do so.⁹⁷

II. SUMMARY OF RECOMMENDATIONS

The Commission should adopt the following recommendations for Suburban’s request for the RSM:

- Reject the request for all three components of the RSM
- Maintain Suburban’s current Monterey Water Revenue Adjustment Mechanism (“M-WRAM”)
- Require Suburban to re-name its M-WRAM to the Conservation Adjustment for Rate Tiers (“CART”)

These recommendations protect ratepayers from extreme amounts of surcharges and Suburban from revenue instability between tier revenues.

III. ANALYSIS

Suburban’s requests for WRAM will burden all ratepayers, including low water users and low-income, with extreme surcharge amounts. The accumulated WRAM balances for Class A’s which previously had the mechanisms, are shown below in **Table 3-1**.

⁹⁵ Direct Testimony of Carmelitha Bordelon, at 14-16.

⁹⁶ D.20-08-047 at 106, Ordering Paragraph 3.

⁹⁷ D.24-12-025 at 46-48; D.25-01-036 at 74-76. Proposed Decision of A.24-07-003.

1 **Table 3-1: Lifetime WRAM Balances for Class A Water Utilities⁹⁸**

2

Class A	WRAM Balance
3 Cal Water	\$377,200,000
4 Cal Am	\$300,000,000
5 Golden State	\$238,600,000
6 Liberty – Apple Valley	\$10,600,000
7 Liberty - Park	\$23,900,000
8 TOTAL	\$950,300,000

9

10 Suburban requests to impose similar balances on its ratepayers due to fears of
11 revenue instability from transitioning to a three-tier rate design.⁹⁹ Revenue instability is
12 diminished with making the appropriate adjustments to rate design discussed in *Chapter*
13 *2* and Suburban’s current M-WRAM mechanism allows for the recovery of differences in
14 revenues resulting from rate design restructuring. The full WRAM would shift additional
15 risks of forecasting total sales from Suburban, onto ratepayers.

16 **A. WRAM History**

17 The Commission adopted WRAM as a pilot program, originally intended to
18 address concerns that water utilities have a financial disincentive to promote water
19 conservation. WRAM allowed utilities to recover the difference between adopted (i.e.,
20 forecasted) and actual quantity revenues through surcharges on customer bills, regardless
21 of the reason(s) for decreased sales.¹⁰⁰ The pilot program involved a natural experiment
22 in which five of the nine Class A water Investor-Owned Utilities (IOUs) implemented a
23 full decoupling WRAM, and the other four implemented a conservation-targeted
24 mechanism called M-WRAM. The M-WRAM allows the utility to recover the revenue

⁹⁸ Annual Reports of all Class A Water Utilities, Schedule E (2009 to 2022).

⁹⁹ Direct Testimony of Carmelitha Bordelon, at 14.

¹⁰⁰ D.24-12-025 at 42 (stating that the proposed decoupling mechanism shields utility “from any failure of consumption to meet projections, not just those reductions in consumption attributable to conservation”).

1 difference between what it actually recovered under a conservation rate design, such as a
2 tiered rate structure, and what it would have recovered under a single quantity rate.¹⁰¹
3 Over a period of more than 10 years, the natural experiment demonstrated that decreases
4 in water use between the WRAM and M-WRAM utilities were roughly identical, but the
5 negative impact of WRAM on ratepayer bills was substantially greater.¹⁰²

6 **1. The Commission Has Repeatedly Found that WRAM’s**
7 **Negative Impact on Ratepayers Outweighs its**
8 **Inconclusive Conservation Benefits.**

9 The Commission has previously determined that WRAM does not produce
10 conservation results sufficient to justify its negative ratepayer impacts.¹⁰³ WRAM
11 ultimately proved to be “at best a minor factor in conservation efforts” when the
12 Commission compared utility consumption data under a WRAM versus an M-WRAM.¹⁰⁴
13 Even California Water Service Company (“Cal Water”), a Class A which previously used
14 WRAM, acknowledges that it cannot “solely” attribute conservation results over the past
15 15 years to WRAM, stating “[clearly], there have been other factors...that have
16 influenced customer water usage.”¹⁰⁵ WRAM generated hundreds of millions of dollars

¹⁰¹ D.24-12-025 at 42 (stating that “M-WRAM tracks the difference between revenue achieved under a tiered rate structure designed to promote conservation and a structure without the conservation-promoting tiers”).

¹⁰² D.24-12-025 at 43. The Commission found that “[balancing] the limited record of WRAM’s impact upon conservation against our intergenerational transfer and risk transfer concerns, we find that the benefits of the proposed [full decoupling program] do not sufficiently outweigh its harm.”

¹⁰³ See D.24-12-025 at 41 (stating that “WRSP/WRAM inequitably reallocates risk between the utility’s shareholders and its ratepayers”); D.20-08-047 at 102, FOF 11 (finding that “[while] the WRAM/MCBA was adopted to encourage conservation, the application of this ratemaking mechanism has led to substantial under-collections and subsequent increases in quantity rates”). The California Supreme Court set aside the Commission’s order prohibiting WRAM in *Golden State Water Co. v. Public Utilities Com.* (2024), 16 Cal. 5th 380 solely on procedural grounds (16 Cal. 5th 380, 382 and 389). The issue before the Court was whether the Commission had adequately notified the utilities that elimination of WRAM was within the scope of the rulemaking proceeding (at 395-396). The Court in *Golden State* did not address the merits of WRAM or the Commission’s analysis of WRAM’s impact on ratepayers. See Attachment 3-2.

¹⁰⁴ D.24-12-025 at 42; see also Rulemaking (R.) 17-06-024, *Reply Comments of the Public Advocates Office on the Water Division’s Staff Report and Response to Additional Questions* at 6-8 (September 23, 2019).; D.20-08-047, Finding of Fact (FOF) [x] at 102.

¹⁰⁵ A.24-07-003, Cal Water Testimony Book # 2 at 72:2-4.

1 in additional revenue and profit for utilities during its use, whereas the M-WRAM
2 produced significantly less.¹⁰⁶ These millions in revenue are a result of the WRAM
3 protecting the Class A water utilities from the risk of forecasting sales and shifting that
4 risk onto the ratepayers. As a substitute for competition,¹⁰⁷ the Commission should not
5 allow the transfer of such risk from the utility to the ratepayer.

6 The Commission should allow the M-WRAM for Suburban, not the original
7 WRAM. The Commission rejected all other Class As requests for the WRAM, in favor of
8 the M-WRAM.¹⁰⁸ Additionally, as mentioned in *Chapter 2*, San Gabriel Valley Water
9 Company (“San Gabriel”) a utility also transitioning from two to three tiers did not
10 express the same concerns as Suburban and did not request the full WRAM in its most
11 recent GRC.¹⁰⁹ The Commission should also consider renaming M-WRAM to the
12 Conservation Adjustment for Rate Tiers (CART) to correctly reflect the purpose of the
13 mechanism and to remove the misleading association with Monterey, California.¹¹⁰

14 **B. Suburban’s Three-Tier Argument**

15 After the Commission reviewed years of evidence and concluded that the WRAM
16 failed to meet its original intent, Suburban is now attempting to leverage its requirement
17 to implement three tiers to obtain WRAM.

¹⁰⁶ Annual Reports of all Class A Water Utilities, Schedule E (2009 to 2022).

¹⁰⁷ See D.24-12-007 at 14 (stating that “[in] a closely regulated market, regulation substitutes for competition and the regulator, acting as a substitute for the market, provides investors an opportunity to earn a fair and reasonable return for accepting the degree of risk presented by the regulated business”).

¹⁰⁸ D.24-12-025 at 46-48; D.25-01-036 at 74-76. Proposed Decision of A.24-07-003.

¹⁰⁹ Attachment 2-3 EXHIBIT SG-4 (Reiker)

¹¹⁰ Although the M-WRAM has not operated in Monterey, California, for more than a dozen years, it is currently the decoupling mechanism utilized by Class A water utilities operating in San Jose, Fontana, Rancho Cucamonga, Rialto, El Monte, Covina, West Covina, La Puente, Glendora, Whittier, Sativa, City of Industry, Pico Rivera, Arcadia, Irwindale, and other portions of Los Angeles, Orange, and San Bernadino Counties.

1 **1. M-WRAM Recovers Differences from Revenue Changes**
2 **Due to Three Tiers**

3 The difference between WRAM and M-WRAM is the scope of revenues the
4 mechanisms can recover. WRAM recovers the difference in total usage revenues, while
5 M-WRAM recovers the difference in usage revenues due to a block-rate design.¹¹¹ This
6 narrower scope of the M-WRAM is more in line with the Commission’s original intent of
7 preventing revenue loss due to conservation. While the full WRAM shifts the entire risk
8 of sales forecasting from the utility to the ratepayer,¹¹² the M-WRAM only shifts the risk
9 of customer sales changing between tiers to the ratepayer.

10 San Gabriel is a Class A water utility with a service area similar to Suburban's,
11 with the same requirement to increase its block rate design from two to three tiers, and
12 also has an M-WRAM. San Gabriel correctly does not express the same concern about
13 revenue instability due to total sales lost from a three-tier design, but rather about revenue
14 lost as its tier usage percentages change.¹¹³ San Gabriel’s M-WRAM would mitigate this
15 difference, as it would for Suburban.

16 Suburban’s concern that the M-WRAM does not address the issue of revenue
17 variability from a three-tier design is unfounded. The very nature of the M-WRAM is to
18 capture revenue lost due to rate design structure, and in this case, a third tier. Suburban is
19 safeguarded from the potential for revenue instability from a transition to three tiers with
20 M-WRAM. WRAM would widen the scope of what revenue Suburban is entitled to
21 recovery of, which would include changes in revenues not due to the transition from two
22 to three tiers, but due to total sales forecasting. The Commission found this practice
23 inequitably reallocates risk from the shareholders to ratepayers.¹¹⁴

¹¹¹ Suburban’s Preliminary Statement: F. As mentioned, Suburban incorrectly labels its mechanism as WRAM, not M-WRAM.

¹¹² D.24-12-025 at 41.

¹¹³ Attachment 2-3 EXHIBIT SG-4 (Reiker), at 49-50.

¹¹⁴ D.24-12-025 at 41

1 Additionally, any changes in revenues as a result of tier use changes are
2 minimized with the recommended changes to Suburban’s proposed three-tier structure
3 discussed in *Chapter 2* of this report.

4 **C. SRM History**

5 The Commission initially adopted the SRM to fix an issue caused by WRAM. As
6 discussed in Section A of this chapter, the WRAM led to enormous, nontransparent
7 surcharges on bills, resulting in rate increases for all ratepayers. In Suburban’s own
8 words, “Adjusting forecasted sales for the upcoming year based on changes in sales
9 during the previous year through the SRM is necessary to avoid accumulating large
10 balances in the RSMBA.”¹¹⁵ A simple solution to the issue the SRM is meant to fix is to
11 reject the RSMBA. In the event the Commission adopts the SRM, Suburban’s request
12 should be modified in two ways to comply with a standard approach among the Class As.
13 The triggering percent differences should be reduced from 10% to 5%.¹¹⁶ The mechanism
14 should also be a two-way mechanism, rather than a one-way, so sales can be adjusted if
15 they are above or below the adopted.¹¹⁷

16 **IV. CONCLUSION**

17 Suburban’s RSM request is unreasonable. The Commission found that WRAM
18 failed to fulfill its initial purpose and imposed extreme burdens on ratepayers. The
19 argument that M-WRAM, or CART, will not recover revenue differences resulting from
20 a three-tier rate design is incorrect. Therefore, Suburban’s request should be denied
21 because it will only shift any risk of total sales forecasting from Suburban onto its
22 ratepayers.

¹¹⁵ Direct Testimony of Carmelitha Bordelon, at 16.

¹¹⁶ A.24-07-003, Testimony Book #2, at 52.

¹¹⁷ Proposed Decision of A.24-07-003 Cal Water GRC

Appendix A:
Qualifications of Witness

1 **QUALIFICATIONS AND PREPARED TESTIMONY**
2 **OF**
3 **CHRIS RONCO**

4
5 Q.1 Please state your name and address.

6 A.1 My name is Chris Ronco and my business address is 505 Van Ness Avenue, San
7 Francisco, California 94102

8
9 Q.2 By whom are you employed and what is your job title?

10 A.2 I am a Public Utilities Regulatory Analyst in the Water Branch of the Public
11 Advocates Office at the California Public Utilities Commission.

12
13 Q.3 Please describe your educational and professional experience.

14 A.3 I received a Bachelor of Science Degree in Environmental Economics & Policy
15 and a Bachelor of Arts Degree in Geography from the University of California,
16 Berkeley in 2019. I have been with the Public Advocates Office – Water Branch
17 since October 2019, during which I have worked on several General Rate Cases.

18
19 Q.4 What is your area of responsibility in this proceeding?

20 A.4 In this proceeding I prepared analysis and testimony addressing Suburban’s
21 proposal for Sales & Revenue Forecasting, Rate Design and Decoupling.

22
23 Q.5 Does that complete your prepared testimony?

24 A.5 Yes it does.

Appendix B:
Supporting Attachments

INDEX LIST OF ATTACHMENTS FOR APPENDIX B

Attachment #	Title
Attachment 1-1	CPUC Approval of Sativa Acquisition
Attachment 1-2	<p>RESPONSE to A2601001 Cal PA DR SIB-001 (Hardcoded Data),</p> <p>Excel Files:</p> <p>SIB-001 22.B Revised Response - WULM+Active vs Inactive</p> <p>SIB-001 22.B Revised Response - WUSJ+Active vs Inactive</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-3	<p>RESPONSE to Cal PA DR CR8-001 (Billing Data),</p> <p>Excel Files:</p> <p>Usage Data WULM 2019</p> <p>Usage Data WULM 2020</p> <p>Usage Data WULM 2021</p> <p>Usage Data WULM 2021</p> <p>Usage Data WULM 2023</p> <p>Usage Data WUSJ 2019</p> <p>Usage Data WUSJ 2020</p> <p>Usage Data WUSJ 2021</p> <p>Usage Data WUSJ 2022</p> <p>Usage Data WUSJ 2023</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-4	<p>RESPONSE to Cal PA DR CR8-003 (2025 Billing Data & Customer Class)</p> <p>Excel files:</p> <p style="padding-left: 40px;">1. CR8-003 - Usage Data WULM 2025</p> <p style="padding-left: 40px;">1. CR8-003 - Usage Data WUSJ 2025</p> <p style="color: red;">(Excel Files Available via Email)</p>
Attachment 1-5	Downtown LA Weather
Attachment 1-6	RESPONSE to Cal PA DR CR8-002 (Rev. & Rate Design)
Attachment 1-7	Lifeline Maintenance Plan Terms and Conditions

Attachment #	Title
Attachment 1-8	3a. Lifeline Program
Attachment 2-1	Excel file: DR_CR8-002_Q5a_2024_Fixed_Cost (Excel Files Available via Email)
Attachment 2-2	PARTIAL RESPONSE #1 to A2601001 Cal PA DR DKG-001 (SIB-001 follow-up)
Attachment 2-3	A.25-01-001, EXHIBIT SG-4 (Reiker)

Attachment 1-1:

CPUC Approval of Sativa Acquisition



California Public Utilities Commission
505 Van Ness Ave., San Francisco

FOR IMMEDIATE RELEASE

Media Contact: Terrie Prosper, 415.703.1366, news@cpuc.ca.gov

PRESS RELEASE

Docket #: A.21-08-011

CPUC APPROVES PURCHASE OF SATIVA LOS ANGELES COUNTY WATER DISTRICT BY SUBURBAN WATER SYSTEMS

SAN FRANCISCO, April 7, 2022 - The California Public Utilities Commission (CPUC) today approved Suburban Water Systems' \$11.8 million acquisition of Sativa Los Angeles County Water District, located in Willowbrook and Compton. The Decision also furthers the goal of Assembly Bill 1577 (Gipson) to provide affordable, safe drinking water to disadvantaged communities.

In order to facilitate a smooth transition for customers, Suburban Water must integrate the Sativa system into Suburban's Whittier/La Mirada Service Area by January 1, 2024. The rates for Sativa customers will be determined in Suburban Water's 2023 General Rate Case, which is expected to be filed with the CPUC on January 3, 2023. If the acquisition closes before December 31, 2023, Sativa's rates for customers will be reduced to a flat rate of approximately \$62 per month plus fees and charges. After December 31, 2023, Sativa's rates will be subject to the approved rates and charges for Suburban's Whittier/La Mirada Service Area. Eligible low-income Sativa customers will have access to the Customer Assistance Program immediately after closing of the acquisition.

"Today's Decision offers long-term stability to more than 1,600 customers in Compton and Willowbrook, who experienced poor water quality for several years," said Commissioner Genevieve Shiroma. "Since the passing of Assembly Bill 1577 in 2018, the County of Los Angeles Department of Public Works has served as an interim administrator, bringing short-term improvements in water quality, and through the acquisition by Suburban Water Company, the Sativa system will see long-term, essential, water infrastructure investments, and customers will now have access to low-income water programs to reduce their utility burden."

On August 13, 2021, Suburban Water Systems submitted an application requesting CPUC approval to purchase Sativa Los Angeles County Water District. Sativa was previously owned and operated by Los Angeles County and serves a population of approximately 6,837 through 1,643 active service connections in the City of Compton and Willowbrook, an unincorporated area of Los Angeles County. Suburban Water is a Class A regulated water company that serves a population of approximately 300,000 customers in Los Angeles and Orange Counties. Suburban Water is a subsidiary of Southwest Water Company, which operates in six states and serves approximately 600,000 customers.

The proposal voted on is available at

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M459/K718/459718887.PDF>.

Documents related to the proceeding are available at

https://apps.cpuc.ca.gov/apex/f?p=401:56:0::NO:RP,57,RIR:P5_PROCEEDING_SELECT:A2108011.

The CPUC regulates services and utilities, protects consumers, safeguards the environment, and assures Californians' access to safe and reliable utility infrastructure and services. For more information on the CPUC, please visit www.cpuc.ca.gov.

###

Attachment 1-2:

**RESPONSE to A2601001 Cal PA DR SIB-001
(Hardcoded Data),**

**Excel Files: “SIB-001 22.B Revised Response -
WULM+Active vs Inactive”, “SIB-001 22.B Revised
Response - WUSJ+Active vs Inactive”**

(Excel Files Available via Email)



**Suburban
Water Systems**

1325 N. Grand Avenue
Suite 100
Covina, CA 91724-4044
Phone: 626.543.2500
Fax: 626.331.4848
www.swwc.com/suburban

January 22, 2026

To: Suliman Ibrahim
Project Coordinator

Corwin Hockema
Attorney for Public Advocates Office

Re.: Responses to A.26-01-001, Public Advocates Office DR SIB-001 (Hardcoded
Data)

Dear Mr. Ibrahim et al.,

Attached is the information you requested in writing for Suburban's Total Company
General Rate Case.

Sincerely,

/s/Carmelitha Bordelon

Carmelitha Bordelon
Vice President, Regulatory Affairs & Finance

Responses to A.26-01-001, Public Advocates Office
DR SIB-001 (Hardcoded Data)

Expenses

1. Worksheet 5-1E in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “01. Worksheet 5.1E 2020-2024 Detail Data.xlsx”

2. Worksheet 5-1F in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “02. Worksheet 5.1F 2020-2024 Detail Data.xlsx”

3. Worksheet 5-1G in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “03. Worksheet 5.1G 2020-2024 Detail Data.xlsx”

4. Worksheet 5-1H in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “04. Worksheet 5.1H 2020-2024 Detail Data.xlsx”

5. Worksheet 5-1I in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “Worksheet 5.1I 2020-2024 Detail Data.xlsx”

6. Worksheet 5-1J in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “Worksheet 5.1J 2020-2024 Detail Data.xlsx”

7. Worksheet 5-1K in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “07. Worksheet 5.1K 2020-2024 Detail Data.xlsx”

8. Worksheet 5-1L in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “08. Worksheet 5.1L 2020-2024 Detail Data.xlsx”

The recorded years 2020 through 2024 for Regulatory Expenses, CPUC account 797, source code 344 have been revised. Consequently, the calculated five years average escalated by other expenses inflation for year 2025, estimated years 2026, Test Years 2027 and 2028 are also changed. Below is the summary of the revised amounts:

Line Number	CPUC Account Number	Source Code Number	Description	Recorded Year					Estimated Year		Test Year	
				2020	2021	2022	2023	2024	2025	2026	2027	2028
<u>REGULATORY COMMISSION EXPENSES</u>												
39.	797	344	Regulatory Expenses	270,212	382,327	385,432	385,215	395,248	403,991	414,818	426,184	436,498

9. Worksheet 5-1M in the RO Model includes Total company operating expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “09. Worksheet 5.1M 2020-2024 Detail Data.xlsx”

10. Table 5-2B in the RO Model includes Parent Company Administrative and General Expenses in dollars for several categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “10. Table 5-2B 2020-2023 Detail Data.xlsx”

For explanation 2024 detail data, please see file entitled “10.0 2024 CAM Details.xlsx” which describes the purpose of the following files:

- 10.1 CAM 4.1.2024 - 8.31.2024_SAP_Employee Costs_11.05.2024.xlsx
- 10.2 CAM 4.1.2024 - 8.31.2024_SAP_Other OH Costs_11.05.2024.xlsx
- 10.3 CAM 4.1.2024 - 8.31.2024_Fusion_11.14.2024.xlsx
- 10.4 CAM 9.1.2024 - 12.31.2024_SAP_Employee Costs_03.24.2025.xlsx
- 10.5 CAM 9.1.2024 - 12.31.2024_SAP_Other OH Costs_03.24.2025.xlsx
- 10.6 CAM 9.1.2024 - 12.31_Fusion.xlsx
- 10.8 CAM 9.1.24 - 12.31.24_SAP_Employee Costs_STI True up_03.24.25.xlsx
- 10.9 Q1 2024 GL Details.xlsx
- 10.10 Q2-4 2024 CAM activity summary.xlsx

11. Table 6-1 in the RO Model includes Total Company Capital Expenditures in dollars for CWIP balances and different construction projects. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see files entitled “11.1 Table 6-1 2020-2024 CWIP Detail Data.xlsx” and “11.2 Table 6-1 2020-2024 Detail Data.xlsx”

12. Table 6-1A in the RO Model includes Total Company Capital Expenditures in dollars for different construction projects. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “12. Table 6-1A 2020-2024 Detail Data.xlsx”

13. Table 6-1B in the RO Model includes Total Company Capital Expenditures in dollars for different construction projects. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “13. Table 6-1B 2020-2024 Detail Data.xlsx”

14. Table 6-1C in the RO Model includes Total Company Capital Expenditures in dollars for different construction projects. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response 11 (second part), 12 – 14:

Please see file entitled “14. Table 6-1C 2020-2024 Detail Data.xlsx” for the general ledger data related to Company’s funded construction projects, excluding advice letter projects.

15. Table 6-3 in the RO Model includes Utility Plant In Service Beginning of Year in dollars for different plant categories. The entries for the recorded year 2020 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “15. Table 6-3 2020 Utility Plant in Service Beg. Bal.xlsx”

16. Table 6-4 in the RO Model includes Total Company Utility Plant Additions in dollars for several different categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “16. Table 6-4 2020-2024 Addition Detail.xlsx”

17. Table 6-5 in the RO Model includes Total Company Utility Plant Retirements in dollars for several different categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “17. Table 6-5 2020-2024 Retirements Detail.xlsx”

18. Table 7-3 in the RO Model includes Total Company Depreciation Accruals and Expense in dollars for several different categories. The entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “18. Table 7-3 2020-2024 Depr Activity Detail.xlsx”

19. Table 7-4 in the RO Model includes Total Company Depreciation Reserve in dollars. The Depreciation Reserve, Beginning of Year Balance is hardcoded for the year 2020. The Salvage and Cost of Removal entries for the recorded years 2020 through 2024 are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see files entitled “19.1 Table 7-4 2020 Accum Depr Beg Bal.xlsx” and “19.2 Table 7-4 2020-2024 COR+Salvage.xlsx”

20. Table 8-1 in the RO Model includes Total Company Rate Base in dollars. The entries for Materials and Supplies for the recorded years 2020 through 2024 are hardcoded. For each of

these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “20. Table 8-1 2020-2024 Materials & Supplies Detail.xlsx”

21. Table 9-2 in the RO Model Computes Ad Valorem Taxes in dollars. The entries for the recorded years 2020 through 2024 for Ad Valorem Taxes, Calendar Year are hardcoded. For each of these hardcoded entries, please provide the raw accounting (general ledger) data as described above.

Response:

Please see file entitled “21. Table 9-2 2020-2024 Detail Data.xlsx”

22. Please refer to the Direct Testimony of David Mitchell. Page 9 of the testimony states that Suburban’s rate design simulation used all 936,637 customer bills issued in 2024.

a. Are these 936,637 customer bills just for residential customers?

Response:

No, these 936,637 customer bills issued in 2024 are not just for residential customers.

b. Please provide the customer billing data in Excel format for all customers in 2024, including all customer classes. Use a separate row providing the consumption over the same 12-month period for each customer including the meter-size for servicing the customer, the service area and tariff area of the customer, whether the connection is currently active, and if the customer is enrolled in the Customer Assistance Program (“CAP”). Provide a separate Excel Tab/Worksheet for each different customer class. See format example below.

Customer Identifier	Currently Active?	Meter Size	Service Area	Tariff Area	CAP Customer?	Jan. 2024 CCF	...	Dec. 2024 CCF
#1	Y	5/8 in	San Jose Hills	1	Y	6.6	....	4.2
#2	N	3/4 in	Whittier La Mirada	3	Y	8.9	....	5.3

Response:

Please see files entitled “22b. 2024 SJH Customer Billing Data.xlsx” and “22b. 2024 WLM Customer Billing Data.xlsx” for SJH and WLM customers, respectively.

Currently, detailed report by customer identifier which identify customers either active or inactive at a particular time is not available. However, as a total, the customer count at the end of 2024 is as follows:

Service Area	Active	Inactive
San Jose Hills	42,835	857
Whittier/La Mirada	35,202	495
Total	78,037	1,352

Attachment 1-3:

Response to Cal PA DR CR8-001 (Billing Data),

Excel Files:

“Usage Data WULM 2019”

“Usage Data WULM 2020”

“Usage Data WULM 2021”

“Usage Data WULM 2022”

“Usage Data WULM 2023”

“Usage Data WULM 2019”

“Usage Data WULM 2020”

“Usage Data WULM 2021”

“Usage Data WULM 2022”

“Usage Data WULM 2023”

(Excel Files Available via Email)



1325 N. Grand Ave. Ste. 100, Covina, CA 91724-4044
Phone: 626.543.2500, Fax: 626.331.4848
SuburbanWaterSystems.com

March 3, 2026

To: Chris Ronco
Public Utilities Regulatory Analyst

Suliman Ibrahim
Project Coordinator

Corwin Hockema
Attorney for Public Advocates Office

Re.: Responses to A.26-01-001, Public Advocates Office CR8-001 (Billing Data)

Dear Mr. Ronco et al.,

Attached is the information you requested in writing for Suburban's Total Company General Rate Case.

Sincerely,

/s/Carmelitha Bordelon

Carmelitha Bordelon
Vice President, Regulatory Affairs & Finance

Responses to A.26-01-001, Public Advocates Office
DR CR8-001 (Billing Data)

1. The following refers to Suburban’s response to DR SIB-001, Question 22.b.
 - a. In the file titled “SIB-001 22.B Revised Response - WUSJ+Active vs Inactive”, there are 11 residential and 9 business customers labeled in tariff area “L”. Please explain what tariff area is “L” and for rate design purposes, which of the tariff areas mentioned in the direct testimony of David Mitchell (1, 2 or 3) these customers fall into.

Response:

“L” stands from Lowell Track Water Company.

For further information on Lowell Track, please see paragraph four of Result of Operations (Final Application) PDFA.pdf, page 2-1.

In David Mitchell’s testimony, tariff area L customers are in tariff area 2.











- b. Question 22 requested the following billing data for all customers in 2024:

Customer Identifier	Currently Active?	Meter Size	Service Area	Tariff Area	CAP Customer?	Jan. 2024 CCF	...	Dec. 2024 CCF
#1	Y	5/8 in	San Jose Hills	1	Y	6.6	....	4.2
#2	N	3/4 in	Whittier La Mirada	3	Y	8.9	....	5.3

Please provide the same data for all customers in years 2019-2023. Provide the data in separate Excel files for each year and service area. For example, 2019 Whittier La Mirada and 2019 San Jose Hills data would be in two different Excel files.

Response:

Please see files entitled as follows:

-  Usage Data WULM 2019.xlsx
-  Usage Data WULM 2020.xlsx
-  Usage Data WULM 2021.xlsx
-  Usage Data WULM 2022.xlsx
-  Usage Data WULM 2023.xlsx
-  Usage Data WUSJ 2019.xlsx
-  Usage Data WUSJ 2020.xlsx
-  Usage Data WUSJ 2021.xlsx
-  Usage Data WUSJ 2022.xlsx
-  Usage Data WUSJ 2023.xlsx

Attachment 1-4:

**Response to Cal PA DR CR8-003
(2025 Billing Data & Customer Class),
Excel Files: “1. CR8-003 - Usage Data WULM 2025”,
“1. CR8-003 - Usage Data WUSJ 2025”**

(Excel Files Available via Email)



1325 N. Grand Ave. Ste. 100, Covina, CA 91724-4044
Phone: 626.543.2500, Fax: 626.331.4848
SuburbanWaterSystems.com

March 17, 2026

To: Chris Ronco
Public Utilities Regulatory Analyst

Suliman Ibrahim
Project Coordinator

Corwin Hockema
Attorney for Public Advocates Office

Re.: Responses to A.26-01-001, Public Advocates Office DR CR8-003 (2025 Billing
Data and Customer Class Allocation)

Dear Mr. Ronco et al.,

Attached is the information you requested in writing for Suburban's Total Company
General Rate Case.

Sincerely,

/s/Carmelitha Bordelon

Carmelitha Bordelon
Vice President, Regulatory Affairs & Finance

Responses to A.26-01-001, Public Advocates Office
DR CR8-003 (2025 Billing Data and Customer Class Allocation)

1. The following refers to Suburban’s response to DR SIB-001, Question 22.b.
 - a. Question 22 requested the following billing data for all customers in 2024:

Customer Identifier	Currently Active?	Meter Size	Service Area	Tariff Area	CAP Customer?	Jan. 2024 CCF	...	Dec. 2024 CCF
#1	Y	5/8 in	San Jose Hills	1	Y	6.6	....	4.2
#2	N	3/4 in	Whittier La Mirada	3	Y	8.9	....	5.3

Please provide the same data for all customers in 2025 using the same format as previously provided.

Response:

Refer to files titled “1. CR8-003 - Usage Data WULM 2025.xlsx” and “1. CR8-003 - Usage Data WUSJ 2025.xlsx”

2. The following refers to the Direct Testimony of David Mitchell.
 - a. Please explain the process used to determine the allocation of revenues from each of Suburban’s customer classes. Please provide any workpapers or calculations, in Excel format, used to arrive at these allocations.

Response:

This response pertains to the rate design simulation model developed by David Mitchell of M.Cubed to evaluate Suburban Water Systems’ proposed rate design in this proceeding. The model evaluates how alternative rate structures would affect bills, water use, and revenues. It does not determine the allocation of revenue responsibility among customer classes, which is addressed separately in Suburban’s cost-of-service and operations models.

In the rate design simulation model, the revenue produced by each customer class is calculated based on (1) the number and size of meters in the class, (2) the volume of water usage by customers within the class, and (3) the meter and quantity charges applied to those meters and usage volumes.

The model relies on a tabulation of 2024 billing data that summarizes the number of bills and associated water use across multiple customer and service characteristics. The tabulation counts the number of bills recorded in 2024 according to the following attributes:

- **Season:** Fall, Winter, Spring, Summer
- **District:** WULM or WUSJ
- **CAP Designation:** CAP (1) or Not CAP (0)
- **Rate Class:** RES or NRES
- **Asset Type:** Commercial, Fire Hydrant, Fire Protection, Gov't Facility, Industrial Plants, Irrigation, Other Utilities, Rental Meters, Residential
- **Account Class:** BLD, COM, GOV, IRR, RES
- **Zone:** 1, 2, 3, H, I
- **Meter (Pipe) Size:** 5/8, 3/4, 1, 1 1/2, 2, 3, 4, 6, 8, 10, Fire Hydrant, Fire Protection
- **Fire Protection Pipe Size:** (Null), 0, 6, 8, 10, 12
- **# of Hydrants:** 0-37 or (Null)
- **Billed CCF:** Integer value from 0-16,131

The model calculates the revenues generated from each customer class under the current (baseline) rate design by applying the existing meter and quantity charges to this billing tabulation.

For alternative rate designs, the model calculates class revenue based on two user-specified inputs:

- The **target revenue requirement** (expressed relative to the baseline revenue level), and
- The **percentage of total revenue to be recovered through meter charges.**

The model then calibrates rates and charges to meet the target revenue requirement in two steps.

First, the model scales the existing meter charges so that they recover the specified share of total revenue from meter charges. For example, if the revenue requirement increases from 100 to 125 and the meter-charge recovery share increases from 30 percent to 40 percent, the model increases the existing meter charges by a factor of approximately 1.67.¹

Second, the model scales the existing quantity (commodity) charges to recover the remaining portion of the revenue requirement. As part of this step, the model adjusts baseline water use in the billing tabulation in response to changes in the quantity charges, using the price-response assumptions described in the Direct Testimony of David Mitchell.²

Throughout this process, the model preserves the existing relative differences in rates and charges across the following unless the user explicitly changes these:

¹ In this example, the current meter charges would recover 30. Under the alternative design, they would need to recover 50 (0.4 x 125). Thus, the current meter charges would need to be increased by a factor of 50/30, which is approximately 1.67.

² Direct Testimony of David Mitchell, pages 10-11.

- (1) districts,
- (2) zones,
- (3) rate classes, and
- (4) residential tiering.

The rate design simulation model and the underlying bill tabulation are contained in the Excel workbook **DR_CR8-003_Q2_SWS_Rate_Design_Model_V4.xlsb**, which accompanies this response.

Attachment 1-5:
Downtown LA Weather

Monthly Total Precipitation for LOS ANGELES DOWNTOWN/USC, CA

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	0.88	5.54	2.82	1.49	T	0.00	0.00	0.07	0.15	0.98	T	T	11.93
2001	5.59	8.87	1.17	1.11	0.00	T	T	0.00	0.00	0.06	1.42	1.38	19.60
2002	0.80	0.29	0.32	0.09	0.05	0.01	0.00	T	T	0.05	2.43	3.31	7.35
2003	T	4.64	4.32	0.71	1.02	0.01	T	T	0.00	0.53	0.79	1.35	13.37
2004	0.47	4.89	1.17	0.04	0.00	0.00	T	0.00	T	4.56	0.20	8.77	20.10
2005	9.32	11.02	2.14	1.05	0.19	T	T	0.00	0.29	1.35	0.22	1.03	26.61
2006	2.06	2.37	2.87	2.15	0.85	T	T	0.00	T	0.34	0.16	0.81	11.61
2007	0.19	0.92	0.05	0.74	0.00	0.00	T	T	0.52	0.95	0.56	1.73	5.66
2008	7.97	1.64	0.01	0.04	0.11	0.00	0.00	0.00	T	0.02	1.85	2.79	14.43
2009	0.34	3.57	0.33	0.03	T	0.15	0.00	0.00	0.00	2.07	0.01	2.89	9.39
2010	4.94	4.27	0.48	1.65	0.05	0.00	T	0.00	T	0.94	0.53	10.23	23.09
2011	0.79	3.29	3.96	T	0.45	0.01	0.00	0.00	T	1.17	1.58	1.01	12.26
2012	1.30	0.16	1.75	1.71	0.01	0.00	0.01	0.00	T	0.02	1.03	2.16	8.15
2013	1.18	0.20	0.54	T	0.71	0.00	0.09	0.00	0.00	0.06	0.62	0.20	3.60
2014	T	3.58	1.18	0.35	0.00	0.00	T	0.04	0.01	0.25	0.48	3.88	9.77
2015	1.09	0.83	0.87	0.13	0.93	0.01	0.38	T	2.39	0.45	0.01	0.57	7.66
2016	3.17	0.79	1.60	0.24	0.05	0.00	0.00	0.00	T	0.52	0.88	4.55	11.80
2017	8.38	4.17	0.09	0.08	0.32	0.01	0.00	T	0.07	0.10	0.01	0.01	13.24
2018	1.77	0.03	2.69	0.02	0.09	0.00	0.00	0.00	0.00	0.57	1.58	2.11	8.86
2019	5.95	5.59	2.19	0.02	0.81	T	T	0.00	0.03	0.00	2.12	4.84	21.55
2020	0.32	0.04	4.34	3.02	0.14	0.00	0.00	0.00	0.00	0.00	0.11	1.84	9.81
2021	2.44	T	1.41	0.00	0.00	0.02	0.22	T	0.01	0.71	0.00	9.46	14.27
2022	0.19	0.06	1.41	0.33	0.00	0.01	0.00	0.00	0.37	0.02	1.98	2.81	7.18
2023	8.95	5.95	7.71	0.06	0.55	T	0.00	2.99	0.05	T	0.36	2.82	29.44
2024	2.05	12.66	3.50	0.63	M	M	M	M	M	M	M	M	M
Mean	2.81	3.41	1.96	0.63	0.26	0.01	0.03	0.13	0.16	0.66	0.79	2.94	13.36
Max	9.32 2005	12.66 2024	7.71 2023	3.02 2020	1.02 2003	0.15 2009	0.38 2015	2.99 2023	2.39 2015	4.56 2004	2.43 2002	10.23 2010	29.44 2023
Min	T 2014	T 2021	0.01 2008	0.00 2021	0.00 2022	0.00 2020	0.00 2023	0.00 2022	0.00 2020	0.00 2020	0.00 2021	T 2000	3.60 2013

Attachment 1-6:

**Response to Cal PA DR CR8-002
(Rev. & Rate Design)**



1325 N. Grand Ave. Ste. 100, Covina, CA 91724-4044
Phone: 626.543.2500, Fax: 626.331.4848
SuburbanWaterSystems.com

March 12, 2026

To: Chris Ronco
Public Utilities Regulatory Analyst

Suliman Ibrahim
Project Coordinator

Corwin Hockema
Attorney for Public Advocates Office

Re.: Responses to A.26-01-001, Public Advocates Office CR8-002 (Revenues and Rate Design)

Dear Mr. Ronco et al.,

Attached is the information you requested in writing for Suburban's Total Company General Rate Case.

Sincerely,

/s/Carmelitha Bordelon

Carmelitha Bordelon
Vice President, Regulatory Affairs & Finance

**Responses to A.26-01-001, Public Advocates Office
DR CR8-002 (Revenues and Rate Design)**

1. The following refers to the tab “Model” of Suburban’s Results of Operation Model.
 - a. Row 698 of the tab contains revenues from miscellaneous services. Please provide a list of all services that contribute to these revenue totals.
Response:
Penalties and fees, reconnect fee, return check charges, NSF charges, and backflow charges.
 - b. Please provide all General Ledger transactions, in Excel format, which contribute to the annual totals in 2020-2024. Provide all transactions for each year in a separate tab. For example, all line items in tab “2020” should total \$5,955.
Response:
Refer to file titled “1b. 2020 - 2024 GL Transactions Misc. Services Revenues.xlsx”
 - c. Please provide all documentation, in PDF format, to support the 2020-2024 revenue totals.
Response:
Supporting documentation for the 2020 – 2024 revenue total is provided in files titled:
 - 1c. Rule 9 - Bad Check Fee.pdf
 - 1c. Rule 11 - Reconnect Fee.pdf
 - 1c. Rule 16 - Backflow Testing.pdf
 - d. Cell M1431 shows the rate reduction from uniform rates for recycled water customers is 15%. How did Suburban arrive at this 15% reduction?
Response:
The 15% discount from San Jose Hills service area’s potable quantity rates were established in Advice Letter (AL) 278-W, which was approved by Water Division on November 5, 2010, effective December 5, 2010. Refer to file titled “1d. AL 278-W Recycled Water – Approved.pdf”
 - i. Please provide all calculations and Workpapers in Excel format which were used to arrive at this 15% reduction.
Response:
Please refer to file titled “1d. AL 278-W Recycled Water.xls.”
2. The following refers to tabs “NTP&S” and “MODEL” of Suburban’s Results of Operation Model.
 - a. Please provide PDFs of all lease agreements for each of Suburban’s cell tower leases in 2024.
Response:

All lease agreements for Suburban’s cell tower that cover calendar year 2024 have already been provided in A.26-01-001, filed on January 2, 2026. These documents are included in the file titled “Workpapers Vol. II (FINAL APPLICATION).pdf,” pages 6 through 20.

- b. Please provide all documentation and workpapers to support the \$1,836.55 in monthly revenue from recycled water operation charges in cell 146G of tab “NTPS”.

Response:

The documentation related to the operation and maintenance of a recycled water distribution system agreement has been provided in A.26-01-001, filed on January 2, 2026. The document is included in the file titled “Workpapers Vol. II (FINAL APPLICATION).pdf,” pages 21 through 30.

Please refer to file titled “2.b Support for Recycled Water \$1,836.55.pdf” for documentation supporting the monthly amount of \$1,836.55.

- c. Please provide the cell location in the tab “MODEL” where the NTPS TY forecast of \$215,432 reduces the revenue requirement impact on ratepayers.

Response:

The amount of \$215,432 is included in the cost of service calculation in cell G6185, which reflects present revenue of \$103,322,657. Present revenue includes Other Water Revenues totaling \$408,075, within which the NTP&S amount of \$215,432 is embedded.

- 3. The following refers to Suburban’s Lifeline Maintenance Plan Program.

- a. Please provide in Excel format the following data regarding the Lifeline Maintenance Plan. Be sure to include the information on an annual basis since Suburban began the program. Also include the projected numbers for years 2026, 2027, 2028 and 2029.

Year	Number of Participants	Per Month Cost for Enrollment	Number of Instances a Customer Used the Lifeline Service	Total hours of crew labor spent conducting services for Lifeline

Response:

Please see file entitled “3a. Lifeline Program.xlsx” for the above information.

Employee hours are tracked when incremental labor is incurred for NTP&S. For the Lifeline Program, no incremental crew labor hours was incurred because the

program utilizes excess capacity as part of routine operations. As a result, no separately maintained labor hours exist.

- b. The Lifeline Maintenance Plan Program Terms and Conditions state “the cost of bringing a crew to your property is included in Lifeline”. The Commission requires that all costs incurred due to NTP&S projects be tracked in separate accounts.¹ Please provide the annual costs for crew labor incurred for Suburban’s Lifeline Program in years 2021-2025.

Response:

Suburban does not separately track or record employee hours attributable to the Lifeline Program. As a result, discrete annual crew labor costs for Lifeline activities are not available for the years 2021 through 2025.

Consistent with the Lifeline Maintenance Plan Program Terms and Conditions, the cost of bringing a crew to a customer’s property is included in the Lifeline Program offering; however, Suburban’s cost-sharing structure excludes costs already incurred for routine operations. Crew labor associated with Lifeline activities is not separately charged to, nor tracked within, NTP&S project-specific accounts.

Accordingly, Suburban did not incur incremental or separately identifiable crew labor costs attributable to the Lifeline Program that can be reported on an annual basis for the requested years.

- 4. The following refers to Suburban’s response to DR SIB-001, Question 22.b and tab “MODEL” of Suburban’s Result of Operation Model.

- a. Cells 838E and 1138E of the tab contain the forecasted 2025 residential usage revenues for San Jose Hills and Whittier La Mirada, respectively. Please provide the recorded 2024 residential usage revenues for San Jose Hills and Whittier La Mirada.

Response:

Refer to file titled “4.a 2024 Residential Usage Revenue.xlsx.”

- b. Attachment 1 of this DR contains the 2024 total residential sales by block rate tier, tariff area, and meter size for San Jose Hills according to Suburban’s response to DR SIB-001, Question 22.b. Please provide in the attachment the quantity rates and fixed charges for each usage amount that Suburban charged its ratepayers in 2024. Provide all the approved tariff sheets in PDF format to support these rates. If there are multiple rates for the quantity charge or fixed charge in 2024, please provide all tariffs with their start and finish dates.

Response:

Excluding rate offsets, please refer to file titled “4. AL 396-W 2024 Interim Rates - Approved.pdf” for supporting documentation corresponding to the quantity rates and service charges presented in the file titled “4b. Attachment 1-CR8-002 (2024 SJH Rates).xlsx”

¹ D.12-01-042, p. A-13.

- c. Attachment 2 of this DR contains the 2024 total residential sales by block rate tier, tariff area, and meter size for Whittier La Mirada according to Suburban’s response to DR SIB-001, Question 22.b. Please provide in the attachment the quantity rates and fixed charges for each usage amount Suburban charged its ratepayers in 2024. Provide all the approved tariff sheets in PDF format to support these rates. If there are multiple rates for the quantity charge or fixed charge in 2024, please provide all tariffs with their start and finish dates.

Response:

Excluding rate offsets, please refer to file titled “4. AL 396-W 2024 Interim Rates - Approved.pdf” for supporting documentation corresponding to the quantity rates and service charges presented in the file titled “4c. Attachment 1-CR8-002 (2024 WLM Rates).xlsx”

5. The following refers to the direct testimony of David Mitchell and tab “MODEL” of Suburban’s Results of Operation Model.

- a. Page 4 of the testimony quotes D.16-12-026, in reference to revenue allocations with 30% of revenues from fixed charges, with “...may not collect a sufficient amount of fixed costs”.² In 2024, what were Suburban’s total 2024 fixed costs?
- i. Please provide the location of the cell(s) in Suburban’s model that contain these total 2024 fixed costs.

Response:

Suburban estimates its fixed costs were 52% of its total operating costs in 2024. This estimate is based on the 2024 expenses recorded in the Operating Expenses Summary (Worksheet 5-1B and Worksheet 5-1C). The operating expense summary for 2024 begins on Row 1681, Column L of the MODEL tab of Suburban’s Results of Operation Model workbook. In the workbook accompanying this response, the MODEL tab has been copied to the tab FIXED_COST_ESTIMATES and rows preceding the relevant tables have been hidden. Operating expense line items have been tagged as fixed (F) or variable (V) in Column R, which is adjacent to the operating expense summary. The sums of fixed, variable, and total operating expenses, and the percentage of fixed costs for 2024 are provided in the cell range L1790:L1793.

Workbook accompanying this response: DR_CR8-002_Q5a_2024_Fixed_Cost.xlsx

- b. Page 5 of the testimony states Suburban currently has different tier break points depending on the residential customers’ meter size. Please explain the benefits of doing so. In your explanation, please include the benefit for both ratepayers and for revenue stability.

Response:

² D.16-12-026, Ordering Paragraph 13.

Suburban's residential tier widths are identical for 5/8" × 3/4" and 3/4" meters, which together comprise approximately 82% of residential accounts. Tier widths are modestly wider for 1" meters (approximately 17% of residential accounts), and continue to increase for 1½", 2", and 3" meters, which collectively represent less than 1% of residential customers.

Thus, from a practical standpoint, the overwhelming majority of residential customers face the same tier thresholds. The meter-based differentiation primarily affects a small number higher-capacity meters.

Benefits to Ratepayers

1. Equity Across Service Capacities

Larger meters provide greater instantaneous flow capacity and are generally associated with larger homes, larger irrigated areas, or multi-household configurations. If identical volumetric breakpoints were applied to all meter sizes, customers with larger service capacity could enter higher-priced tiers at usage levels that are proportionate to their service configuration.

By modestly widening tier thresholds for larger meters, Suburban helps ensure that higher-capacity customers are not moved prematurely into upper tiers solely because of structural differences in service size. This promotes horizontal equity across households with materially different service capacities.

2. Preservation of Intended Conservation Signals

Tiered rates are designed to distinguish between baseline/efficient use and higher discretionary use. Calibrating breakpoints to meter size helps maintain that distinction for customers whose service configuration reasonably supports higher baseline usage levels. Importantly, because 82% of residential customers share the same tier widths, the conservation signal for typical households is uniform and consistent.

Benefits for Revenue Stability

1. Avoidance of Excessive Revenue Concentration in Upper Tiers

Without meter-size calibration, larger-meter customers could enter upper tiers at relatively moderate usage levels. This could concentrate a disproportionate share of revenue in higher tiers for a small segment of customers.

Upper-tier sales are inherently more volatile, particularly during conservation periods or weather-driven demand reductions. Modestly widening tier widths for larger meters helps reduce this concentration risk and improves revenue predictability.

2. Limited Scope of Differentiation

Because more than four-fifths of residential customers face identical tier thresholds, the differentiated structure does not introduce material complexity or widespread variability in

rate impacts. Instead, it functions as a targeted adjustment to prevent distortions among higher-capacity accounts, while maintaining a uniform structure for most customers.

Conclusion

In practice, the same tiering applies to most residential customers. The limited meter-size differentiation serves as a structural safeguard to maintain equity and reduce revenue volatility among higher-capacity accounts, without materially affecting the vast majority of residential customers.

- c. Pages 5 and 6 of the testimony states differences among tariff areas primarily reflect variations in production and pumping costs. Cells 830E to 832E of the model show Suburban proposes usage rates that increase by \$0.146 per CCF from tariff area 1 to tariff area 2 and by \$0.163 from tariff area 2 to 3, for San Jose Hills. Please provide all workpapers and calculations used to arrive at the increases for the tariff areas.

Response:

As noted on line 3, page 6 of the testimony, Table 2 reflects Suburban's 2024 rates. These rates were approved by Water Division on January 2, 2024, pursuant to Advice Letter 396-W which went into effect on January 1, 2024.

Cells E830 through E832 reflect the 2025 residential sales based on uniform rates. These uniform rates are currently in effect as authorized by Water Division on October 3, 2025, pursuant to Advice Letter 406-W-A with an effective date of September 26, 2025.

In Decision (D.) 08-02-036, the Commission adopted conservation rate design and authorized the establishment of Water Revenue Adjustment Mechanism (WRAM) balancing accounts for Suburban. The WRAM records the difference between (1) recorded quantity rate water revenues collected under conservation rates and (2) the equivalent rate revenues that would have been collected if Suburban had single quantity rates, known as uniform rates.

Accordingly, page 6 of the testimony reflects Suburban's 2024 rates, and cells E830 through E832 are presented solely to illustrate the 2025 residential sales and associated revenues using uniform rates for WRAM comparison and calculation purposes.

- i. Please also provide the production and pumping costs totals used in the calculation to determine the tariff area increases.

Response:

Not applicable. The rates were approved by Water Division on October 3, 2025, pursuant to Advice Letter 406-W-A, and became effective on September 26, 2025.

- d. Cells 1130E to 1132E of the model show Suburban proposes usage rates that increase by \$0.218 per CCF from tariff area 1 to tariff area 2 and by \$0.378 per CCF from tariff area 1 to tariff area 2, for Whittier La Mirada. Please provide all workpapers and calculations used to arrive at the increases for the tariff areas.

Response:

As noted on line 3, page 6 of the testimony, Table 2 reflects Suburban's 2024 rates. These rates were approved by Water Division on January 2, 2024, pursuant to Advice Letter 396-W which went into effect on January 1, 2024.

Cells E1130 through E1132 reflect the 2025 residential sales based on uniform rates. These uniform rates are currently in effect as authorized by Water Division on October 3, 2025, pursuant to Advice Letter 406-W-A with an effective date of September 26, 2025.

In Decision (D.) 08-02-036, the Commission adopted conservation rate design and authorized the establishment of Water Revenue Adjustment Mechanism (WRAM) balancing accounts for Suburban. The WRAM records the difference between (1) recorded quantity rate water revenues collected under conservation rates and (2) the equivalent rate revenues that would have been collected if Suburban had single quantity rates, known as uniform rates.

Accordingly, page 6 of the testimony reflects Suburban's 2024 rates, and cells E1130 through E1132 are presented solely to illustrate the 2025 residential sales and associated revenues using uniform rates for WRAM comparison and calculation purposes.

- i. Please also provide the production and pumping costs totals used in the calculation to determine the tariff area increases.

Response:

Not applicable. The rates were approved by Water Division on October 3, 2025, pursuant to Advice Letter 406-W-A, and became effective on September 26, 2025.

Attachment 1-7:

Lifeline Maintenance Plan Terms and Conditions



**Suburban
Water Systems**

LifeLine™ Maintenance Plan

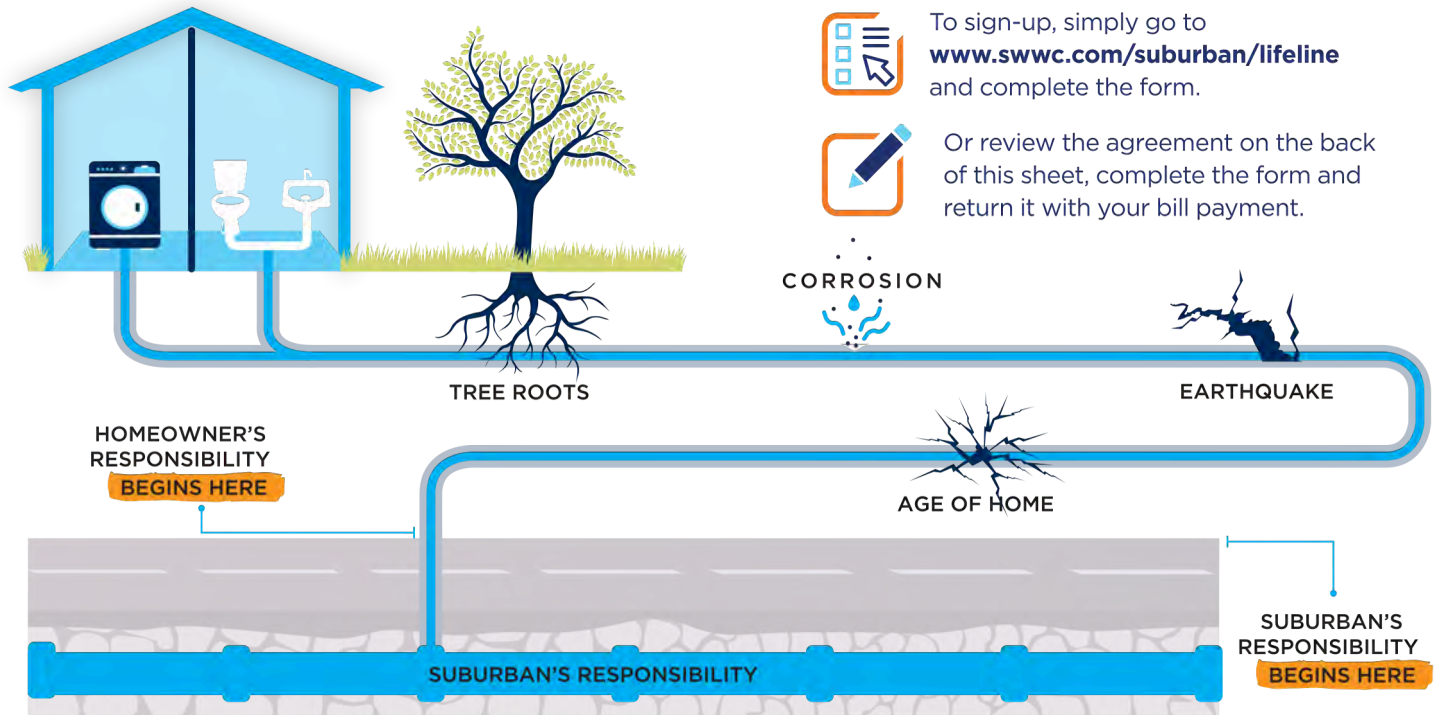
Many customers aren't aware that the outside water line from their residence to Suburban's water meter is **THEIR** responsibility. Suburban Water Systems is advising customers that if the original water service line servicing their home has not been replaced, it may be at risk for leaks or breaks. This can mean an unexpected bill for an expensive repair. Unfortunately, this kind of problem can be caused by normal wear and tear, earthquakes or tree roots and can occur at any time without warning. Typically, standard homeowners' insurance **DOES NOT** cover this type of repair.

Suburban Water Systems provides a simple solution to help you avoid these costly repairs

LifeLine™ Maintenance Plan*

For only \$6.97 a month, the LifeLine Maintenance Plan will cover the repair or replacement of your outside water line.

Get peace of mind, SIGN UP TODAY!



To sign-up, simply go to www.swwc.com/suburban/lifeline and complete the form.



Or review the agreement on the back of this sheet, complete the form and return it with your bill payment.

*Only Homeowners/Landlords may apply. No need to reapply if you are already a LifeLine Customer. LifeLine Maintenance Program is for Suburban Water Systems Customers living in a single family dwelling only. Commercial buildings and condominiums/apartments are currently not eligible to participate.

**Save Thousands of Dollars
as an Average Mainline
Repair is \$1,000-\$10,000**

Be Prepared With
LifeLine

Lifeline™ TERMS and CONDITIONS

PLEASE READ THIS CONTRACT CAREFULLY. IT INCLUDES IMPORTANT LIMITATIONS AND EXCLUSIONS.

THE Lifeline™ PROGRAM IS DESIGNED FOR RESIDENTIAL CUSTOMERS WHO OWN THE WATER PIPE RUNNING FROM SUBURBAN'S WATER METER TO THEIR FOUNDATION WALL. IF YOU ARE A RENTER OR LIVE IN ANY OTHER ARRANGEMENT THAT PLACES RESPONSIBILITY FOR THAT WATER PIPE ON ANOTHER PERSON, Lifeline™ IS NOT FOR YOU.

Lifeline™ IS NOT A SUBSTITUTE FOR INSURANCE. PLEASE CONSULT WITH YOUR INSURANCE COMPANY OR AGENT TO DETERMINE WHETHER THE WATER PIPE RUNNING FROM SUBURBAN'S WATER METER TO YOUR FOUNDATION WALL IS COVERED BY YOUR INSURANCE.

Terms & Conditions

As used herein, "Suburban", "We", "Us" and "Our" mean Suburban Water Systems; "You" and "Your" mean the residential customer of Suburban Water Systems who is a party to this Contract; and Lifeline means the Lifeline™ Program set forth in this contract.

Suburban is a water service company regulated by the California Public Utilities Commission (CPUC). Lifeline is a non-tariffed program operated by Suburban and is not regulated by the CPUC. The information and prices contained in this contract are, or will be in effect, as of April 1, 2025.

We reserve the right to change the terms, conditions and price of Lifeline by providing You with at least one (1) month advance notice of the change(s). Notice of change(s) may occur through any reasonable method, such as inclusion in our monthly service bill. Your payment of the monthly enrollment fee after the effective date of the change(s) constitutes Your acknowledgement of Your desire to continue Your enrollment in Lifeline and Your acceptance of the change(s) to the terms, conditions, and price. No enrollment fees paid prior to cancellation/termination per Section 8 are subject to refund. We reserve the right to discontinue Lifeline at any time.

1. What We Service.

Subject to the exceptions set forth below, Lifeline repairs or replaces Your "Lateral Line", which is the water pipe extending from Suburban's water meter to the outside foundation wall of the related residential dwelling. Where there is more than one structure, Lifeline only applies to the Lateral Line to the main/primary building. To be eligible for Lifeline, the Lateral Line must be no greater than 1-1/2 inches in diameter. A separate Lifeline enrollment, and payment of the monthly fee, is required for each additional service connection and/or Lateral Line on Your property. Lateral Line excludes any irrigation lines, auxiliary water lines serving swimming pools or accessory structures, or any use other than the residential structure designating the service address, even if such water pipes are connected to the Lateral Line.

2. When Our Service Responsibility Starts.

Your Lifeline enrollment commences on the date of the first service bill following our approval of Your enrollment. Before accepting Your Lifeline enrollment request and the obligation to repair or replace Your Lateral Line, we reserve the right to make an on-site inspection of (a) Your Lateral Line and the associated parts of Your premises' plumbing to ensure they are in proper operating condition and (b) the conditions of Your property to ensure We can provide Lifeline service. We reserve the right to refuse Your request Lifeline enrollment request for no reason or any reason. Lifeline is not transferable.

3. Our Obligations and Exceptions.

A. Obligations: When a leak is reported to Us, We or Our contractors will:

- i. Determine, in Our sole discretion, whether and how to repair or replace any portion of the Lateral Line.
- ii. Provide all parts, material and labor required to make the repair or replacement, including the cost of water service shut-off and the cost of excavation. We reserve the right to select the parts or materials used; however, all such parts and materials will comply with all applicable laws, regulations, codes and standards.
- iii. Clean-up Our worksite and remediate the area disturbed by Our work, consistent with the workmanlike performance standards. Remediation includes basic repairs to sidewalks and the filling, loaming and re-seeding of grass but does not include replacement of any other hardscaping or softscaping damaged by the leak or repair work, including any custom tiles or outbuildings.

B. Exceptions: Our obligation to repair and replace Your Lateral Line does not include:

- i. Repairing pre-existing leaks or improperly installed pipes and appurtenances.
- ii. Repairing leaks arising from digging or drilling by You or persons authorized by You.
- iii. Leaks arising from alterations made by You or anyone other than Us to the Lateral Line, including new service installations and relocations.
- iv. Repairing or replacing parts other than the Lateral Line, including items such as pressure-reducing valves, house valves, backflow devices, water softeners, hose bibs, booster pumps, irrigation and/or fire sprinkler systems.
- v. Leaks caused by flooding, sinkholes, terrorism, main breaks, landslides, civil disobedience, riot or war; however, We will repair leaks caused by freezing, earthquakes or other natural disasters.
- vi. Any labor, parts or other costs for repair or replacement performed by an unauthorized party. All work must be performed by Us or Our authorized contractors.
- vii. Flushing any sediment caused by Our repair work out of internal systems, such as toilets and water heaters.

**Only Homeowners/Landlords may apply (tenants may not)
No commercial buildings or apartments/condominiums
No need to reapply if you are already a Lifeline customer**

viii. Reimbursement for water that leaked from a damaged Lateral Line, or consumed during repairs, diagnostics, flushing, or other industry standard purposes associated with diagnosis and repair of residential plumbing systems.

4. Our Limited Role In Spotting Leaks; No Liability

Our personnel may make periodic visits to Your property to read Your water meter and will report to You and Us any leaks that they observe. Lifeline, however, does not include preventative maintenance to Your Lateral Line and We do not assume any liability for any failure by our personnel to detect any leak. See Section 7 below.

5. How to Report Leaks to Us.

If you spot a leak, promptly report it by calling us at 800.203.5430. We, or our contractor, will promptly respond to requests for service 24 hours a day, 7 days a week. The cost of bringing a crew to Your property is included in Lifeline. Response times may vary based on several factors, including but not limited to weather conditions, workload, and staffing levels. In most cases, We will dispatch a crew within 24 hours. We reserve the right to make temporary repairs and/or a temporary water connection in certain circumstances, including but not limited to, service calls occurring outside of normal business hours, when appropriate tools or materials are unavailable or when work cannot be safely completed with available staff, and make permanent repairs at a later date. If an unsafe working condition is present, as determined solely by Us, We reserve the right in our sole discretion to delay service until You make the area safe. If You refuse to make the area safe, We will terminate Lifeline and shall have no further obligation to repair or replace Your Lateral Line.

If You have any difficulty or complaints about our response, please call us at 800.203.5430.

6. Cost to You.

Lifeline costs \$6.97 per month, billed through Your monthly Suburban bill. We reserve the right to terminate Your enrollment for nonpayment.

7. Limitations of Liability

LIFELINE ONLY PROVIDES LATERAL LINE REPAIR AND REPLACEMENT AND IS NOT PROTECTION FROM THE CONSEQUENCES OF LEAKS, INCLUDING ANY PROPERTY DAMAGE.

EXCEPT AS SET FORTH BELOW WITH RESPECT TO ANY REPAIRS OR REPLACEMENTS ACTUALLY MADE UNDER THIS CONTRACT, NEITHER WE NOR ANY OF OUR AGENTS, CONTRACTORS, OR LICENSEES ARE LIABLE FOR ANY DAMAGES OF ANY TYPE ARISING FROM LEAKS IN YOUR LATERAL LINE.

WITH RESPECT TO ANY REPAIRS OR REPLACEMENTS ACTUALLY MADE UNDER THIS CONTRACT, NEITHER WE NOR OUR AGENTS, CONTRACTORS OR LICENSEES ARE LIABLE FOR ATTORNEYS' FEES OR INCIDENTAL OR CONSEQUENTIAL OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO PROPERTY DAMAGE, LOST TIME OR PROFITS, LOSS OF WATER SERVICE, EXCEPT AS ARE PROXIMATELY CAUSED BY OUR OR OUR AGENTS', CONTRACTORS' OR LICENSEES' NEGLIGENCE OR WILLFUL ACTS.

IN NO EVENT SHALL WE BE RESPONSIBLE FOR DELAYS OR FAILURES TO REPAIR OR REPLACE YOUR LATERAL LINE DUE TO CIRCUMSTANCES BEYOND OUR CONTROL, INCLUDING LABOR STRIKES, NATURAL CATASTROPHES, CIVIL DISTURBANCES, WEATHER, MATERIAL SHORTAGES, AND UNUSUAL WORK LOADS.

WE HEREBY EXPRESSLY DISCLAIM ANY AND ALL IMPLIED WARRANTIES, MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTIES NOT EXPRESSLY GRANTED IN THIS CONTRACT.

8. Cancellation and Termination.

Lifeline requires an initial one-year enrollment commitment. You may, however, cancel Your enrollment within the first sixty (60) days after enrollment and get a full refund if no leak has been reported to us during that period. After the first year, you can terminate Lifeline at any time. There is no charge for canceling after the first year but, if you cancel, there will be no proration of the last month's billing. Your enrollment will be automatically renewed on a continuing month-to-month basis after the anniversary date of Your initial enrollment.

Your Lifeline enrollment will continue unless (a) You or We cancel Your enrollment or (b) We discontinue Lifeline. To cancel Lifeline, please call us at 800.203.5430 or notify us in writing to Lifeline Program, P.O. Box 6105, Covina, CA 91722. Termination will be effective immediately.

9. Interpretation: This contract shall be governed by the laws of the state of California. This contract represents the entire agreement between You and Us regarding the subject matter hereof. No Suburban representative has authority to waive or alter any term of this contract or to make any representation, promise, guarantee or warranty other than as expressly written in the contract or in a written amendment to this contract as provided for above.

Terms and conditions are subject to change.

EXISTING Lifeline Customers - Please Do NOT Reapply

*Please complete and return form below with your bill.

Customer Name (please print) _____

Daytime Telephone Number _____ Alternate Telephone Number _____

Mailing Address _____ City _____ State _____ Zip _____

Service Address _____ City _____ State _____ Zip _____

Email Address _____ Account Number _____

By signing below, I understand that \$6.97 a month will be charged to my bill. I acknowledge that I have read all of the terms and conditions attached to this page and agree to abide by them.

X _____

Lifeline is only available for owners/landlords of single family dwellings served by Suburban Water Systems. Commercial buildings and condominiums/apartments are not eligible.

Rev. 1/25

Attachment 1-8:
3a. Lifeline Program

3. The following refers to Suburban’s Lifeline Maintenance Plan Program.
- a. Please provide in Excel format the following data regarding the Lifeline Maintenance Plan.
 Be sure to include the information on an annual basis since Suburban began the program. Also in

Year	Number of Participants	Per Month Cost for Enrollment	Number of Instances a Customer Used the Lifeline Service	Total hours of crew labor spent conducting services for Lifeline	
2001 – 2012	Information is not available (n/a)				
Recorded	2013	8,350	\$4.97	7	n/a
	2014	9,513	\$4.97	55	n/a
	2015	9,999	\$4.97	69	n/a
	2016	10,251	\$4.97	19	n/a
	2017	10,044	\$4.97	53	n/a
	2018	9,849	\$4.97	151	n/a
	2019	9,868	\$4.97	127	n/a
	2020	10,256	\$4.97	82	n/a
	2021	10,592	\$5.97	132	n/a
	2022	10,748	\$5.97	171	n/a
	2023	10,944	\$6.97	199	n/a
	2024	11,247	\$6.97	114	n/a
	2025	11,687	\$6.97	143	n/a
Estimated	2026e	11,687	\$6.97	unknown	n/a
	2027e	11,687	\$6.97	unknown	n/a
	2028e	11,687	\$6.97	unknown	n/a
	2029e	11,687	\$6.97	unknown	n/a

include the projected numbers for years 2026, 2027, 2028 and 2029.

Attachment 2-1:

DR_CR8-002_Q5a_2024_Fixed_Cost

(Excel Files Available via Email)

Attachment 2-2:

**PARTIAL RESPONSE #1 to A2601001
Cal PA DR DKG-001 (SIB-001 follow-up)**



**Suburban
Water Systems**

1325 N. Grand Ave. Ste. 100, Covina, CA 91724-4044
Phone: 626.543.2500, Fax: 626.331.4848
SuburbanWaterSystems.com

March 5, 2026

To: Daphne Goldberg
Utilities Engineer

Suliman Ibrahim
Project Coordinator

Corwin Hockema
Attorney for Public Advocates Office

Re.: PARTIAL RESPONSE #1 to A.26-01-001, Public Advocates Office DR DKG-001 (Response to SIB-001 follow up)

Dear Ms. Goldberg et al.,

Attached is the information you requested in writing for Suburban's Total Company General Rate Case.

Suburban will provide item numbers 3b – 3c, 4, 5, and 8 no later than March 10, 2026.

Sincerely,

/s/Carmelitha Bordelon

Carmelitha Bordelon
Vice President, Regulatory Affairs & Finance

Responses to A.26-01-001, Public Advocates Office

DR DKG-001 (Response to SIB-001 follow-up)

Except for Nos. 3b, 3c, 4, 5, and 8

1. During the February 12, 2026, meeting with Public Advocates Office, Suburban stated that it does not have a formal manual that provides guidance to Suburban employees on expense classification and recording in relation to ratemaking.

a. Does Suburban have an expense classification manual or other form of guidance to assist its employees with classifying expenses for ratemaking purposes?

Response:

Suburban does not maintain an internal expense classification manual or similar written guidance document for ratemaking purposes.

Suburban classifies expenses using Generally Accepted Accounting Principles (GAAP), together with the expense and account structure prescribed by the California Public Utilities Commission (CPUC) through its Uniform System of Accounts (USOA) and the expertise of Certified Public Accountants (CPAs) employed by Suburban.

Suburban's books and records are audited annually by an independent accounting firm to ensure they are presented fairly in all material respects.

b. If Suburban does have a manual or other form of guidance please provide a copy.

Response:

Not applicable.

c. If Suburban does not have any formal guidance, please explain how Suburban employees decide if an expense is appropriate for recording in its ratemaking books.

Response:

First, all expenses are recorded under GAAP, ensuring accuracy and proper accounting treatment. Employees then classify these expenses into ratemaking accounts using the CPUC's USOA, which establishes required account definitions, structures, and general accounting instructions for water utilities.

Therefore, even without an internal manual, Suburban ensure proper classification of expenses for ratemaking by applying GAAP and aligning its accounting with the CPUC-prescribed USOA.

2. Does Suburban remove one-time or non-reoccurring expenses from its forecast? If so, please explain the process and provide a copy of any employee guidance Suburban provides its employees.

Response:

Suburban does not conduct a separate screening process to identify, adjust, or exclude one-time or non-recurring expenses. Instead, all recorded expenses flow into the forecast as booked, and any consideration of whether individual expenses should be normalized or excluded is addressed during the GRC process, and the Commission's evaluation of the reasonableness of recorded costs.

Because Suburban does not make any adjustments to remove one-time or non-recurring expenses, Suburban does not maintain any employee guidance, written procedures, or internal policies instructing employees on how to identify or exclude such costs. No responsive internal guidance documents exist.

3. During the February 12, 2026, meeting with Public Advocates Office, Suburban stated that it "scrubbed" recorded expenses to remove unjust and unreasonable expenses. For each administrative and general expense account, provide the original unscrubbed 2024 amount. Provide Suburban's workpaper which shows the scrubbed compared to unscrubbed 2024 total.

Response:

During the February 12, 2026, meeting with Public Advocates Office, Suburban, specifically Ms. Carlson did not state that the "scrubbed" recorded expenses were removed because they were unjust and unreasonable, rather, Suburban explained that in the prior GRC, the Public Advocates Office recommended disallowance of the entire Employee Welfare account, despite the account containing a variety of costs unrelated to employee anniversary gifts or employee appreciation gatherings, which were the specific items Public Advocates opposed. An example of costs erroneously disallowed were company cell phone expenses which are necessary for conducting business.

Because the full-account disallowance in the last GRC resulted in an outcome Suburban considers inappropriate for ratemaking and not reflective of the actual composition of the account, Suburban has excluded those costs in this proceeding to avoid repeating that outcome.

Please see file entitled "DR DKG-001 #3 - 2024-Employee Welfare.xlsx" for the original unadjusted amount. The adjusted amount has been provided in response to data request SIB-001 (Hardcoded Data) in file entitled "08. Worksheet 5.1L 2020-2024 Detail Data.xlsx."

During the February 12, 2026, meeting with Public Advocates Office, Suburban stated that it "scrubbed" recorded expenses to remove unjust and unreasonable expenses. For each operation and maintenance expense account, provide the original unscrubbed 2024 amount. Provide Suburban's workpaper which shows the scrubbed compared to unscrubbed 2024 total.

Response:

As noted above, no Suburban employee stated, implied, or insinuated “scrubbed” recorded expenses were removed because they were unjust and unreasonable. Additionally, no operation and maintenance expense account was “scrubbed” in the recorded 2024 data.

Please provide the following details for Suburban’s expenses included in response to Public Advocates Office DR SIB-001:

Worksheet 5.1M

2. Worksheet 5-1M “2020-2024 Detail Data” includes entries with a “Description” of “CORP – CORP OH Assessment” (see table excerpt below).
 - a. Provide details of what is included in the “CORP OH Assessment” expense for each entry.
Response:
See attachment DR DKG-001 #2 – CORP OH Assessment.xlsx
 - b. Provide the formula for how the “CORP OH Assessment” is calculated. If the formula contains variables, define each variable. If the formula contains calculations within it, provide all the calculations in an attached spreadsheet.
Response:
See attachment DR DKG-001 #2 – CORP OH Assessment.xlsx
3. Worksheet 5-1M “2020-2024 Detail Data” includes entries with a “Description” which includes “Sober Living By The Sea” dated May 2022-August 2022 (see rows 555,569,570,572 of Worksheet 5-1M in table excerpt below)

Description	1. Fiscal year/period	Amount
P-CARD BEFORE CUT-OFF - SOBER LIVING BY THE SEA	May 2022	2,500.00
7-10B SOBER LIVING BY THE SEA	July 2022	2,500.00
7-10B SOBER LIVING BY THE SEA	July 2022	(2,500.00)
P-CARD BEFORE CUT-OFF - SOBER LIVING BY THE SEA	August 2022	(297.56)

- a. Provide details of what is included in each expense in rows 555,569,570,572.
Response:
Rows 555 and 572 represent an employee health insurance reimbursement and the associated overpayment refund.

Rows 569 and 570 represent an accrual and its corresponding reversal, resulting in a net total of zero dollars.
- b. Provide the invoice for each expense listed above.
- c. Provide the payment receipt for each expense listed above.

4. Worksheet 5-1M “2020-2024 Detail Data” includes an entry with a “Description” of “Methodist Hospital” dated January 2023 (see row 579 of Worksheet 5-1M in table excerpt below)

Description	1. Fiscal year/peri	Amount
METHODISTHOSPITAL- 24122	January 2023	2,150.00

- a. Provide details of what is included in the expense.
- b. Provide the expense invoice.
- c. Provide the payment receipt.

5. Worksheet 5-1M “2020-2024 Detail Data” includes entries with a “Description” which includes multiple law firm names (for example, see rows 237-358 of Worksheet 5-1M in table excerpt below)

9-5A-LEGAL ACCRUAL-WILLKIE FARR BOND OPINION SEP	September 2022	16,472.35
WILLKIE FARR & GALLAGHER LLP - 22224506	October 2022	16,472.35
AP ACCRUAL DINGESS, FOSTER, LUCIANA, DAVIDSON #6391	October 2022	9,967.50
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6391	November 2022	9,967.50
11-5A DINGESS ENVIRONMENTAL INSURANCE MATTER	November 2022	3,118.51
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6446	December 2022	3,118.51
NOSSAMAN LLP - 543340	January 2023	1,859.62
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6484	February 2023	6,007.50
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6607	March 2023	1,036.50
04-5A-LEGAL ACCRUAL-NOSSAMAN CPUC GENERAL	April 2023	2,160.00
05-5A-LEGAL ACCRUAL-NOSSAMAN CPUC GENERAL MAY	May 2023	5,440.00
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6717	May 2023	4,697.16
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6759	June 2023	7,729.04
NOSSAMAN LLP - 549569	June 2023	1,216.00
DINGESS, FOSTER, LUCIANA, DAVIDSON - 6846	August 2023	2,153.50
09-5A-LEGAL ACCRUAL-WILLKIE SWS DEBT UCC OPINION	September 2023	5,800.00
WILLKIE FARR & GALLAGHER LLP - 22326291	October 2023	5,752.50
DINGESS, FOSTER #6883	October 2023	23,390.23
FARELLA BRAUN #392746	October 2023	18,409.50
PC LAW GROUP #11947	October 2023	4,147.50
AHMAD ZAVITISANO #502173	October 2023	1,361.00
RECLASS PFAS FARELLA BRAUN #393066	November 2023	4,533.75
RECLASS-TRUE UP REGULATORY ACC	December 2023	27,181.76
12-5A-LEGAL ACCRUAL-HUNTON ANDREW #122021729	December 2023	3,497.50
HUNTON ANDREWS KURTH LLP - 122021729	January 2024	3,497.50
FARELLA BRAUN & MARTEL LLP - 408193	May 2024	4,481.10
AP ACCRUAL-FARELLA #403126	June 2024	25,089.30
FARELLA BRAUN & MARTEL LLP - 403126	July 2024	25,089.30

- a. Provide details of what is included in each expense listed in the table above. For example, for the “Dinges, Foster #6883” October 2023 entry for \$23,390.23, provide a non-privileged descriptions of the case and the work that Suburban hired Dinges, Foster for, the start and end date of the representation, and the outcome of the case (i.e. favorable decision to Suburban).
- b. Provide the invoice for each expense listed above.
- c. Provide the payment receipt for each expense listed above.

Worksheet 5.1L

6. Worksheet 5-1L “2020-2024 Detail Data” includes entries with a “Description” of “California Country Club” dated August 2023-November 2024 (see rows 12889,12968,12975,16741,16844,17051 of Worksheet 5-1L in table excerpt below)

Description	1. Fiscal year/period	Amount
AP ACCRUAL-CALIFORNIA COUNTRY CLUB#08312023	August 2023	3,669.23
AP ACCRUAL-CALIFORNIA COUNTRY CLUB#08312023	September 2023	(3,669.23)
CALIFORNIA COUNTRY CLUB - 8312023	September 2023	3,669.23
CALIFORNIA COUNTRY CLUB - DEPOSIT 12/12/24	October 2024	500.00
CALIFORNIA COUNTRY CLUB - CK103124	October 2024	4,730.00
CALIFORNIA COUNTRY CLUB - CK112124	November 2024	180.00

- a. Provide details of what is included in each expense in each row 12889, 12968, 12975, 16741, 16844, 17051.

Response:

- Rows 12889 and 12968 represent an accrual and its corresponding reversal, resulting in a net total of zero dollars.
- Row 12975 represents Employee Engagement Event.
- Rows 16741, 16844, and 17051 represent Year-End Employee Meeting Breakfast.

- b. Provide the invoice for each expense listed above.

- c. Provide the payment receipt for each expense listed above.

Responses b – c:

Please see file entitled:

- 6. CALIFORNIA COUNTRY CLUB - 8312023 Sep23.pdf
- 6. CALIFORNIA COUNTRY CLUB - CK103124 Oct24.pdf
- 6. CALIFORNIA COUNTRY CLUB - CK112124 Nov24.pdf
- 6. CALIFORNIA COUNTRY CLUB - DEPOSIT Dec24.pdf

7. Worksheet 5-1L “2020-2024 Detail Data” includes entries with a “Description” of “Pacific Palms” dated January 2020-January 2024 (see rows 3033, 3034, 3038, 3043, 10591, 10616, 12985, 13540, 13778, 14364 in table excerpt below)

Description	1. Fiscal year/period	Amount
P-Card After Cut-Off - PACIFIC PALMS RESORTH	January 2020	(175.00)
P-Card After Cut-Off - PACIFIC PALMS RESORTH	February 2020	175.00
P-Card Before Cut-Off - PACIFIC PALMS RESORTH	January 2020	1,062.04
P-Card Before Cut-Off - PACIFIC PALMS RESORTH	February 2020	(175.00)
AP ACCRUAL-PACIFIC PALMS RESORT#MF49870	January 2023	(678.26)
PACIFIC PALMS CONFERENCE RESORT(DB - MF49870	January 2023	678.26
PACIFIC PALMS CONFERENCE RESORT(DB - MF50126	September 2023	2,025.00
PACIFIC PALMS CONFERENCE RESORT(DB - MF50126	November 2023	8,260.28
PACIFIC PALMS CONFERENCE RESORT(DB - MF50126 - BAL	December 2023	564.14
JE 1-1MO PACIFIC PALMS RESORT	January 2024	(431.87)

- a. Provide details of what is included in each expense in each row 3033, 3034, 3038, 3043, 10591, 10616, 12985, 13540, 13778, 14364.

Response:

- Rows 3033 and 3034 represent an accrual and its corresponding reversal, resulting in a net total of zero dollars.
- Rows 3038 and 3043 reflect CWUEC meeting expenses, hosted by Mr. C. Gott, and paid by company credit card.
- Rows 10591 and 10616 represent an accrual and its corresponding reversal, resulting in a net total of zero dollars.
- Rows 12985, 13540, 13778, and 14364 reflect Year-End Employee Meeting Breakfast.

- b. Provide the invoice for each expense listed above.

- c. Provide the payment receipt for each expense listed above.

Responses b – c:

Please see file entitled:

- 7. PACIFIC PALMS Jan2020 \$1062.04.pdf
- 7. PACIFIC PALMS Feb2020 (-\$175).pdf
- 7. PACIFIC PALMS CONFERENCE RESORT (DB - MF50126) \$2025.pdf
- 7. PACIFIC PALMS CONFERENCE RESORT Nov23 \$8260.28.pdf
- 7. PACIFIC PALMS CONFERENCE RESORT Dec23 \$564.14.pdf
- 7. JE 1-1MO PACIFIC PALMS RESORT Jan24 (-\$431.87).pdf

Worksheet 5.1K

8. Worksheet 5-1K “2020-2024 Detail Data” includes entries with a “Description” which includes the word “Entertainment” dated November 2022-December 2024 (see table below, Worksheet 5-1K many rows, excerpt).

Description	1. Fiscal year/peri	Amount
101093/9017/ENTERTAINMENT- STAFF	November 2022	675.89
101093/9053/ENTERTAINMENT- STAFF	November 2022	149.90
50571/9539/ENTERTAINMENT- STAFF	January 2023	84.70
50571/9847/ENTERTAINMENT- CLIENTS	March 2023	59.86
50571/9836/ENTERTAINMENT- CLIENTS	March 2023	36.47
50571/9944/ENTERTAINMENT- STAFF	April 2023	19.99
50571/9944/ENTERTAINMENT- STAFF	April 2023	6.49
101254/10185/ENTERTAINMENT- STAFF	May 2023	247.43
101254/10185/ENTERTAINMENT- STAFF	May 2023	89.60
101254/10185/ENTERTAINMENT- STAFF	May 2023	83.29
101254/10185/ENTERTAINMENT- STAFF	May 2023	63.40
101254/10185/ENTERTAINMENT- STAFF	May 2023	54.49
50571/10184/ENTERTAINMENT- STAFF	May 2023	35.98
101039/10251/ENTERTAINMENT- STAFF	May 2023	83.81
101254/10300/ENTERTAINMENT- STAFF	May 2023	315.81
101039/10352/ENTERTAINMENT- STAFF	May 2023	530.00
101276/10331/ENTERTAINMENT- STAFF	May 2023	38.00
101039/10352/ENTERTAINMENT- STAFF	May 2023	27.90
101039/10422/ENTERTAINMENT- STAFF	June 2023	53.65
50110/10408/ENTERTAINMENT- STAFF	June 2023	34.78
101039/10741/ENTERTAINMENT- STAFF	July 2023	277.26
101039/10595/ENTERTAINMENT- STAFF	July 2023	54.96
101039/10594/ENTERTAINMENT- STAFF	July 2023	31.00
101039/10593/ENTERTAINMENT- STAFF	July 2023	15.54
101039/10760/ENTERTAINMENT- STAFF	July 2023	39.69
101101/10748/ENTERTAINMENT- STAFF	July 2023	39.00
101101/10748/ENTERTAINMENT- STAFF	July 2023	38.00
101101/10745/ENTERTAINMENT- STAFF	July 2023	18.53
101039/11107/ENTERTAINMENT- STAFF	September 2023	33.00
50431/11178/ENTERTAINMENT- STAFF	September 2023	43.42

101254/11267/ENTERTAINMENT- STAFF	October 2023	177.11
101254/11267/ENTERTAINMENT- STAFF	October 2023	88.82
101061/11188/ENTERTAINMENT- STAFF	October 2023	58.21
101061/11188/ENTERTAINMENT- STAFF	October 2023	30.83
101039/11293/ENTERTAINMENT- STAFF	October 2023	33.00
101101/11353/ENTERTAINMENT- STAFF	October 2023	210.22
101039/11366/ENTERTAINMENT- STAFF	October 2023	118.03
101101/11353/ENTERTAINMENT- STAFF	October 2023	34.20
101101/11353/ENTERTAINMENT- STAFF	October 2023	33.00
101065/11527/ENTERTAINMENT- STAFF	November 2023	64.44
50206/11534/ENTERTAINMENT- STAFF	November 2023	54.19
50103/11675/ENTERTAINMENT- STAFF	December 2023	43.91
101929/11774/ENTERTAINMENT- STAFF	December 2023	366.58
50206/11731/ENTERTAINMENT- STAFF	December 2023	132.89
101930/11840/ENTERTAINMENT- STAFF	December 2023	421.68
50206/11806/ENTERTAINMENT- STAFF	December 2023	63.77
101929/11893/ENTERTAINMENT- STAFF	December 2023	384.46
101061/11874/ENTERTAINMENT- STAFF	December 2023	50.17
101039/11885/ENTERTAINMENT- STAFF	December 2023	31.60
101061/11874/ENTERTAINMENT- STAFF	December 2023	5.99
101045/11919/ENTERTAINMENT- STAFF	January 2024	387.45
101045/11920/ENTERTAINMENT- STAFF	January 2024	381.90
101045/11916/ENTERTAINMENT- STAFF	January 2024	259.48
101045/11924/ENTERTAINMENT- STAFF	January 2024	230.65
101045/11923/ENTERTAINMENT- STAFF	January 2024	211.71
101045/11921/ENTERTAINMENT- STAFF	January 2024	137.00
100200/11914/ENTERTAINMENT- STAFF	January 2024	83.41
101093/11901/ENTERTAINMENT- STAFF	January 2024	56.46
101045/11922/ENTERTAINMENT- STAFF	January 2024	53.99
101093/11850/ENTERTAINMENT- STAFF	January 2024	38.94
101065/11947/ENTERTAINMENT- STAFF	January 2024	55.07
101093/12010/ENTERTAINMENT- STAFF	January 2024	43.08
101065/11947/ENTERTAINMENT- STAFF	January 2024	21.78
101930/12091/ENTERTAINMENT- STAFF	January 2024	52.15
50206/12092/ENTERTAINMENT- STAFF	January 2024	48.71
101039/12109/ENTERTAINMENT- STAFF	January 2024	34.93
50206/12093/ENTERTAINMENT- STAFF	January 2024	33.76
101929/12130/ENTERTAINMENT- STAFF	January 2024	301.58
101254/12150/ENTERTAINMENT- STAFF	January 2024	69.59
101065/12163/ENTERTAINMENT- STAFF	January 2024	68.16
101093/12135/ENTERTAINMENT- STAFF	January 2024	49.51
101093/12133/ENTERTAINMENT- STAFF	January 2024	45.70
101254/12150/ENTERTAINMENT- STAFF	January 2024	26.02
101065/12164/ENTERTAINMENT- STAFF	January 2024	24.45
50103/12225/ENTERTAINMENT- STAFF	February 2024	43.63
50206/12126/ENTERTAINMENT- STAFF	February 2024	41.02
50086/12294/ENTERTAINMENT- STAFF	February 2024	560.00
50086/12294/ENTERTAINMENT- STAFF	February 2024	9.65
50086/12294/ENTERTAINMENT- STAFF	February 2024	8.77
50206/12327/ENTERTAINMENT- STAFF	February 2024	239.74
101929/12348/ENTERTAINMENT- STAFF	February 2024	46.42
101093/12331/ENTERTAINMENT- STAFF	February 2024	24.26
101930/12371/ENTERTAINMENT- STAFF	February 2024	441.42
50206/12396/ENTERTAINMENT- STAFF	February 2024	123.48
101930/12370/ENTERTAINMENT- STAFF	February 2024	46.16
50103/12381/ENTERTAINMENT- CLIENTS	February 2024	29.75
20000337/12463/ENTERTAINMENT- STAFF	March 2024	259.03
101930/12454/ENTERTAINMENT- STAFF	March 2024	190.41
101095/12480/ENTERTAINMENT- STAFF	March 2024	67.50
101095/12480/ENTERTAINMENT- STAFF	March 2024	65.27
101930/12455/ENTERTAINMENT- STAFF	March 2024	25.21
50206/12459/ENTERTAINMENT- STAFF	March 2024	340.48
101929/12481/ENTERTAINMENT- STAFF	March 2024	293.75
50103/12551/ENTERTAINMENT- STAFF	March 2024	58.80
101930/12634/ENTERTAINMENT- STAFF	March 2024	291.83
101093/12633/ENTERTAINMENT- STAFF	March 2024	190.59
20000005/12625/ENTERTAINMENT- STAFF	March 2024	40.37
101101/12632/ENTERTAINMENT- STAFF	March 2024	38.48
101016/12654/ENTERTAINMENT- STAFF	March 2024	37.32
101016/12654/ENTERTAINMENT- STAFF	March 2024	17.99
101016/12654/ENTERTAINMENT- STAFF	March 2024	9.99
03RECLASSOOP-101065-CARBAJAL, DARRIN/ENTERTAINMENT	March 2024	68.16
03RECLASSOOP-101065-CARBAJAL, DARRIN/ENTERTAINMENT	March 2024	(68.16)
101929/12679/ENTERTAINMENT- STAFF	April 2024	399.71

101039/12671/ENTERTAINMENT- STAFF	April 2024	38.98
101039/12670/ENTERTAINMENT- STAFF	April 2024	37.12
101039/12672/ENTERTAINMENT- STAFF	April 2024	35.00
101039/12669/ENTERTAINMENT- STAFF	April 2024	33.20
101065/12729/ENTERTAINMENT- STAFF	April 2024	560.64
101929/12734/ENTERTAINMENT- STAFF	April 2024	239.23
20000337/12726/ENTERTAINMENT- STAFF	April 2024	217.58
101016/12795/ENTERTAINMENT- STAFF	April 2024	29.87
101929/12987/ENTERTAINMENT- STAFF	May 2024	529.47
101101/12901/ENTERTAINMENT- STAFF	May 2024	19.50
101095/13108/ENTERTAINMENT- STAFF	May 2024	24.50
101930/13167/ENTERTAINMENT- STAFF	May 2024	259.32
101095/13162/ENTERTAINMENT- STAFF	May 2024	208.20
101276/13116/ENTERTAINMENT- STAFF	May 2024	66.00
101276/13112/ENTERTAINMENT- STAFF	May 2024	53.08
101930/13166/ENTERTAINMENT- STAFF	May 2024	31.15
101016/13131/ENTERTAINMENT- STAFF	May 2024	19.99
101016/13131/ENTERTAINMENT- STAFF	May 2024	9.99
101930/13100/ENTERTAINMENT- STAFF	June 2024	385.02
20000337/13168/ENTERTAINMENT- STAFF	June 2024	194.10
101276/13185/ENTERTAINMENT- STAFF	June 2024	39.00
101095/13294/ENTERTAINMENT- STAFF	June 2024	24.50
101095/13401/ENTERTAINMENT- STAFF	July 2024	388.53
50206/13410/ENTERTAINMENT- STAFF	July 2024	231.44
50206/13409/ENTERTAINMENT- STAFF	July 2024	173.42
101039/13426/ENTERTAINMENT- STAFF	July 2024	35.75
101061/13455/ENTERTAINMENT- STAFF	July 2024	35.00
101061/13455/ENTERTAINMENT- STAFF	July 2024	33.48
101061/13455/ENTERTAINMENT- STAFF	July 2024	18.98
101930/13501/ENTERTAINMENT- STAFF	July 2024	238.05
101929/13541/ENTERTAINMENT- STAFF	July 2024	242.67
101039/13699/ENTERTAINMENT- STAFF	August 2024	18.95
101929/13745/ENTERTAINMENT- STAFF	September 2024	522.51
50206/13852/ENTERTAINMENT- STAFF	September 2024	171.70
101276/13883/ENTERTAINMENT- STAFF	September 2024	73.69
101101/13879/ENTERTAINMENT- STAFF	September 2024	33.00
101930/13924/ENTERTAINMENT- STAFF	September 2024	503.27
101929/13873/ENTERTAINMENT- STAFF	September 2024	478.71
50206/13915/ENTERTAINMENT- STAFF	September 2024	127.17
20000337/14059/ENTERTAINMENT- STAFF	October 2024	32.53
20000337/14059/ENTERTAINMENT- STAFF	October 2024	28.19
20000337/14059/ENTERTAINMENT- STAFF	October 2024	26.98
101929/14132/ENTERTAINMENT- STAFF	October 2024	502.69
20000337-RIVERA, ISMAEL/ENTERTAINMENT- STAFFNEXUS	October 2024	(32.53)
101930/14203/ENTERTAINMENT- STAFF	November 2024	548.62
50353/14196/ENTERTAINMENT- STAFF	November 2024	139.73
101039/14237/ENTERTAINMENT- STAFF	November 2024	30.94
50353/14263/ENTERTAINMENT- STAFF	November 2024	99.60
101276/14284/ENTERTAINMENT- STAFF	November 2024	38.00
50300/14359/ENTERTAINMENT- STAFF	November 2024	600.65
101929/14464/ENTERTAINMENT- STAFF	December 2024	417.07
50206/14459/ENTERTAINMENT- STAFF	December 2024	188.53
50206/14476/ENTERTAINMENT- STAFF	December 2024	152.64
50206/14458/ENTERTAINMENT- STAFF	December 2024	146.96
101929/14524/ENTERTAINMENT- STAFF	December 2024	432.03
50709/14519/ENTERTAINMENT- STAFF	December 2024	41.98
101061/14518/ENTERTAINMENT- STAFF	December 2024	33.48
101039/14540/ENTERTAINMENT- STAFF	December 2024	31.61
AP ACCRUAL- MEDINA, TOMMYD-ENTERTAINMENT- STAFFS	December 2024	26.00

- a. Provide details of what is included in each expense in each row of the table above.
- b. Provide the invoice for each expense listed above.
- c. Provide the payment receipt for each expense listed above.

9. Worksheet 5-1K “2020-2024 Detail Data” includes entries with a “Vendor” which include many rows of names of people (refer to Worksheet 5-1K, column AI). For example, row 28629 includes the name “Victor Mendoza” in the “Vendor” column and the expense amount is \$200 in column AQ.

- a. Explain if all the people listed are Suburban employees.

Response:

No, not all individuals listed are Suburban employees. The list also includes Suburban’s external vendors.

- b. Identify the names that are not Suburban employees and state which company they work for.

Response:

Please refer to column AT in file titled “DR DKG-001 #9 – Reference to Worksheet 5-1K 2020-2024 (Vendor).xlsx” for the applicable identifier.

Several of the names listed do not represent individual persons, instead they reflect a company or vendor entities. For entries that are not Suburban employees, the vendor name indicates that the individual or entity is a vendor to whom Suburban makes payments for services rendered. Suburban cannot identify an “employer” for those entries because they do not correspond to employees of any company, but rather to organizational or vendor accounts established for billing and payment purposes.

- c. If the names of people listed are Suburban employees, explain why each person is listed as a “vendor”.

Response:

Suburban’s SAP system establishes all payees as “vendor” for purposes of initiating and processing disbursements, which applies uniformly to both employees and non-employees. Accordingly, where Suburban employees appear in the file, they are designated as “vendor” solely due to the standardized SAP payee-setup process.

10. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “DR POOCH FOUNDATION” dated September 2021 (see table below, Worksheet 5-1K row 11427, excerpt).

DR POOCH FOUNDATION - 1001	September 2021	1,416.67
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- a. Provide details of what is included in the expense.

Response:

The expense relate to Chidren's Book Based on Water treatment Process.

- b. Provide the invoice for the expense listed above.
Response:
Please refer to the file titled “10. DR POOCH FOUNDATION #1001.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

11. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “ACTIVE SOCIAL MEDIA LLC” dated September 2021 (see table below, Worksheet 5-1K row 11647, excerpt).

ACTIVE.SOCIAL.MEDIA.LLC - 378	September 2021	850.00
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- a. Provide details of what is included in the expense.
Response:
Social media post-production related expense.
- b. Provide the invoice for the expense listed above.
Response:
Please refer to the file titled “11. ACTIVE SOCIAL #378.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

12. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “DJ TEMPOE ENTERTAINMENT” dated November 2021, November 2022, August 2023, and November 2024 (see table below, Worksheet 5-1K rows 12831, 19336, 25440, 34577 excerpt).

DJ TEMPOE ENTERTAINMENT INC - CK1 12221	November 2021	945.00
DJ TEMPOE ENTERTAINMENT INC - 419032	November 2022	1,006.25
DJ TEMPOE ENTERTAINMENT INC - 420235-371	August 2023	1,331.13
DJ TEMPOE ENTERTAINMENT INC - 422256	November 2024	1,331.13

- a. Provide details of what is included in each expense.
Response:
Music host for Operation Gobble community event.
- b. Provide the invoices for the expense listed above.

Response:

Please refer to the file titled:

- 12-1. DJ TEMPOE ENTERTAINMENT INC - CK112221.pdf
- 12-2. DJ TEMPOE ENTERTAINMENT INC - 419032.pdf
- 12-3. DJ TEMPOE ENTERTAINMENT INC - 420235-371.pdf
- 12-4. DJ TEMPOE ENTERTAINMENT INC - 422256.pdf

c. Provide the payment receipts for each expense listed above.

Response:

Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

13. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “First Christian Church” dated December 2023 (see table below, Worksheet 5-1K row 27668, excerpt).

First Christian Church - ACCT6000018876	December 2023	9,410.29
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a. Provide details of what is included in the expense.

Response:

Customer Refund for Meter size adjustment.

b. Provide the invoice for the expense listed above.

Response:

Please refer to file titled “13. FIRST CHRISTIAN CHURCH.pdf”

c. Provide the payment receipt for the expense listed above.

Response:

Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

14. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “Lowell Joing School Dist” dated December 2023 (see table below, Worksheet 5-1K row 27670, excerpt).

Lowell Joing School Dist - ACCT6000165780	December 2023	7,763.18
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a. Provide details of what is included in the expense.

Response:

Customer Refund for Meter size adjustment.

b. Provide the invoice for the expense listed above.

Response:

Please refer to file titled “14. LOWELL JOING SCHOOL DIST.pdf”

- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

15. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “Rowland Unified School Dist” dated December 2023 (see table below, Worksheet 5-1K row 27671, excerpt).

Rowland Unified School District - ACCT6000099687	December 2023	6,828.02
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- a. Provide details of what is included in the expense.
Response:
Customer Refund for Meter size adjustment.
- b. Provide the invoice for the expense listed above.
Response:
Please refer to file titled “15. ROWLAND UNIFIED SCHOOL DISTRICT.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

16. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “Golden Mateur Inc” dated December 2023 (see table below, Worksheet 5-1K row 27683, excerpt).

Golden Mateur Inc - ACCT6000148904	December 2023	2,242.79
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- a. Provide details of what is included in the expense.
Response:
Customer Refund for Meter size adjustment.
- b. Provide the invoice for the expense listed above.
Response:
Please refer to file titled “16. GOLDEN MATEUR INC.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

17. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “The Pizza Press” dated December 2023 (see table below, Worksheet 5-1K row 27673, excerpt).

The Pizza Press Whittier - ACCT6000141764	December 2023	4,567.09
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- a. Provide details of what is included in the expense.
Response:
Customer Refund for Meter size adjustment.
- b. Provide the invoice for the expense listed above.
Response:
Please refer to file titled “17. THE PIZZA PRESS WHITTIER.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

18. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “MODERN SUV LIMOUSINE INC” dated April 2023-April 2024 (see table below, Worksheet 5-1K rows 22814, 29104, 30411 excerpt).

Description	1. Fiscal year/period	Amount
MODERN SUV LIMOUSINE INC - 31572	April 2023	968.50
MODERN SUV LIMOUSINE INC - 21571	February 2024	1,001.28
MODERN SUV LIMOUSINE INC - 4007	April 2024	1,746.88

- a. Provide details of what is included in each expense.
Response:
Small tour bus transportation for legislative and city tours of Suburban plant sites and infrastructure.
- b. Provide the invoices for the expense listed above.
Response:
Please refer to file titled:
 - 18-1. MODERN SUV LIMOUSINE INC #31572.pdf
 - 18-2. MODERN SUV LIMOUSINE INC #21571.pdf
 - 18-3. MODERN SUV LIMOUSINE INC #4007.pdf
- c. Provide the payment receipts for each expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

19. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “NEXT LEVEL EMPYRE LLC” dated January 2024-December 2024 (see table below, Worksheet 5-1K rows 28589, 28984, 29596, 30142, 30676, 31266, 31906, 32580, 33117, 33718, 34481, 35007 excerpt).

NEXTLEVELEMPYRE LLC - 142024	January 2024	4,000.00
NEXTLEVELEMPYRE LLC - 2052024	February 2024	4,000.00
NEXTLEVELEMPYRE LLC - MARCH 5TH,2024	March 2024	4,000.00
NEXTLEVELEMPYRE LLC - APRIL 4TH 2024	April 2024	4,000.00
NEXTLEVELEMPYRE LLC - MAY 2ND,2024	May 2024	4,150.00
NEXTLEVELEMPYRE LLC - JUNE 2ND, 2024	June 2024	4,000.00
NEXTLEVELEMPYRE LLC - JULY 2ND 2024	July 2024	4,000.00
NEXTLEVELEMPYRE LLC - AUGUST 2ND,2024	August 2024	4,000.00
NEXTLEVELEMPYRE LLC - SEPT 3RD 2024	September 2024	4,000.00
NEXTLEVELEMPYRE LLC - OCTOBER 2ND,2024	October 2024	5,600.00
NEXTLEVELEMPYRE LLC - NOV 2ND 2024	November 2024	5,000.00
NEXTLEVELEMPYRE LLC - DECEMBER 2ND	December 2024	5,000.00

a. Provide details of what is included in each expense.

Response:

Social Media Management & Content Creation.

b. Provide the invoices for the expense listed above.

Response:

Please refer to file titled:

- 19-1. NEXT LEVEL EMPYRE LLC - 142024.pdf
- 19-2. NEXT LEVEL EMPYRE LLC – 2052024.pdf
- 19-3. NEXT LEVEL EMPYRE LLC - MARCH 5TH,2024.pdf
- 19-4. NEXT LEVEL EMPYRE LLC - APRIL 4TH 2024.pdf
- 19-5. NEXT LEVEL EMPYRE LLC - MAY 2ND,2024.pdf
- 19-6. NEXT LEVEL EMPYRE LLC - JUNE 2ND, 2024.pdf
- 19-7. NEXT LEVEL EMPYRE LLC - JULY 2ND 2024.pdf
- 19-8. NEXT LEVEL EMPYRE LLC - AUGUST 2ND 2024.pdf
- 19-9. NEXT LEVEL EMPYRE LLC - SEPT 3RD 2024.pdf
- 19-10. NEXT LEVEL EMPYRE LLC - OCTOBER 2ND,2024.pdf
- 19-11. NEXT LEVEL EMPYRE LLC - NOV 2ND 2024.pdf
- 19-12. NEXT LEVEL EMPYRE LLC - DECEMBER 2ND.pdf

c. Provide the payment receipts for each expense listed above.

Response:

Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

20. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “OREGON WATER UTILITIES” dated January 2023 (see table below, Worksheet 5-1K row 20820, excerpt).

OREGON WATER UTILITIES - 180012844651	January 2023	49.58
---------------------------------------	--------------	-------

- a. Provide details of what is included in the expense.
Response:
Water bill.
- b. Provide the invoice for the expense listed above.
Response:
Please refer to file titled “20. OREGON WATER #1900204151.pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

21. Worksheet 5-1K “2020-2024 Detail Data” includes an entry with a “Description” of “ALABAMA UTILITIES SERVICES” dated September 2023 (see table below, Worksheet 5-1K row 26113, excerpt).

ALABAMA UTILITIES SERVICES - 9945040644	September 2023	8.93
---	----------------	------

- a. Provide details of what is included in the expense.
Response:
Verizon Wireless service charge. The vendor is Verizon Wireless rather than Alabama Utilities.
- b. Provide the invoice for the expense listed above.
Response:
Please see file entitled “21. VERIZON #9945040644 .pdf”
- c. Provide the payment receipt for the expense listed above.
Response:
Please refer to the file titled “DR DKG-001 #10 - #21 Payment Receipt Responses.pdf.”

Attachment 2-3:

A.25-01-001, EXHIBIT SG-4 (Reiker)

Application No. _____

Exhibit No. SG-4

Witness _____

Date _____

SAN GABRIEL VALLEY WATER COMPANY

DIRECT TESTIMONY OF

JOEL M. REIKER

January 2025

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**DIRECT TESTIMONY OF
JOEL M. REIKER**

I. Introduction and Qualifications

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND TITLE.

A. My name is Joel M. Reiker, and I am Vice President of Regulatory Affairs for San Gabriel Valley Water Company (“San Gabriel” or “Company”). As Vice President of Regulatory Affairs, I have overall responsibility for regulatory matters including general rate case (“GRC”) applications, advice letters, tariffs and other filings before the California Public Utilities Commission (“CPUC” or “Commission”). I also oversee the development of procedures and controls to ensure organizational compliance and I perform general executive management responsibilities under the direction of San Gabriel’s President.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from the Arizona State University School of Management, receiving a Bachelor of Science degree in global business with a specialization in finance. I have attended the National Association of Regulatory Utility Commissioners and the Institute of Public Utilities' Regulatory Studies program at Michigan State University, and I have completed undergraduate coursework in water resources management and water distribution system operation and maintenance.

I have over 25 years of experience in the field of public utility regulatory policy and ratemaking. I was employed by the Arizona Corporation Commission (“ACC”) as an Auditor and a Rate Analyst in the ACC’s Utilities Division for five years. During my employment with the ACC, my responsibilities included providing recommendations on behalf of the Utilities Division regarding the cost of capital, mergers and acquisitions, divestitures, financings, and affiliate transactions. I have also acted as an arbitrator in disputes brought before the Utilities Division.

Subsequent to my employment with the ACC, I was employed by the American Water Works Service Company ("American Water") as a Senior Regulatory Analyst. My

1 responsibilities with American Water included the preparation and support of regulatory
2 filings, including GRCs, on behalf of utility subsidiaries in Arizona, California, New
3 Mexico and Hawaii. In 2007, I joined San Gabriel’s regulated affiliate, Arizona Water
4 Company, as Manager of Rates and Regulatory Accounting, and in 2012, I was promoted
5 to the position of Vice President – Rates and Revenues. In 2015, I accepted the position
6 of Vice President of Regulatory Affairs with San Gabriel.

7
8 I am Second Vice President, Director, and former General Secretary and Treasurer of the
9 California Water Association, which represents the interests of investor-owned water
10 utilities serving more than six million customers in California, and I serve on the Board of
11 Directors of Arizona Water Company. I am a member of the American Water Works
12 Association and the Society of Utility and Regulatory Financial Analysts (“SURFA”). I
13 am designated by SURFA as a Certified Rate of Return Analyst, and I have been a certified
14 water distribution system operator in the state of Arizona.

15 **Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE REGULATORY**
16 **COMMISSIONS?**

17 A. Yes. I have testified before the CPUC on issues regarding revenue requirement, the cost
18 of capital, risk and revenue decoupling. I have testified in Arizona on behalf of both
19 regulated utilities and the ACC staff in cases involving rates, mergers and acquisitions,
20 financings, complaints, and affiliate transactions, and I have filed testimony with the New
21 Mexico Public Regulation Commission addressing marginal cost-based special contracts
22 for large industrial customers.

23 **Q. PLEASE DESCRIBE YOUR RESPONSIBILITY FOR THIS GRC.**

24 A. I am the project manager for this total company GRC. As such, it is my responsibility to
25 coordinate, review, and supervise the preparation of San Gabriel’s GRC Application and
26 all supporting testimony and exhibits.

27 **II. Purpose and Scope of Testimony**

28 **Q. WHAT IS THE SCOPE OF YOUR TESTIMONY IN THIS PROCEEDING?**

29 A. I address several issues in this proceeding, including San Gabriel’s revenue requirement
30 calculations, proposed rate design, special requests, compliance with prior Commission

1 decisions, and satisfaction of the Minimum Data Requirements (“MDR”) of the
2 Commission’s Rate Case Plan (“RCP”).

3 **Q. ARE YOU FAMILIAR WITH THE EXHIBITS FILED BY SAN GABRIEL AND**
4 **IDENTIFIED AS SG-1, SG-2, AND SG-3 IN THIS PROCEEDING?**

5 A. Yes. The **EXHIBITS** marked as **SG-1, SG-2** and **SG-3** are the Reports on Operations for
6 San Gabriel’s General Office, Los Angeles County, and Fontana Water Company
7 divisions, respectively.

8 **Q. WERE THESE EXHIBITS PREPARED BY YOU OR UNDER YOUR DIRECTION**
9 **AND SUPERVISION?**

10 A. Yes, they were. In this proceeding I sponsor and adopt as part of my testimony those
11 portions of **EXHIBITS SG-1, SG-2** and **SG-3** that are covered herein.

12 **Q. DO YOU ALSO SPONSOR WORKPAPERS SUPPORTING THESE EXHIBITS?**

13 A. Yes. I sponsor the electronic Excel revenue requirement workbook \GRCWorkpapers –
14 2025.xlsx\, which supports San Gabriel’s proposed revenue requirement and rate design in
15 this proceeding. With the exception of purchased power expense, the revenue requirement
16 workbook (\GRCWorkpapers – 2025.xlsx) contains worksheets for all components of the
17 revenue requirement and rate design, as follows:
18

TABLE 1

Excel File:\GRC Workpapers – 2025.xlsx\		
Sheet/Tab	Divisions	Description
TOC1	General, L.A. County, Fontana Water Co.	Table of Contents
GI1	General, L.A. County, Fontana Water Co.	General Information such as test year, escalation years, escalation rates, tax rates, and allocation factors.
SOE1	L.A. County, Fontana Water Co.	Summary of Earnings.
RB1	L.A. County, Fontana Water Co.	Average Depreciated Rate Base.

P1	General, L.A. County, Fontana Water Co.	Capita Budget and Overheads.
P2	General, L.A. County, Fontana Water Co.	Utility Plant, Depreciation, Contributions in Aid of Construction, Advances in Aid of Construction, Materials & Supplies, Water Entitlements.
P3	General, L.A. County, Fontana Water Co.	Ratemaking Adjustments.
P4	General, L.A. County, Fontana Water Co.	Federal and State Tax Depreciation.
WC1	L.A. County, Fontana Water Co.	Working Cash Calculation and Lead/Lag Study.
EX1	General, L.A. County, Fontana Water Co.	Operating Expense Summary.
EX2	General, L.A. County, Fontana Water Co.	Operating Expense Detail.
EX3	L.A. County, Fontana Water Co.	Purchased Water and Pumping Assessments.
EX4	L.A. County, Fontana Water Co.	General Liability/Business Package Insurance.
PR1	General, L.A. County, Fontana Water Co.	Payroll – Insurance premiums, payroll tax rates, and 401k contribution limits.
PR2	General, L.A. County, Fontana Water Co.	Payroll forecast summary.
PR3	General, L.A. County, Fontana Water Co.	Payroll Payroll-related costs by account.
PR4	General, L.A. County, Fontana Water Co.	Payroll Forecast Detail – CONFIDENTIAL.
TX1	General, L.A. County, Fontana Water Co.	Ad Valorem (Property) Taxes.
TX2	L.A. County, Fontana Water Co.	Income Taxes, Prepaid Taxes, and Deferred Income Taxes.
RV1	L.A. County, Fontana Water Co.	Customers, Water Sales, and Production.

RV2	L.A. County, Fontana Water Co.	Operating Revenues.
RD1	L.A. County, Fontana Water Co.	Revenue Requirement, Required Increase, and Rate Design.
MDR1	General, L.A. County, Fontana Water Co.	Minimum Data Requirements.
TABLES1	General, L.A. County, Fontana Water Co.	EXHIBITS SG-1, SG-2 and SG-3 Revenue Requirement Tables.
TABLES2	L.A. County, Fontana Water Co.	EXHIBITS SG-2 and SG-3 Present and Proposed Rates Tables.
TABLES3	L.A. County, Fontana Water Co.	EXHIBITS SG-2 and SG-3 Typical Bill Comparison Tables.

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Company witness Patricia G. Butcher (**EXHIBIT SG-11**) sponsors two Excel workbooks supporting San Gabriel’s Test Year purchased power expenses for the Los Angeles County and Fontana Water Company divisions (\LAPurchased Power - 2025.xlsx\ and FWCPurchased Power - 2025.xlsx).

III. The Concept of Just and Reasonable Rates

Q. WHAT IS A JUST AND REASONABLE RATE?

A. In the context of public utility regulation, a just and reasonable rate (in the aggregate) is one that provides the utility with a reasonable opportunity to recover its cost of providing service, including the cost of capital deployed in the provision of such service, to the public. The authoritative text on utility ratemaking by professors Bonbright, Danielsen and Kamerschen provides the following statement on cost of service as the standard of reasonableness:

No writer whose views on public utility rates command respect purports to find a single yardstick by sole reference to which rates may be judged reasonable or socially desirable as distinguished from rates that are unreasonable or adverse to the public interest. A complex of tests of acceptability is required just as would be the case with the tests of a good automobile, a good income-tax law, or a good poem. Nevertheless, one standard of reasonable rates can fairly be said to outrank all others in the importance attached to it by experts and public opinion alike – the standard

1 of costs of service, often qualified by the stipulation that the relevant cost is
2 necessary, true (i.e., private and social) cost or cost reasonably or prudently
3 incurred.¹
4

5 A specific rate charged to an individual customer may not be precisely equal to the cost of
6 providing service to that specific customer. Such an individual rate can still be considered
7 just and reasonable, provided that some overriding benefit or public policy goal is realized,
8 and provided that the overall rate level (*i.e.* the aggregate rate), on average over the long-
9 term, is equal to the cost of service.

10 **Q. ARE UTILITIES THAT CHARGE LESS THAN A JUST AND REASONABLE**
11 **RATE STILL OBLIGATED TO PROVIDE SERVICE TO THE PUBLIC?**

12 A. Yes. Public utilities have an obligation to serve all customers in their service territory who
13 desire such service, regardless of whether or not the rates charged fully recover the cost of
14 service. However, it is also the duty of a regulated utility to act in the long-term best
15 interests of its customers by seeking appropriate rate relief when rates do not adequately
16 recover the reasonable cost of providing service. As mentioned above, a request for such
17 rate relief requires the regulator to determine the utility's cost of service and to set new
18 rates that allow a fair opportunity to recover that cost of service. This arrangement is
19 known as the "regulatory compact." The regulatory compact states that in return for being
20 granted the exclusive right to provide utility service to the certificated area, the regulated
21 utility assumes an obligation to serve (and the attendant risks that come with that
22 obligation), with just and reasonable compensation for such service being equal to the costs
23 prudently incurred.

24 **Q. IS A UTILITY ACTING IN THE LONG-TERM INTERESTS OF ITS**
25 **CUSTOMERS BY SEEKING RATE RELIEF?**

26 A. Yes. A utility whose rates are less than its total cost of service still incurs that cost of
27 service. Put another way, if the parties benefiting from a particular service are not paying
28 for that service, somebody else must pick up the tab. In the case of a regulated public
29 utility and in the absence of any public subsidies, it is the owners of that utility who pay

¹Bonbright, James C., Albert L. Danielsen and David R. Kamerschen. Principles of Public Utility Rates (Public Utilities Reports, Inc. 1988) p. 109.

1 those costs, or "pick up the tab." This situation sometimes occurs in the short-term, as one
2 might expect actual revenues to fluctuate around actual costs in any given year. However,
3 over the long-term, those fluctuations should cancel each other out such that, *on average*,
4 rates are equal to cost. If rates are consistently lower than cost, the owners of the utility
5 are forced to subsidize the cost of service, which is not sustainable in the long-term. That
6 situation, aside from encouraging inefficient and excessive water consumption in the near-
7 term, has the undesirable effect of unnecessarily increasing costs in the future.

8 **Q. HOW DOES THAT HAPPEN?**

9 A. The utility's investors provide the capital necessary to build, improve, repair and replace
10 the infrastructure required to provide safe and reliable water service. It is important to
11 distinguish this capital, which represents an *investment* on the part of owners, from the
12 costs associated with *running* the utility which, as mentioned above, include costs
13 associated with deploying said capital (*i.e.* the rate of return). Each dollar of these non-
14 capital operating costs that the owners of the utility are required to pay represents one less
15 dollar that would otherwise be available to build, improve, repair and replace necessary
16 infrastructure. Over time, subsidizing the cost of service creates financial pressure to
17 reduce or delay improvements, operate the utility in a weakened financial condition or, in
18 some cases, divert shareholder capital to other enterprises. Because water utilities operate
19 in a rising-cost industry, when utility plant improvements are eventually made, they come
20 at an even higher cost. Additionally, operating the utility in a weakened financial condition
21 increases the future cost associated with the capital needed to make those improvements.

22 **Q. HOW IS THE FOREGOING DISCUSSION RELEVANT TO SAN GABRIEL'S**
23 **REQUEST FOR RATE RELIEF IN THIS PROCEEDING?**

24 A. Given the regulatory compact explained above, any question regarding the appropriate
25 revenue requirement to be adopted in this proceeding can only be answered by
26 appropriately estimating San Gabriel's cost of service over the period new rates will be in
27 effect, and setting rates at a level designed to recover that cost of service, in the aggregate.
28 That is not to say that the individual rates charged to a particular class of customers cannot
29 be designed to further public policy goals.

1 **IV. Revenue Requirement**

2 **1. Forecasts in General**

3 **Q. PLEASE DESCRIBE SAN GABRIEL’S GENERAL PROCEDURE FOR MAKING**
4 **TEST YEAR FORECASTS.**

5 A. Unless San Gabriel has specific knowledge of facts and circumstances that produce a more
6 accurate test year forecast, the Company uses a five-year average of recorded figures,
7 adjusted for inflation. In some instances, for particular reasons, the most recent recorded
8 annual expense may provide a better basis for the test year forecast. In cases where specific
9 information indicates that a recorded five-year inflation-adjusted average will not produce
10 the most reliable result, San Gabriel incorporates such information into the forecast. For
11 example, forecasted labor expense reflects not only inflation-related cost escalation, but
12 also any known and measurable adjustments to wage rates, proposed additions to the
13 workforce, and other organizational changes. Forecasted purchased power expense reflects
14 the power that will be required by proposed future plant additions occurring through the
15 test year, as well as existing facilities. The specific forecasts for Estimated Year 2025, Test
16 Year 2026-2027, and Escalation Years 2027-2028 and 2028-2029 expenses are described
17 in more detail below.

18 **Q. PLEASE EXPLAIN THE GENERAL METHODOLOGY SAN GABRIEL USED TO**
19 **FORECAST OPERATIONS AND MAINTENANCE (“O&M”) AND**
20 **ADMINISTRATIVE AND GENERAL (“A&G”) EXPENSES FOR TEST YEAR**
21 **2026-2027.**

22 A. San Gabriel’s forecasts of Test Year O&M expense are presented in TABLE 4 of
23 **EXHIBIT SG-1** for the General division, and TABLE 5A of **EXHIBITS SG-2** and **SG-3**
24 for the Los Angeles County and Fontana Water Company divisions, respectively. San
25 Gabriel’s forecasts of Test Year A&G expenses are presented in TABLE 4 of **EXHIBIT**
26 **SG-1** for the General division, and TABLE 6 of **EXHIBITS SG-2** and **SG-3** for the Los
27 Angeles County and Fontana Water Company divisions, respectively.

28
29 The O&M and A&G expense forecasts presented in the above-referenced tables for the
30 General, Los Angeles County, and Fontana Water Company divisions are developed in

1 WORKPAPER EX1. O&M and A&G expenses are, in general, forecasted on a calendar
 2 year basis, using 5-year inflation-adjusted averages of recorded data (2020 through 2024)
 3 and the escalation factors published on November 27, 2024 (“Escalation Rates”) by the
 4 Commission’s Public Advocates Office (“Cal Advocates”). The Escalation Rates are
 5 shown in WORKPAPER G11 (lines 20 – 43). Forecasts were made by individual
 6 subaccount. The subaccounts used by San Gabriel for accounting and ratemaking purposes
 7 are as follows:
 8

TABLE 2

Subaccount	Description
00	Miscellaneous
01	Payroll
02	Materials & Supplies
04	Transportation
05	Outside Services
06	Utilities & Rents
07	Postage
09	Dues & Subscriptions

9
 10 The Escalation Rates used to forecast expenses are the labor rates for employee
 11 labor/payroll expenses, compensation per hour rates for outside services, CPI-U for dues
 12 & subscriptions, and a composite rate (weighted 40% compensation/hour and 60% non-
 13 labor) for each of the other subaccounts, where appropriate. These Escalation Rates are
 14 summarized as follows:
 15

TABLE 3

Year	Labor	Compensation Per Hour	Composite Non-Labor	CPI-U
2025	2.9%	4.1%	1.8%	2.7%
2026	2.1%	4.3%	1.8%	2.7%
2027	2.4%	3.5%	1.9%	2.7%

16
 17 As mentioned above and discussed in further detail below, the procedure described above
 18 is not used for certain categories of expenses because specific information is available to
 19 make a better, more accurate forecast.

1 **Q. DID YOU MAKE ANY ADJUSTMENTS TO THE RECORDED DATA USED TO**
2 **DEVELOP THE 5-YEAR INFLATION-ADJUSTED AVERAGES?**

3 A. Yes. Costs that are subject to ongoing memorandum account treatment and nonrecurring
4 costs subject to memorandum account treatment were removed from the recorded data used
5 to develop the 5-year inflation-adjusted averages of O&M and A&G expenses. These
6 adjustments are reflected in WORKPAPER EX1, and include costs recorded in the
7 Catastrophic Event Memorandum Account (“CEMA”) (lines 83, 521, 697, 1333 and 1504),
8 and Polyfluoroalkyl Substances (“PFAS”) memorandum account (lines 425 and 1227). In
9 addition, because San Gabriel maintains memorandum accounts in each of its operating
10 divisions for water quality litigation, as authorized by Resolution W-4089, those expenses
11 have been excluded from the forecast of operating expenses, as shown in WORKPAPER
12 EX1 (lines 724 and 1531).

13 **2. Customer, Sales and Revenue Forecasts**

14 *Customer Forecast*

15 **Q. HAS SAN GABRIEL RETAINED THE SAME CUSTOMER CLASSIFICATIONS**
16 **AS IN PRIOR GRCs?**

17 A. Yes, San Gabriel has retained the same customer classifications as in prior GRCs.
18 However, the Residential – Multi-Family, Commercial, Industrial, and Public Authority
19 customer classes are no longer separated into “large” and “small” sub-categories. This
20 change coincided with the implementation of the Company’s new customer information
21 and billing system, which went live in February 2024.

22 **Q. HOW DID YOU FORECAST CUSTOMER GROWTH?**

23 A. San Gabriel’s customer growth forecasts for the Los Angeles County and Fontana Water
24 Company divisions are shown in WORKPAPER RV1 (lines 10 – 26 and 135 – 154).

25
26 With the exception of the Construction classes in both divisions and the Recycled Water
27 class in the Fontana Water Company division, San Gabriel forecasted customer growth
28 using the average annual rate of growth in customers for each class over the five-year
29 period ending with 2024. Adjustments were made to the 5-year average annual rate of
30 growth in customers in the Los Angeles County division to account for the 2023 acquisition

1 of the City of Montebello’s water system, in which San Gabriel acquired approximately
2 1,650 customers, as shown WORKPAPER RV1 (lines 11 – 18).

3
4 The number of forecasted Construction class customers in both the Los Angeles County
5 and Fontana Water Company divisions is based on the average number of Construction
6 class customers served during the five years ending 2024.

7
8 The number of forecasted Recycled Water class customers in the Fontana Water Company
9 division is based on the number of customers actually served in 2024, adjusted to reflect
10 additional customers the Company expects to convert to recycled water service in 2025,
11 2026 and 2027.

12 ***Sales Forecast***

13 **Q. HOW DID YOU FORECAST CUSTOMER SALES?**

14 A. San Gabriel’s customer sales forecasts for the Los Angeles County and Fontana Water
15 Company divisions are shown TABLE 4B of **EXHIBITS SG-2** and **SG-3**, respectively,
16 and in WORKPAPER RV1 (lines 36 – 47 and 163 – 177).

17
18 For the Residential and Commercial customer classes, San Gabriel began by applying the
19 New Committee Method to recorded monthly sales for the last ten years, in accordance
20 with the RCP. The New Committee Method uses the econometric technique of regression
21 analysis to normalize water sales based on multiple historic, current, and anticipated
22 service area factors. In each regression, the dependent variable is unit consumption
23 (hundred cubic feet or “Ccf” per customer) and the independent variables are time,
24 precipitation and temperature. San Gabriel implemented the New Committee Method for
25 the Residential and Commercial customer classes by inputting monthly sales per customer
26 data for 120 months (ten years) beginning July 2014 and ending June 2024. The results of
27 this regression analysis (“REGRESSION 1”) are shown in **ATTACHMENT A** to this
28 testimony.

1 The RCP requires that sales data during historical periods in which sales restrictions were
2 imposed or the utility recorded lost sales in a Drought Lost Revenue Memorandum
3 Account (“DLRMA”) be removed from the regression analysis and replaced with sufficient
4 additional historical data.² San Gabriel recorded lost sales in DLRMAs for the Los Angeles
5 County and Fontana Water Company divisions during two separate drought emergency
6 declarations in the past ten years – from June 2015 through April 2017, and from July 2022
7 through June 2023. Accordingly, San Gabriel ran additional regressions (REGRESSIONS
8 2 through 4) in which different statistical methodologies were used to remove or otherwise
9 account for the effect of these declared drought emergencies.

10 **Q. PLEASE EXPLAIN REGRESSIONS 2, 3, AND 4, IN WHICH YOU ACCOUNT**
11 **FOR THE PERIOD SAN GABRIEL RECORDED LOST SALES IN DLRMAs.**

12 A. In REGRESSION 2, San Gabriel removed sales data for the 23 months from June 2015
13 through April 2017, and the 12 months from July 2022 through June 2023, and included
14 sales data for the additional 35 months from August 2011 through June 2014. The results
15 of REGRESSION 2 are summarized in **ATTACHMENT A**.

16
17 In REGRESSION 3, San Gabriel included sales data for the 120 months (ten years)
18 beginning July 2014 and ending June 2024, but utilized explanatory variables (sometimes
19 called “indicator” or “dummy” variables) to account for (1) the period in which the
20 Company recorded lost sales in DLRMAs, and (2) each month of the year. Explanatory
21 variables are typically used in the field of statistics to account for factors that are not
22 quantitative and therefore not represented by numbers.³ San Gabriel utilized explanatory
23 variables to account for the fact that water consumption behavior can reasonably be
24 expected to be statistically significantly different during a declared drought emergency
25 (when residents and businesses are called upon by the governor and other authorities to
26 conserve water) than before and after such period. Additionally, the use of monthly
27 explanatory variables would capture, for example, changing household behavior due to
28 school schedules, vacations, and holidays. To take these effects into account, an

² A.07-05-062, Appdx. A, p. 23

³ Levine, David M., Timothy C. Krehbiel and mark L. Berenson. Business Statistics. 3rd Ed. p. 522.

1 explanatory variable with a value of 1 is included in the regression analysis for each month
2 in which there was a declared drought emergency and San Gabriel recorded lost sales in
3 DLRMAs, and an explanatory variable with a value of 0 is included for each remaining
4 month. Likewise, an explanatory variable with a value of 1 is included in the regression
5 analysis as an indicator of which month the usage occurred in. The resulting regression
6 equation allows one to forecast sales either with or without the effect of a declared drought
7 emergency, as well as for any particular month of the year. Notably, these types of monthly
8 explanatory variables were utilized in the landmark 2010 study *North America Residential*
9 *Water Usage Trends Since 1992* (“WRF-EPA Study”), sponsored by the Water Research
10 Foundation and Environmental Protection Agency (“EPA”).⁴ The results of
11 REGRESSION 3 are summarized in **ATTACHMENT A**.

12
13 In REGRESSION 4, San Gabriel once again removed sales data for the 35 months in which
14 the Company recorded lost sales in DLRMAs (June 2015 through April 2017, and July
15 2022 through June 2023), similar to REGRESSION 2. Additionally, San Gabriel added
16 explanatory variables for each month of the year. The results of REGRESSION 4 are
17 summarized in **ATTACHMENT A**.

18 **Q. WHICH OF THESE REGRESSIONS HAS SAN GABRIEL RELIED UPON TO**
19 **FORECAST SALES IN THIS PROCEEDING?**

20 A. Of the four regressions summarized in **ATTACHMENT A**, REGRESSIONS 1 and 2 have
21 regression statistics that are statistically significant for all predictors, which include those
22 for *time*, *precipitation*, and *temperature*.⁵ Out of these two regressions, REGRESSION 2
23 has a higher coefficient of determination, or “R Squared,” meaning the average monthly
24 sales per customer are better explained by the independent variables included in that
25 regression than those included in REGRESSION 1. Therefore, San Gabriel has relied upon
26 the results of REGRESSION 2 to forecast Test Year 2026-2027 sales per customer for the
27 Residential (both Single Family Multi-Family) customer classes.

⁴ “North America Residential Water Usage Trends Since 1992,” Water Research Foundation (2010).

⁵ If an estimate is statistically significant, one can conclude that it is statistically different from zero. For additional information, see the notes provided in pages 3 through 26 of **ATTACHMENT A**.

1 **Q. DID YOU RELY UPON THE RESULTS OF REGRESSION 2 TO FORECAST**
2 **TEST YEAR SALES FOR THE COMMERCIAL CUSTOMER CLASS?**

3 A. No. While REGRESSIONS 1 and 2 have regression statistics that are statistically
4 significant across all predictors, the slope of the regression indicates increasing per-
5 customer Commercial class sales in the Los Angeles County division. As explained below,
6 this is unreasonable given the numerous factors that will serve to reduce per-customer sales
7 going forward, particularly in California. For the Fontana Water Company division, two
8 of the regressions have slopes indicating increasing per-customer Commercial class sales
9 (REGRESSIONS 1 and 3), and two have slopes indicating declining per-customer sales
10 (REGRESSIONS 2 and 4). This particular analysis is not robust because it fails to provide
11 consistent results when altering its variables. For these reasons, San Gabriel forecasted
12 Test Year sales for the Commercial customer class in both the Los Angeles County and
13 Fontana Water Company divisions based on a five-year average of per-customer sales.

14 **Q. HOW DID YOU FORECAST SALES FOR THE REMAINING CUSTOMER**
15 **CLASSES?**

16 A. With the exception of the Recycled Tariff class in the Fontana Water Company division
17 and the California Steel Industries (“CSI”) recycled contract (also in the Fontana Water
18 Company division), San Gabriel forecasted sales for the remaining customer classes based
19 on a five-year average of per-customer sales.

20
21 As of the filing of this GRC, San Gabriel has yet to connect any Recycled Tariff class
22 customers in the Fontana Water Company division. Therefore, the Company is relying
23 upon the sales forecast developed in San Gabriel’s last GRC for this customer class, which
24 is the current adopted forecast. Likewise, while CSI has connected to the Fontana Water
25 Company division’s recycled water system, they have not yet begun using meaningful
26 quantities of recycled water. Therefore, San Gabriel is relying upon the recycled water
27 sales forecast developed for CSI in the Company’s last GRC, which is also the current
28 adopted forecast.

1 *Compliance with Decision 20-08-047, Providing Guidance on Water Sales Forecasting*

2 **Q. PLEASE SUMMARIZE DECISION 20-08-047, AS IT RELATES TO WATER**
3 **SALES FORECASTING.**

4 A. Decision (“D.”) 20-08-047 was issued in Phase I of R.17-06-024, Order Instituting
5 Rulemaking Evaluating the Commission’s 2010 Water Action Plan Objective of Achieving
6 Consistency between Class A Water Utilities’ Low-Income Rate Assistance Programs,
7 Providing Rate Assistance to All Low-Income Customers of Investor-Owned Water
8 Utilities, and Affordability. One of the goals of Phase I of R.17-06-024 was to improve
9 water sales forecasting. To that end, in D.20-08-047, the Commission ordered the
10 following:

11
12 **ORDERING PARAGRAPH NO. 1:**

13 In any future general rate case applications filed after the effective date of
14 this decision, a water utility must discuss how these specific factors impact
15 the sales forecast presented in the application:

- 16
17 (a) Impact of revenue collection and rate design on sales and
18 revenue collection;
19 (b) Impact of planned conservation programs;
20 (c) Changes in customer counts;
21 (d) Previous and upcoming changes to building codes requiring low
22 flow fixtures and other water-saving measures, as well as any
23 other relevant code changes;
24 (e) Local and statewide trends in consumption, demographics,
25 climate population density, and historic trends by ratemaking
26 area; and
27 (f) Past sales trends.

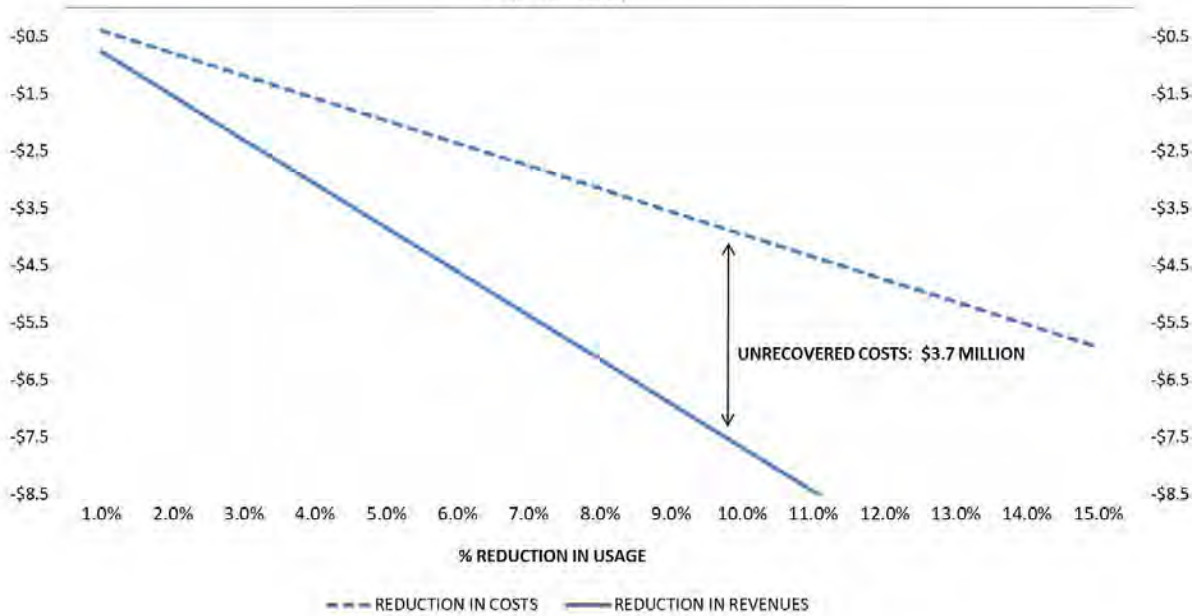
28
29 Below, I discuss the extent to which each of these factors impacts San Gabriel’s sales
30 forecast in this proceeding.

31 **Q. PURSUANT TO ORDERING PARAGRAPH NO. 1 OF D.20-08-047, PART (a),**
32 **HOW DOES THE REVENUE COLLECTION/ALLOCATION AND RATE**
33 **DESIGN IMPACT THE SALES FORECAST AND REVENUE COLLECTION IN**
34 **THIS PROCEEDING?**

35 A. San Gabriel’s rate design for metered water revenues consists of a monthly fixed basic
36 service charge and a volumetric quantity rate. As explained below in Section V of this

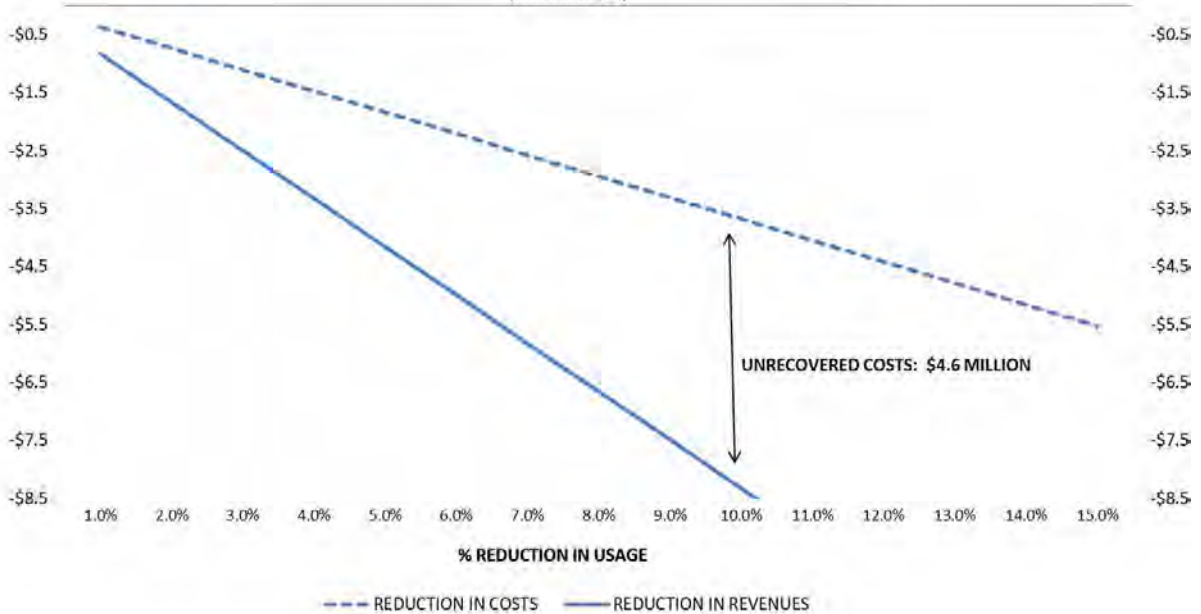
1 testimony regarding rate design, in the Los Angeles County division San Gabriel has
2 allocated 64.6% of the metered water revenue requirement to quantity rates, consistent with
3 the conservation rate design approved for the Los Angeles County division in D.10-04-
4 031. In the Fontana Water Company division, San Gabriel has allocated 70.0% of the
5 metered water revenue requirement to quantity rates, consistent with the conservation rate
6 design the parties agreed to in the settlement agreement adopted in D.20-08-006. By
7 contrast, in excess of 65% of the total cost of service at proposed rates in each of the
8 Company's operating divisions is fixed (*see ATTACHMENT B* hereto), resulting in a
9 portion of fixed costs being allocated to the volumetric quantity rate for recovery. This is
10 intended to promote conservation. However, this mismatch between fixed costs and
11 variable revenues means that San Gabriel will fail to recover its full cost of service when
12 customers reduce the amount of water they use to levels below those adopted in this
13 proceeding. This lack of cost recovery is illustrated in **CHARTS 1** and **2** below, which
14 show the decline in revenues versus the decline in costs at varying levels of conservation
15 beyond that incorporated into the sales forecast in this proceeding:
16

CHART 1
IMPACT OF REVENUE ALLOCATION ON REVENUE COLLECTION
LOS ANGELES COUNTY DIVISION
(\$ Millions)



1

CHART 2
IMPACT OF REVENUE ALLOCATION ON REVENUE COLLECTION
FONTANA WATER COMPANY DIVISION
(\$ Millions)



2

1 As shown in **CHARTS 1** and **2**, a 10% decline in customer water usage beyond that
2 incorporated into the sales forecast in this proceeding is expected to cause annual shortfalls
3 in cost recovery of \$3.7 million and \$4.6 million in the Los Angeles County and Fontana
4 Water Company divisions, respectively.

5
6 With extreme drought conditions and the attendant water use restrictions and conservation
7 measures becoming more frequent in California, a very modest 10% reduction in per-
8 customer water usage beyond what is incorporated into the sales forecast in this proceeding
9 is entirely possible. As explained in Section III above, this shortfall in cost recovery
10 benefits neither customers nor the utility. For these reasons, it is imperative that continued
11 declines in per-customer water usage be incorporated into GRC sales forecasts for
12 ratemaking purposes. The Commission’s Water Division recognized the importance of
13 accounting for these factors in their workshop report attached to the March 20, 2019
14 Administrative Law Judge ruling inviting comment in R.17-06-024:

15
16 In summary, drought conditions are becoming a way of life in California
17 and management of drought impacts by water utilities is critical. ...With
18 the water conservation legislation discussed, it is more important than ever
19 to improve sales forecasting *in a way that accounts for the reality of*
20 *decreasing water supplies and use in California.*⁶ [emphasis added]
21

22 I discuss water conservation legislation further below.

23 **Q. PURSUANT TO ORDERING PARAGRAPH NO. 1 OF D.20-08-047, PART (b),**
24 **HOW DO CONSERVATION PROGRAMS IMPACT THE SALES FORECAST IN**
25 **THIS GRC?**

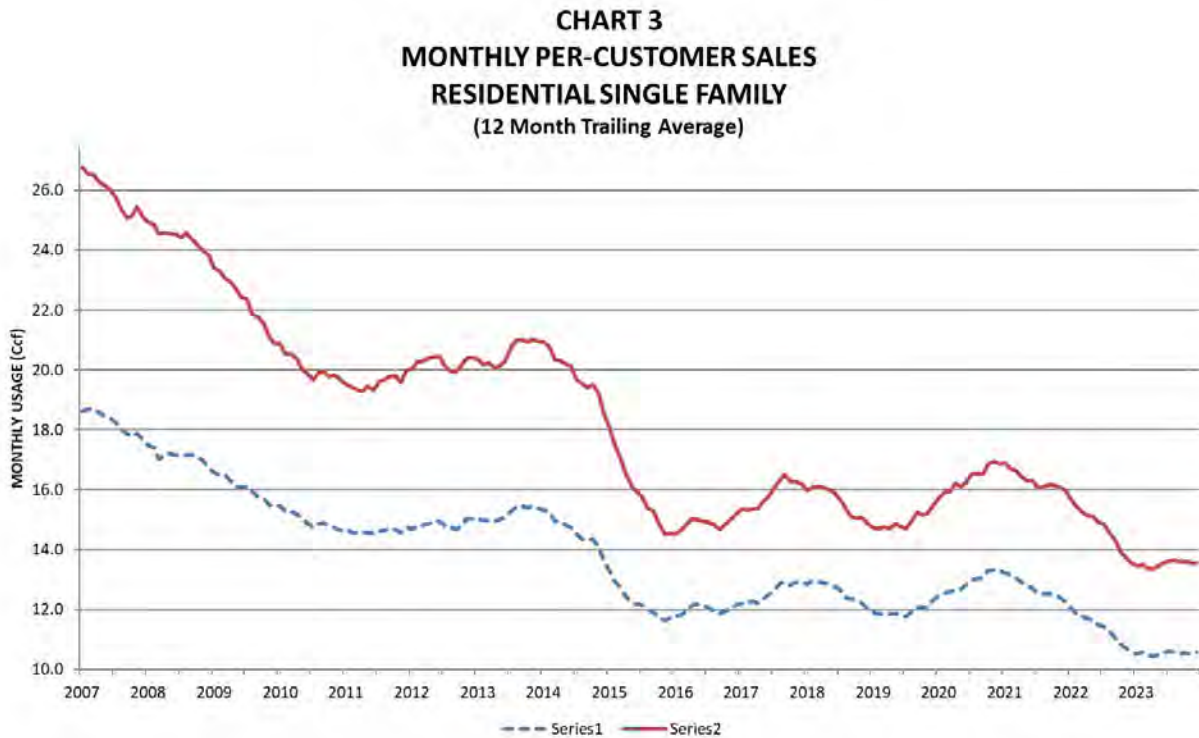
26 A. As discussed below, per-customer sales have declined significantly during the time San
27 Gabriel has actively promoted water conservation. San Gabriel’s water conservation
28 efforts, which are expressly designed to permanently reduce per customer water use, as

⁶ See ATTACHMENT A to Administrative Law Judge’s Ruling Inviting Comments on Water Division Staff Report on Joint Agency Workshop; and Noticing Additional Proceeding Workshops, dated March 20, 2019, in A.17-06-024, Report on Joint Agency Workshop: Water Sales Forecasting and Rising Drought Risk, California Public Utilities Commission and State Water Resources Control Board.

1 well as the water conservation efforts of other local, regional and state agencies, will
2 continue to drive down per customer sales. San Gabriel’s Director of Water Resources,
3 Cris Fealy, provides an in-depth discussion of San Gabriel’s conservation efforts in Section
4 VI of his prepared direct testimony, **EXHIBIT SG-9**. As explained by Mr. Fealy, San
5 Gabriel has in place extensive and robust Commission-approved water conservation
6 programs which the Company plans to continue and expand during this rate case cycle.

7 **Q. HOW MUCH HAVE PER-CUSTOMER SALES DECLINED?**

8 A. **CHART 3** below illustrates the significant declines in per-customer water sales for the
9 Residential Single Family customer classes in the Los Angeles County and Fontana Water
10 Company divisions:



11 The data illustrated in **CHART 3** above depict a staggering overall decline in Residential
12 Single Family per-customer water sales of 43.2% and 49.3% from 2007 through 2024 in
13 the Los Angeles County and Fontana Water Company divisions, respectively. These
14 declines equate to respective steady annualized declines of 3.3% and 3.9% in the Los
15 Angeles County and Fontana Water Company divisions.
16
17

1 However, steady annual declines are not the norm – as shown in **CHART 3**, *drastic*
2 declines can occur during short periods and such drastic declines are, as shown in the chart,
3 more common and significant than temporary increases. Notwithstanding the
4 Commission’s Finding of Fact in D.20-08-047 that “it is difficult to parse out consumption
5 declines due to the sole effects of conservation programs and rate designs from other
6 contributing factors such as weather, drought, economic effects, or inaccurate sales
7 forecast...,”⁷ it is reasonable to conclude that a combination of these factors will continue
8 to drive down per-customer sales into the foreseeable future.

9
10 The sales declines depicted in **CHART 3** are also consistent with declines experienced
11 across California. As explained by Governor Newsom in Executive Order N-10-21:

12
13 WHEREAS during the 2012 – 2016 drought, Californians did their part to
14 conserve water, with many taking *permanent actions that continue to yield*
15 *benefits*; per capita residential water use statewide declined 21 percent
16 between the years 2013 and 2016, and has remained on average 16 percent
17 below 2013 levels as of 2020... [emphasis added]
18

19 As explained above, San Gabriel’s conservation programs, as well as the water
20 conservation efforts of other local, regional, and state agencies, are expressly designed to
21 permanently reduce per customer water use. Accordingly, such continuing declines are
22 incorporated into the Company’s sales forecasts in this proceeding.

23 **Q. PURSUANT TO ORDERING PARAGRAPH NO. 1 OF D.20-08-047, PART (c),**
24 **HOW DO CHANGES IN CUSTOMER COUNTS IMPACT THE SALES**
25 **FORECAST IN THIS PROCEEDING?**

26 A. Although customer growth has no direct impact on the per-customer sales forecast,
27 customer growth does impact the forecast of total water sales and production. As shown
28 in TABLE 4A of **EXHIBIT SG-2** and **EXHIBIT SG-3** for the Los Angeles County and
29 Fontana Water Company divisions, respectively, and in WORKPAPER RV1, San Gabriel
30 is projecting to add approximately 89 customers per year in the Los Angeles County

⁷ See FINDING OF FACT NO. 7.

1 division and approximately 195 customers per year in the Fontana Water Company
2 division over this GRC cycle. The impact of these additional customers on total sales is
3 estimated to be approximately 22,000 Ccf in the Los Angeles County division,⁸ and
4 approximately 57,000 Ccf in the Fontana Water Company division.⁹
5

6 Moreover, as further explained below the state of California has required the installation
7 of high efficiency (i.e. water saving) devices in new construction since 2014. This means
8 that as new residential single and multi-family housing is added throughout San Gabriel’s
9 operating divisions, average sales per customer will continue to decline going forward, and
10 these declines have been incorporated into the Company’s sales forecasts.

11 **Q. PURSUANT TO ORDERING PARAGRAPH NO. 1 OF D.20-08-047, PART (d),**
12 **HOW DO PREVIOUS AND UPCOMING CHANGES TO SUCH THINGS AS**
13 **WATER USE EFFICIENCY STANDARDS, BUILDING CODES, AND**
14 **CONSERVATION LEGISLATION IMPACT THE SALES FORECAST IN THIS**
15 **PROCEEDING?**

16 A. San Gabriel’s sales forecast in this proceeding is based upon actual historical water usage
17 data, and therefore incorporates the impact of existing water use efficiency regulations.
18 These regulations, combined with all of the other factors discussed herein, have played a
19 role in the significant declines in per-customer water sales discussed above and illustrated
20 in **CHART 3**. For example, a 2020 feature article published in the Journal of the American
21 Water Works Association examined the impact of the Energy Policy Act of 1992
22 (“EPACT92”) and the Environmental Protection Agency’s (“EPA”) WaterSense program
23 on water sales.¹⁰ EPACT92 required manufacturers to adhere to certain water-use
24 standards for new toilets and showerheads beginning in 1994. The EPA’s WaterSense
25 Program, initiated in 2006, requires manufacturers to develop devices that use 20% less
26 water than “standard” devices in order to have the WaterSense label added to their

⁸ Based on overall average annual projected sales per customer of approximately 248 Ccf

⁹ Based on overall average annual projected sales per customer of approximately 290 Ccf

¹⁰ See **ATTACHMENT C**, DeOreo, William B. “The Truth About Water Efficiency in the United States.” Journal AWWA. July 2020. pp. 60 – 65.

1 products. Using data from the Water Research Foundation’s landmark 1999 study
 2 “Residential End Uses of Water” and its 2016 update, the author was able to examine
 3 changes in daily indoor water use that occurred during the period of time between these
 4 two studies, when major improvements to residential fixtures and appliances occurred as a
 5 result of EPACT92 and WaterSense. During this period, the residential average daily
 6 indoor water use dropped by 22%, or 39 gallons per day (“gpd”) per household, from 177
 7 to 138 gpd/household. The author concludes that the requirements of EPACT92 have
 8 significantly reduced water use, with the largest reduction in indoor residential water use
 9 during the study period being provided by more efficient clothes washers, which accounted
 10 for 43% of the total reduction in indoor water use.

11 **Q. IS IT SAFE TO ASSUME THAT MORE HOMES AND BUSINESSES WILL BE**
 12 **RETROFITTED WITH HIGH EFFICIENCY FIXTURES AND DEVICES,**
 13 **THEREBY DRIVING DOWN PER-CUSTOMER WATER USE IN THE**
 14 **EXISTING CUSTOMER BASE EVEN FURTHER?**

15 A. Yes. According to the most recent U.S. WaterSense Market Penetration report
 16 (“WaterSense Penetration Report”), California had the following market penetration rates
 17 for WaterSense certified toilets, bathroom sink faucets, and showerheads as of 2019:¹¹
 18

TABLE 6

WaterSense Certified Product	2019 California Market Penetration Rate
Toilets	21.00%
Bathroom Sink Faucets	52.08%
Showerheads	59.00%

19
 20 Toilets are by far the main source of water use inside the home, accounting for almost 30%
 21 of average indoor usage.¹² According to the WaterSense Penetration Report, just 21.00%
 22 of the toilets installed in California were WaterSense certified as of 2019, meaning they
 23 use just 1.28 gallons per flush (“gpf”) or less, with 62.10% of toilets installed using 1.6

¹¹ See ATTACHMENT D, 2019 U.S. WaterSense Market Penetration. A GMP Research Industry Report commissioned by Plumbing Manufacturers International (PMI).

¹² *Id.* p. 18.

1 gpf, and 16.90% of toilets installed using 3.5 gpf or more. Notably, the state of California
2 has *required* the installation of WaterSense certified toilets in *both new construction and*
3 *replacement applications* since 2014.¹³ This means that 79.00% of the toilets installed in
4 California (as of 2019) will eventually be replaced with WaterSense toilets that use up to
5 63.4% less water.

6
7 As shown in **ATTACHMENT E** hereto, additional *permanent* declines in residential
8 indoor water use of 9.3% can be expected in California as a direct result of the continued
9 installation of WaterSense toilets alone. This is *in addition* to future declines resulting
10 from the water conservation efforts of San Gabriel, the conservation efforts of other local,
11 regional and state agencies, new water conservation legislation, and other factors.

12 **Q. WHAT NEW WATER EFFICIENCY LEGISLATION ARE YOU REFERRING**
13 **TO?**

14 A. As explained by Mr. Fealy in Section VI of his prepared testimony (**EXHIBIT SG-9**), in
15 2018 the Legislature passed into law Senate Bill (“SB”) 606 and Assembly Bill (“AB”)
16 1668 in an effort to move beyond drought emergency measures and toward implementing
17 long-term efficient water use practices. SB 606 and AB 1668 were in response to the
18 Governor’s Executive Order B-37-16, issued during the previous drought, and subsequent
19 2017 framework report titled “*Making Water Conservation a California Way of Life,*
20 *Implementing Executive Order B-37-16.*”

21
22 The new legislation established the long-term urban water use efficiency framework, which
23 the Governor initiated in 2016 by executive order, and required the Department of Water
24 Resources and the State Water Resources Control Board to develop water use targets for
25 urban retail water suppliers. Under this new framework, an urban retail water supplier’s
26 actual water use for the previous year would be evaluated against its Water Use Objective.
27 The Water Use Objective is the sum of several factors including calculated standards for
28 residential indoor and outdoor water use, commercial outdoor water use, and a certain

¹³ *Id.* p.20.

1 amount of water system losses. Additionally, the framework requires suppliers to
2 implement a variety of performance measures for its commercial customers and report on
3 the progress annually.

4
5 As explained in **EXHIBIT SG-9** (Fealy), customers will be directly affected by the water
6 use objectives set forth in SB 606 and AB 1668, as each division is directly responsible for
7 ensuring its customers' total water use is less than the calculated water use objective. If
8 suppliers do not achieve their objectives, the State Water Resources Control Board may
9 levy penalties. Accordingly, this new legislation will serve to further drive down per-
10 customer sales in the Los Angeles County and Fontana Water Company divisions.

11 **Q. PURSUANT TO ORDERING PARAGRAPH NO. 1 OF D.20-08-047, PARTS (e) and**
12 **(f), HOW DO LOCAL AND STATEWIDE TRENDS IN CONSUMPTION/SALES,**
13 **DEMOGRAPHICS, CLIMATE, POPULATION DENSITY, AND HISTORIC**
14 **TRENDS IN EACH RATEMAKING AREA IMPACT THE SALES FORECAST IN**
15 **THIS PROCEEDING?**

16 A. As it relates to local water usage trends, demographics, climate, and population density in
17 each operating division, San Gabriel's sales forecasts in this proceeding are based upon
18 actual recorded historical water usage data, and therefore inherently incorporate all of this
19 information to the extent it has any impact on water sales. With respect to statewide water
20 use trends, San Gabriel's sales forecast is consistent with the trend of declining per-
21 customer water usage occurring across California, as noted by Governor Newsom in
22 Executive Order N-10-21. The Public Policy Institute of California ("PPIC") has also
23 recognized these pervasive declines:

24
25 Total urban water use has been falling even as the population grows.
26 Even before the latest drought, per capita water use had declined
27 significantly—from 231 gallons per day in 1990 to 180 gallons per day
28 in 2010—reflecting substantial efforts to reduce water use through
29 pricing incentives and mandatory installation of water-saving
30 technologies like low-flow toilets and shower heads. In 2015, per capita
31 use fell to 146 gallons per day in response to drought-related
32 conservation requirements. Much of the recent savings came from
33 reducing landscape watering, which makes up roughly half of all urban

1 water use. Per capita use has since rebounded slightly, *but a new state*
2 *law will require further long-term reductions.*¹⁴ [emphasis added]
3

4 The PPIC’s observation about statewide water use trends and assessment of per capita
5 water use going forward are consistent with San Gabriel’s sales forecast in this proceeding.

6 **Q. BASED ON THE DISCUSSION AND EVIDENCE PRESENTED ABOVE AND**
7 **ELSEWHERE IN THIS PROCEEDING, IS IT REASONABLE TO EXPECT PER**
8 **CUSTOMER SALES TO CONTINUE TO DECLINE?**

9 A. Yes. Per capita water consumption in general, including that of San Gabriel’s residential
10 customers in particular, has been declining for some time and the evidence shows that per
11 capita water consumption is expected to continue to decline into the foreseeable future.
12 There are a number of factors driving this ongoing decline, many of which are intended to
13 instill a conservation ethic in the public and fundamentally change the way people view
14 their local water supply. These factors include increasingly stringent federal and state
15 water efficiency standards and laws, and the strengthening of educational conservation
16 measures by water providers, like San Gabriel, to comply with the Commission’s Water
17 Action Plan, as well as the implementation of consumer price signals in the form of tiered
18 rates.

19 ***Forecasted Revenues***

20 **Q. PLEASE CONTINUE WITH YOUR EXPLANATION OF HOW SAN GABRIEL**
21 **FORECASTED REVENUES.**

22 A. San Gabriel’s revenue forecasts for Estimated Year 2025 and Test Year 2026-2027 are
23 presented in TABLE 4D of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and
24 Fontana Water Company divisions, respectively. The customer and sales forecasts (*see*
25 **WORKPAPERS RV1** and **RV2**) were the starting point for forecasting revenues. Next,
26 the forecasted number of customers for each customer class was distributed to each meter
27 size based on the recorded number of customers served by each by meter size during 2023.

¹⁴ See **ATTACHMENT F**, “Water Use in California.” *Public Policy Institute of California*. May 2019.

1 Finally, present and proposed rates were applied to these forecasted billing determinants.
2 The details of these calculations are summarized in WORKPAPER RV2.

3 **Q. WHAT ARE MISCELLANEOUS REVENUES?**

4 A. Miscellaneous Revenues are those recorded in Accounts 611, 612 and 614. Miscellaneous
5 Revenues are presented on TABLE 4D of **EXHIBITS SG-2** and **SG-3**, and in
6 WORKPAPER RV2 (lines 332 – 348 and 716 – 719).

7 **Q. HOW DID YOU FORECAST REVENUES FOR ACCOUNT 611 -**
8 **MISCELLANEOUS SERVICE REVENUES?**

9 A. Revenues recorded in Account 611 (Miscellaneous Service Revenues) primarily consist of
10 reconnection fees collected from customers. San Gabriel used a five-year (2020 - 2024)
11 average to forecast revenues in Account 611. These revenues are summarized in
12 WORKPAPER RV2 (lines 332 and 716) for the Los Angeles County and Fontana Water
13 Company divisions.

14 **Q. WHAT REVENUES ARE RECORDED IN ACCOUNT 612 – RENT FROM**
15 **WATER PROPERTY?**

16 A. Revenues recorded in Account 612 (Rent from Water Property) consist of rents received
17 for the use by others of land, buildings and other property devoted to water operations by
18 the utility. San Gabriel used a five-year (2020 – 2024) inflation adjusted average to forecast
19 revenues in Account 612. These revenues are summarized in WORKPAPER RV2 (lines
20 333 and 717) for the Los Angeles County and Fontana Water Company divisions.

21 **Q. WHAT REVENUES ARE RECORDED IN ACCOUNT 614 - OTHER WATER**
22 **REVENUES?**

23 A. Account 614 (Other Service Revenues) is primarily used to record reimbursements for
24 operating expenses received from third parties who have been found to be responsible for
25 groundwater pollution. Costs related to operating San Gabriel’s Plants B5, B6, B11, B24,
26 No. 8, G4, and the Whittier Narrows Operable Unit (“WNOU”) in the Los Angeles County
27 division, and costs of operating the wellhead treatment facility at Plant F10 to remove
28 contamination from groundwater produced at Plant Nos. F10 and F49 in the Fontana Water
29 Company division are recorded as operating expenses, and the reimbursement of such costs
30 are recorded to Account No. 614. These revenues were forecasted using a recorded 5-year

1 average and composite non-labor Escalation Rates, consistent with the escalation of the
2 operating expenses these revenues are intended to reimburse. These revenues are
3 summarized in WORKPAPER RV2 (lines 335 - 345 and 718) for the Los Angeles County
4 and Fontana Water Company divisions.

5
6 Account 614 and the reimbursement of operating expenses received from third parties are
7 discussed further by Mr. Harris in Section V.3 of his prepared direct testimony (**EXHIBIT**
8 **SG-5**).

9 **Q. DOES SAN GABRIEL’S FORECAST OF ACCOUNT 614 IN THE LOS ANGELES**
10 **COUNTY DIVISION INCLUDE REVENUES RECEIVED PURSUANT TO SAN**
11 **GABRIEL’S CONTRACT TO OPERATE THE CITY OF MONTEBELLO’S**
12 **WATER SYSTEM?**

13 A. No. As explained in Section IV.3 of **EXHIBIT SG-6** (Swift), the Commission authorized
14 San Gabriel’s purchase of the City of Montebello’s water system assets in D.22-12-002,
15 dated December 1, 2022. San Gabriel’s acquisition of the City’s assets and the termination
16 of the Company’s contract to operate the water system occurred on February 10, 2023. The
17 customers served by the newly-acquired system are included in the customer and sales
18 forecast for the Los Angeles County division.

19 **3. Water Loss**

20 **Q. PLEASE EXPLAIN THE FORECAST FOR “UNMETERED AND**
21 **UNACCOUNTED FOR” WATER.**

22 A. “Unmetered and unaccounted for” water includes unmetered water delivered for private
23 fire service, water provided for public fire hydrants, water used in flushing service mains
24 and hydrants, water lost due to leakage from mains and services, measurement errors and
25 billing adjustments, “process” water used at treatment facilities, and timing differences
26 between meter reads at the source of supply and meter reads for customer billing purposes.
27 The contribution of these individual factors varies depending upon the operating conditions
28 each year. As shown in TABLE 4C of **EXHIBITS SG-2** and **SG-3** for the Los Angeles
29 County and Fontana Water Company divisions, respectively, the overall percentage of
30 unmetered and unaccounted for water varies from year to year.

1 **Q. HOW IS UNMETERED AND UNACCOUNTED FOR WATER USED IN THE**
2 **GRC?**

3 A. Unmetered and unaccounted for water is added to the sales forecast to arrive at the
4 forecasted quantity of water San Gabriel must produce during the test year to meet its
5 obligation to provide safe, adequate and reliable service. Operating expenses for water,
6 power, and chemicals are based on the quantity of water produced in a given year.

7 **Q. HOW DID SAN GABRIEL FORECAST UNMETERED AND UNACCOUNTED**
8 **FOR WATER?**

9 A. For purposes of this GRC, San Gabriel relied upon the recorded five-year average
10 unmetered and unaccounted for water percent to forecast unmetered and unaccounted for
11 water during the test year and escalation years, as shown in WORKPAPER RV1 (lines 102
12 and 231).

13
14 San Gabriel’s efforts to reduce unmetered and unaccounted for water are addressed in detail
15 by Mr. Zielke in Section VI of **EXHIBIT SG-7**, and the Company’s state-mandated
16 validated water loss audits are addressed by Mr. Fealy in Section VI.4 of **EXHIBIT SG-**
17 **9**.

18 **4. Purchased Water & Assessments**

19 **Q. HOW DID SAN GABRIEL FORECAST PURCHASED WATER AND PUMPING**
20 **ASSESSMENTS (“WATER COSTS”)?**

21 A. Forecasted water costs are shown in TABLE 5B of **EXHIBITS SG-2** and **SG-3** for the
22 Los Angeles County and Fontana Water Company divisions, respectively. San Gabriel’s
23 total water supply requirements were developed from the sales forecast and the unmetered
24 and unaccounted for water percentage. San Gabriel then forecasted the availability of
25 water from each of its available supply sources, utilizing the most economical sources to
26 the greatest extent that prevailing groundwater and surface water conditions and limitations
27 in water rights adjudication allowances permit. The forecasted quantities of water from
28 each source are then priced out using the currently known and adopted assessments, pump
29 taxes, and water supplier prices, as shown in WORKPAPER EX3. Water costs for the Los

1 Angeles County and Fontana Water Company divisions are discussed in more detail in
2 Sections IV.1 and IV.2 of **EXHIBIT SG-9** (Fealy).

3 **5. Purchased Power**

4 **Q. HOW DID SAN GABRIEL FORECAST PURCHASED POWER EXPENSE?**

5 A. Purchased Power expenses are recorded in Account No. 726. San Gabriel’s forecast of
6 purchased power expense is based on Southern California Edison’s (“SCE”) current
7 electric rates (see workbooks \LAPurchased Power - 2025.xlsx\ and \FWC Purchased
8 Power - 2025.xlsx\). Purchased power expenses for the Los Angeles County and Fontana
9 Water Company divisions are shown on TABLE 5A of **EXHIBITS SG-2** and **SG-3**, for
10 the Los Angeles County and Fontana Water Company divisions, respectively, as well as in
11 WORKPAPER EX2 (lines 224 and 660). Ms. Butcher addresses San Gabriel’s purchased
12 power expense forecast further in her prepared testimony (**EXHIBIT SG-11**).

13 **6. Chemicals Expense**

14 **Q. PLEASE EXPLAIN SAN GABRIEL’S FORECAST OF CHEMICALS EXPENSE.**

15 A. Chemical expenses are recorded in Account No. 744. The inflation-adjusted recorded five-
16 year average expense, adjusted to reflect forecasted production, is the basis for the Test
17 Year forecast. Chemicals expenses for the Los Angeles County and Fontana Water
18 Company divisions are shown on TABLE 5A of **EXHIBITS SG-2** and **SG-3**, for the Los
19 Angeles county and Fontana Water Company divisions, respectively, as well as in
20 WORKPAPER EX2 (lines 259 and 699).

21 **Q. HAS SAN GABRIEL MADE ANY ADJUSTMENTS TO THE FORECAST OF**
22 **CHEMICALS EXPENSE?**

23 A. Yes. As explained in Section III.16 of **EXHIBIT SG-14** (Marroquin), in 2025 San Gabriel
24 will be placing in service a new ultraviolet (“UV”) light advanced oxidation process
25 (“AOP”) treatment facility at Plant No. 8 in the Los Angeles County division. Based on
26 O&M cost projections, San Gabriel expects to incur an additional \$104,500 annually in
27 expenses for hydrogen peroxide and sodium hypochlorite related to the operation of this
28 new UV AOP facility. Accordingly, San Gabriel has incorporated this additional \$104,500
29 in annual chemical expenses in to the forecast of Account 744, as shown in WORKPAPER
30 EX2 (line 259).

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7. Payroll Expense

Q. HOW DID SAN GABRIEL FORECAST PAYROLL EXPENSE?

A. Salaries and wage rates in effect at the beginning of 2025 for existing employees and positions, as well as any proposed new positions, are escalated to the years 2026 and 2027 in CONFIDENTIAL WORKPAPER PR4. Total forecasted payroll expense by division is summarized, and overtime is added at the historical 5-year average rate of 3.28%, in WORKPAPER PR2. Total forecasted payroll expense for each division is then allocated to the various expense and capital accounts in WORKPAPER PR3 based on the Company’s experienced distribution of such costs. Payroll expenses for the various years are shown in TABLE 4 of EXHIBIT SG-1 for the General division, and TABLES 5A and 6 of EXHIBITS SG-2 and SG-3 for the Los Angeles County and Fontana Water Company divisions, respectively.

Q. IS SAN GABRIEL REQUESTING THE APPROVAL OF ANY NEW EMPLOYEE POSITIONS IN THIS GRC?

A. Yes. San Gabriel is requesting approval of the following new employee positions in this GRC:

TABLE 7

Division	Position	Status	Workpaper Reference
GEN	Associate Corporate Counsel	Open	\PR4\line 21)
GEN	Director of Communications	Filled	\PR4\line 23)
GEN	Project Manager - Operations	Filled	\PR4\line 35)
GEN	Senior Accountant	Open	\PR4\line 73)
GEN	Accountant III	Open	\PR4\line 77)
GEN	Data Service Analyst	Open	\PR4\line 96)
GEN	Cybersecurity Analyst	Open	\PR4\line 99)
GEN	Operations Software Administrator	Open	\PR4\line 100)
GEN	Engineering Software Administrator	Open	\PR4\line 101)
GEN	Engineering Administrative Assistant	Filled	\PR4\line 132)
GEN	Procurement Supervisor	Open	\PR4\line 193)
LAC	Water Resources Project Manager	Filled	\PR4\line 202)
LAC	Water Resources Analyst	Open	\PR4\line 208)
LAC	Water Quality Specialist	Open	\PR4\line 214)

GEN	Database Coordinator	Open	\PR4\line 217)
LAC	Facilities Maintenance Supervisor	Open	\PR4\line 283)
LAC	SCADA Technician	Open	\PR4\line 333)
LAC	Electrician	Open	\PR4\line 334)
FWC	SCADA Technician	Open	\PR4\line 481)
FWC	Electrician	Open	\PR4\line 482)

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8. Materials & Supplies

Q. HOW DID SAN GABRIEL FORECAST MATERIALS & SUPPLIES EXPENSE?

A. San Gabriel records materials & supplies expense in Subaccount 02 of the various O&M and A&G expense accounts. San Gabriel forecasted materials & supplies expense using a five-year average of recorded materials & supplies expense and non-labor Escalation Rates. Materials & supplies expenses are summarized on TABLE 4 of **EXHIBIT SG-1** for the General Division, and TABLES 5A and 6 of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and Fontana Water Company divisions, respectively. These tables are supported by the calculations contained in WORKPAPER EX2.

Q. HAS SAN GABRIEL MADE ANY ADJUSTMENTS TO THE FORECAST OF MATERIALS & SUPPLIES EXPENSE?

A. Yes. As explained in Section IV.6 above, in 2025 San Gabriel will be placing in service a new UV AOP treatment facility at Plant No. 8 in the Los Angeles County division. Based on O&M cost projections, San Gabriel expects to incur an additional \$2,500 annually for materials & supplies related to the operation of this new UV AOP facility. Accordingly, San Gabriel has incorporated an additional \$2,500 in annual costs for materials & supplies into the forecast of Account 742-02, as shown in WORKPAPER EX2 (line 236).

Q. HOW DID SAN GABRIEL FORECAST AVERAGE MATERIALS & SUPPLIES BALANCES INCLUDED IN RATE BASE?

A. Materials & supplies balances are, in part, determined by the level of San Gabriel’s construction activities. Accordingly, San Gabriel forecasted materials & supplies balances by escalating the inflation-adjusted 5-year recorded average balance by the forecasted increase in average net plant, as well as non-labor Escalation Rates. These calculations are shown in WORKPAPER P2 (lines 293 and 545).

1 **9. Transportation Expense**

2 **Q. HOW DID SAN GABRIEL FORECAST TRANSPORTATION EXPENSE?**

3 A. Transportation expense is recorded in Subaccount 04 of the various O&M and A&G
4 expense accounts. San Gabriel forecasted transportation expense by escalating recorded
5 2024 expenses using non-labor Escalation Rates. Transportation expenses are summarized
6 on TABLE 4 of **EXHIBIT SG-1** for the General division, and on TABLES 5A and 6 of
7 **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and Fontana Water Company
8 divisions, respectively. These tables are supported by the calculations contained in
9 WORKPAPER EX2.

10 **10. Outside Services Expense**

11 **Q. HOW DID SAN GABRIEL FORECAST OUTSIDE SERVICES EXPENSE?**

12 A. San Gabriel records expenses for outside services in Account 798, as well as
13 Subaccount 05, which is a component of several different O&M and A&G expense
14 accounts. San Gabriel’s forecast of outside accounting services for Estimated Year 2025
15 and Test Year 2026-2027, which are recorded in Account 798-00 in the General division
16 (line 105 of WORKPAPER EX2), are based on 2024 recorded expenses and compensation
17 per hour Escalation Rates. San Gabriel forecasted the remainder of outside services
18 expense using a five-year average of recorded expenses and compensation per hour
19 Escalation Rates. The amounts for both Account 798 and Subaccount 05 are reflected in
20 the expenses shown on TABLE 4 of **EXHIBIT SG-1** for the General division, and on
21 TABLES 5A and 6 of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and Fontana
22 Water Company divisions, respectively. These tables are supported by the calculations
23 contained in WORKPAPER EX2.

24 **Q. HAS SAN GABRIEL EXCLUDED ANY COSTS FROM ITS FORECAST OF**
25 **ACCOUNT 798 - OUTSIDE SERVICES?**

26 A. Yes. As explained in Section IV.1 above, because San Gabriel maintains memorandum
27 accounts in each of its operating divisions for water quality litigation, as authorized by
28 Resolution W-4089, those expenses have been excluded from the forecast, as shown in
29 WORKPAPER EX2 (lines 542 and 973).

1 **Q. HAS SAN GABRIEL MADE ANY OTHER ADJUSTMENTS TO THE FORECAST**
2 **OF OUSIDE SERVICES EXPENSE?**

3 A. Yes. As explained in Section IV.6 above, in 2025 San Gabriel will be placing in service a
4 new UV AOP treatment facility at Plant No. 8 in the Los Angeles County division. Based
5 on O&M cost projections, San Gabriel expects to incur an additional \$15,000 annually for
6 laboratory testing, and an additional \$409,100 annually in outside services related to the
7 maintenance of this new UV AOP facility, which includes routine maintenance, UV lamp
8 replacements, inspection, and contract labor. Accordingly, San Gabriel has incorporated
9 an additional \$15,000 in annual laboratory testing costs into the forecast of Account 742-
10 05, as shown in WORKPAPER EX2 (line239), and an additional \$409,100 in annual
11 outside services costs into the forecast of Account 748-05, WORKPAPER EX2 (line 415).

12 **11. Utilities & Rents Expense**

13 **Q. HOW DID SAN GABRIEL FORECAST UTILITIES & RENTS EXPENSE?**

14 A. The utilities & rents Subaccount 06 consists primarily of purchased power expense for the
15 lighting, cooling, and heating of office buildings. Because SCE's rates are constantly
16 increasing, San Gabriel based its forecast on 2024 recorded expenses, rather than a 5-year
17 average, and non-labor Escalation Rates. Utilities & rents expenses are shown on TABLE
18 4 of **EXHIBIT SG-1** for the General division, and on TABLES 5A and 6 of **EXHIBITS**
19 **SG-2** and **SG-3** for the Los Angeles County and Fontana Water Company divisions,
20 respectively. These tables are supported by the calculations contained in WORKPAPER
21 EX2.

22 **Q. DID YOU MAKE ANY ADJUSTMENTS TO THE FORECAST OF UTILITIES &**
23 **RENTS EXPENSE RECORDED IN ACCOUNT 811-06 (ADMINISTRATIVE &**
24 **GENERAL – RENTS) IN THE LOS ANGELES COUNTY DIVISION?**

25 A. Yes. As explained in **EXHIBIT SG-6** (Swift), San Gabriel plans to upsize the two
26 temporary trailers that will be located at Plant No. 11 in the Los Angeles County division
27 to accommodate construction of the Company's new administrative building in El Monte.
28 As also explained in **EXHIBIT SG-6**, the owner of San Gabriel's commercial office in the
29 City of Industry has provided notice that the Company's lease will not be renewed after
30 October 2025. Accordingly, San Gabriel has incorporated the additional lease cost related

1 to the upsized trailers (\$43,224), and removed the annual cost of the Industry commercial
2 office lease (\$20,958) from the forecast of rent expense recorded in Account 811, as shown
3 in WORKPAPER EX2 (line 571).

4 **12. Dues & Subscriptions**

5 **Q. HOW DID SAN GABRIEL FORECAST DUES AND SUBSCRIPTIONS EXPENSE?**

6 A. The dues & subscriptions Subaccount 09 consists of membership dues to professional
7 organizations and subscriptions to industry publications. San Gabriel forecasted dues and
8 subscriptions expense using a 5-year average of recorded expenses and CPI-U Escalation
9 Rates. These calculations are shown in WORKPAPER EX2.

10 **13. Employee Pensions & Benefits**

11 **Q. PLEASE DESCRIBE THE PENSION BENEFIT SAN GABRIEL PROVIDES TO**
12 **EMPLOYEES.**

13 A. The Company's pension plan, the San Gabriel Valley Water Company Retirement and
14 Savings Plan, includes both a traditional 401(k) plan and Roth 401(k) plan. Employees
15 become eligible for Company contributions to their traditional or Roth 401(k) account on
16 the first entry date after they complete one year of service. The entry dates are January 1
17 and July 1. Employees' earnings after the date they become eligible for company
18 contributions are referred to as 401(k)-eligible payroll.

19
20 San Gabriel contributes to the 401(k) plan in two ways. First, the Company makes an
21 annual contribution to each eligible employee's 401(k) account each January based on the
22 401(k)-eligible payroll. This contribution, which the Company refers to as its
23 "discretionary contribution," for many years has been set at 6% of San Gabriel's total
24 401(k)-eligible payroll. Second, the Company contributes to the 401(k) plan through
25 matching contributions. San Gabriel matches 50% of each employee's eligible salary
26 deferrals into the plan. Salary deferrals of up to 6% of an employee's 401(k)-eligible
27 payroll are eligible for the Company's matching contribution, so the Company's matching
28 contribution can be up to 3% of 401(k)-eligible payroll.

29 **Q. HOW DOES THE TRADITIONAL 401(K) PLAN DIFFER FROM THE ROTH**
30 **401(K) PLAN?**

1 A. Traditional 401(k) plan contributions are made on a pretax basis and are not included in an
2 employee’s taxable income. The pretax contributions and any earnings under the
3 traditional 401(k) plan are subject to income taxes at the time they are withdrawn. In
4 contrast, Roth 401(k) contributions are made on an after-tax basis and are included in an
5 employee’s current taxable income. Earnings are tax-free if they are part of a qualified
6 distribution. The cost to San Gabriel is the same regardless of which plan an employee
7 chooses.

8 **Q. HOW DID YOU FORECAST PENSION EXPENSE?**

9 A. Employee pensions and benefits expenses are recorded in Account 795. As explained
10 above, forecasted pensions & benefits expenses are calculated in CONFIDENTIAL
11 WORKPAPER PR4, and summarized in WORKPAPERS PR2 and PR3.

12
13 For existing employees, San Gabriel forecasted pension expense by applying the
14 Company’s discretionary contribution percentage and the applicable Company matching
15 contribution percentage (based on each employee’s current 401(k) deferral percentage) to
16 the employee’s forecasted wages in 2025, 2026 and 2027. For new positions that San
17 Gabriel is requesting in this GRC, San Gabriel applied the discretionary contribution
18 percentage and the applicable Company matching contribution percentage (based on the
19 average contribution percentage of all employees) commencing with the first entry date
20 after one year of service. These calculations are detailed in CONFIDENTIAL
21 WORKPAPER PR4, and summarized in WORKPAPERS PR2 and PR3.

22 **Q. DOES SAN GABRIEL OFFER ANY OTHER POST-EMPLOYMENT BENEFITS**
23 **(“OPEB”)?**

24 A. Yes. In addition to the retirement and savings plan, San Gabriel offers a retiree Health
25 Reimbursement Arrangement (“HRA”) plan. As explained by Company witness Lynn
26 Brown in her prepared testimony (**EXHIBIT SG-10**), San Gabriel’s HRA plan offers
27 retirees a flexible and low-cost benefit to help them pay for a portion of their qualified
28 medical expenses that are not paid by Medicare or supplemental insurance. Mr. Harris
29 addresses San Gabriel’s forecast of HRA plan expense in Sections III.7 and III.8 of his
30 prepared testimony (**EXHIBIT SG-5**).

1 **Q. HOW DID YOU FORECAST HEALTH INSURANCE?**

2 A. San Gabriel’s health plan runs annually from July to June. Therefore, San Gabriel
3 escalated the July 2024 premiums by applying CPI-U Escalation Rates for Estimated Year
4 2025 and Test Year 2026-2027, as shown in WORKPAPER PR1. San Gabriel then applied
5 these escalated premiums to its employee forecast to arrive at the total health insurance
6 costs shown in WORKPAPER PR2. San Gabriel’s forecast of health insurance includes
7 the Company’s portion of health insurance premiums for new employee positions
8 requested in this GRC, as calculated in CONFIDENTIAL WORKPAPER PR4.

9 **Q. HOW DID YOU FORECAST DENTAL, VISION, LIFE AND LONG-TERM**
10 **DISABILITY INSURANCE?**

11 A. For dental, vision, life, and long-term disability (“LTD”) insurance, San Gabriel escalated
12 2024 premiums by applying CPI-U Escalation Rates for Estimated Year 2025 and Test
13 Year 2026-2027, as shown in WORKPAPER PR1. San Gabriel then applied these
14 escalated premiums to the Company’s payroll and employee forecast, as appropriate, to
15 arrive at the total dental, vision, life and LTD insurance costs summarized in
16 WORKPAPER PR2.

17 **Q. HOW DID YOU FORECAST EXPENSES RELATED TO VACATIONS,**
18 **HOLIDAYS, SICK LEAVE AND EMPLOYEE UNIFORMS?**

19 A. Forecasted expenses related to vacations, holidays, and sick leave are reflected in San
20 Gabriel’s payroll expense forecast, discussed above, and are shown in WORKPAPER PR3.
21 San Gabriel forecasted expenses for employee uniforms by escalating 2024 recorded
22 expenses by non-labor Escalation Rates, as shown in WORKPAPER PR3.

23 **14. Insurance Expense**

24 **Q. HOW DID SAN GABRIEL FORECAST INSURANCE EXPENSE?**

25 A. Insurance expense is recorded in Accounts 793 (Property Insurance), 794 (Injuries &
26 Damages) and 903 (Transportation Expense – Clearing). San Gabriel’s business insurance
27 package includes coverage for general liability, employment practices liability, automobile
28 liability, property damage, and cyber liability coverage. These are one-year policies, all of
29 which must be renewed as of March 1 of each year. Effective March 1, 2024, the premium
30 for San Gabriel’s business insurance package increased by approximately 11.8%, as shown

1 in WORKPAPER EX4 (line 15). The 5-year average increase in business insurance
2 package premiums is 15.2%. Based on this 5-year average increase, San Gabriel projects
3 the calendar-year premium expense to increase by 14.6%, 15.2% and 15.2% in 2025, 2026
4 and 2027, the computation of which is shown in WORKPAPER EX4.

5 **Q. HOW DID SAN GABRIEL FORECAST WORKERS' COMPENSATION**
6 **INSURANCE?**

7 A. The Company's workers compensation insurance is renewed each year on July 1. San
8 Gabriel escalated July 2024 workers' compensation premiums by applying CPI-U
9 Escalation Rates for Estimated Year 2025 and Test Year 2026-2027, as shown in
10 WORKPAPER PR1. San Gabriel then applied these escalated premiums to the Company's
11 payroll and employee forecast, as appropriate, to arrive at the total workers' compensation
12 insurance costs shown in summarized in WORKPAPERS PR2 and PR3.

13 **Q. HOW DID SAN GABRIEL FORECAST THE REMAINING EXPENSES**
14 **RECORDED IN ACCOUNT 794?**

15 A. The remaining (non-insurance) components of Account 794 were forecasted by escalating
16 the five-year average recorded expense by non-labor (Subaccounts 00 and 02) and CPI-U
17 (Subaccount 09) Escalation Rates.

18 **15. Regulatory Commission Expense**

19 **Q. HOW DID YOU FORECAST REGULATORY EXPENSE RECORDED IN**
20 **ACCOUNT 797?**

21 A. San Gabriel's forecast of Regulatory Expense for Estimated Year 2025 and Test Year
22 2026-2027 is detailed on page 1 of ATTACHMENT G to this testimony. Forecasted
23 Regulatory expense includes non-recurring costs associated with processing San Gabriel's
24 next scheduled GRC, to be filed in January 2028 with a test year beginning July 1, 2029,
25 as well as forecasted costs related to one future cost of capital proceeding (currently
26 scheduled to be filed in 2029) and San Gabriel's participation in Orders Instituting
27 Investigations ("OII") and Orders Instituting Rulemakings ("OIR"), the costs of which are
28 spread evenly over the three-year GRC cycle.

1 Forecasted incremental, non-recurring costs for processing the 2028 GRC and cost of
2 capital proceedings include outside attorneys' fees, customer/public noticing, travel,
3 printing/binding, shipping, as well as costs for outside consulting services and other
4 miscellaneous items. Forecasted costs for outside attorneys are based on the forecasted
5 number of billable hours and rates. Costs for outside consultants are based on actual
6 experienced costs in prior proceedings escalated to the appropriate years, as are forecasted
7 costs for noticing, travel and printing/shipping.

8
9 Forecasted costs for future OIIs and OIRs are based on the assumption that San Gabriel
10 will participate in five such proceedings. Forecasted costs for OIIs and OIRs include
11 traveling to the Commission's office in San Francisco by two employees twice for each
12 proceeding.

13 **Q. PLEASE SUMMARIZE YOUR REGULATORY EXPENSE FORECAST.**

14 A. San Gabriel has forecasted total regulatory expenses of \$1,696,669 for the three-year GRC
15 cycle beginning July 1, 2026. This amount includes \$689,308 for to the Los Angeles
16 County division, or \$229,769 per year, related to the 2028 GRC, and \$682,840 for to the
17 Fontana Water Company division, or \$227,613 per year, related to the 2028 GRC. For the
18 General Division, San Gabriel forecasted \$307,721 in costs for the 2029 cost of capital
19 proceeding and \$16,800 for various OIIs and OIRs, for a total of \$324,521 or \$108,174 per
20 year for the General division. These costs are spread evenly over the three-year GRC cycle,
21 as shown in WORKPAPER EX2 (lines 101, 535, and 970) and page 1 of ATTACHMENT
22 G.

23 **Q. HAS SAN GABRIEL PROVIDED A LISTING OF ALL REGUALTORY**
24 **COMMISSION EXPENSES DETAILING THE NATURE OF THE PROCEEDING,**
25 **INCLUDING PROCEEDING NUMBER, FOR THE PAST SIX YEARS?**

26 A. Yes. This information is provided on page 2 of ATTACHMENT G.

27 **16. Postage Expense**

28 **Q. HOW DID YOU FORECAST POSTAGE EXPENSE?**

29 A. Postage expense is recorded in Subaccount 07 of Accounts 773 (customer records and
30 collection expenses) and 792 (office Supplies and other expenses). San Gabriel forecasted

1 these expenses by escalating 2024 recorded expenses by non-labor Escalation Rates and
2 the five-year average annual rate of customer growth specific to each operating division.
3 Forecasted postage expenses are shown in WORKPAPER EX2 (lines 39, 86, 327, 514,
4 767, and 949) and the customer growth rates are shown in WORKPAPER RV1 (lines 29
5 and 157).

6 **17. Conservation Expense**

7 **Q. HOW DID SAN GABRIEL FORECAST CONSERVATION EXPENSE?**

8 A. Conservation expense is recorded in Account 779 (conservation expense). San Gabriel's
9 proposed conservation program budgets for the Los Angeles County and Fontana Water
10 Company divisions are presented in Section VI.3 of **EXHIBIT SG-9** (Fealy). The
11 conservation program budgets sponsored by Mr. Fealy are shown in WORKPAPER EX2
12 (lines 339 and 779).

13 **18. Miscellaneous Expense**

14 **Q. HOW DID YOU FORECAST MISCELLANEOUS EXPENSE?**

15 A. Miscellaneous expenses are recorded in Subaccount 00 and are generally forecasted using
16 a five-year average of recorded expense by account, escalated at non-labor Escalation
17 Rates. Miscellaneous expenses recorded in Accounts 793 (property insurance), 794
18 (injuries & damages), 795 (pensions & benefits), 796 (franchise tax), 797 (regulatory
19 expense), 798 (outside services), and 812 (administrative expense - transferred) are
20 addressed elsewhere herein. The calculations supporting these forecasts are shown in
21 WORKPAPER EX2.

22 ***California Water Association Dues***

23 **Q. HOW DID YOU FORECAST MISCELLANEOUS GENERAL DIVISION
24 EXPENSES RECORDED IN ACCOUNT 799?**

25 A. The seven components of Account 799 in the General division include Directors Fees,
26 Water Education Foundation ("WEF") costs, Bank Trustee Fees, CWA dues, Executive
27 Charges, National Association of Water Companies ("NAWC") dues, and miscellaneous
28 expenses. WEF costs, Bank Trustee fees, Executive Charges, and Miscellaneous expenses

1 were forecasted using a five-year average and non-labor and compensation per hour
2 Escalation Rates, as shown in WORKPAPER EX2 (lines 110 – 117).

3 **Q. HOW DID YOU FORECAST CWA DUES RECORDED IN ACCOUNT 799?**

4 A. Forecasted CWA dues are based on 2024 recorded expenses and compensation per hour
5 Escalation Rates. As reported in CWA’s Internal Revenue Service (“IRS”) Form 990 for
6 the year 2022, 17% of CWA’s dues and assessments were spent on non-deductible
7 lobbying and political activities.¹⁵ Accordingly, San Gabriel excluded 17% of its
8 forecasted CWA dues from the proposed revenue requirement, as shown in WORKPAPER
9 EX2 (line 113).

10 *National Association of Water Companies Dues*

11 **Q. HOW DID YOU FORECAST NAWC DUES RECORDED IN ACCOUNT 799?**

12 A. Forecasted NAWC dues are based on 2024 recorded expenses and compensation per hour
13 Escalation Rates. As reported in NAWC’s IRS Form 990 for the year 2022, 13% of
14 NAWC’s dues and assessments were spent on non-deductible lobbying and political
15 activities.¹⁶ Accordingly, San Gabriel excluded 13% of its forecasted NAWC dues from
16 the proposed revenue requirement, as shown in WORKPAPER EX2 (line 115).

17 *Directors Fees*

18 **Q. HOW DID YOU FORECAST DIRECTORS FEES RECORDED IN ACCOUNT**
19 **799?**

20 A. San Gabriel has two outside directors who are paid a fee of \$600 for participating in each
21 of the four quarterly meetings. Hence, the annual expense is \$4,800, as shown in
22 WORKPAPER EX2 (line 110).

23 **19. Administrative Expense Transferred**

24 **Q. HOW DID YOU FORECAST ADMINISTRATIVE EXPENSE TRANSFERRED?**

¹⁵ Schedule C, Part III-B (\$394,944 in non-deductible lobbying expenses divided by \$2,323,200 in dues and assessments).

¹⁶ Schedule C, Part III-B (\$765,811 in non-deductible lobbying expenses divided by \$5,889,837 in dues and assessments).

1 A. Administrative expenses (salaries and office supplies) that are transferred to construction
2 costs as capital overheads are recorded (as a credit) in Account 812. The remainder of this
3 account represents administrative salaries attributable to San Gabriel’s affiliates (General
4 division only) which are also credited to this account, as explained in Section III.3 of
5 **EXHIBIT SG-5** (Harris). San Gabriel forecasted this portion of administrative expense
6 transferred using a 5-year average of recorded expenses, escalated using labor Escalation
7 Rates. The capital overheads portion of Account 812 is calculated in WORKPAPER P1
8 (lines 30, 126, 192, 258, 324, 457, 523, 589, and 655) based on the present adopted capital
9 overhead rate of 15%, and are carried over to WORKPAPER EX2 (lines 141, 574, and
10 1017).

11 **Q. IS THE FORECASTED AMOUNT OF ADMINISTRATIVE EXPENSE**
12 **TRANSFERRED DEPENDENT UPON THE ADOPTED CAPITAL BUDGET?**

13 A. Yes. Reducing the forecasted capital budget automatically reduces the forecasted amount
14 of administrative costs that are transferred (i.e. credited) from A&G expenses and
15 capitalized to utility plant. In other words, there is an inverse relationship between the
16 capital budget and A&G expenses. In order to fulfill is obligation under the regulatory
17 compact discussed in Section III above, the Commission must allow for the recovery of
18 prudently-incurred A&G expenses either as capital overheads over the life of the utility
19 plant asset, or as current A&G expenses.

20 **20. Uncollectibles Expense and Franchise Fees**

21 **Q. HOW DID YOU FORECAST UNCOLLECTIBLES EXPENSE?**

22 A. Uncollectibles expense is recorded in Account 775. Uncollectibles expense is affected by
23 factors such as the total level of revenues, general economic conditions, changes in rate
24 levels, and credit and collection policies including legislation and moratoriums on
25 disconnections. San Gabriel calculated a 5-year average uncollectibles rate of 0.0906% for
26 the Los Angeles County division, and 0.1456% for the Fontana Water Company division,
27 as shown in WORKPAPER EX2 (lines 335 and 775). San Gabriel applied this rate to
28 forecasted revenues at both present and proposed rates. Recorded and forecasted

1 uncollectibles expense is shown in TABLE 5A of **EXHIBITS SG-2** and **SG-3** for the Los
2 Angeles County and Fontana Water Company divisions, respectively.

3 **Q. HOW DID YOU FORECAST FRANCHISE FEES?**

4 A. Franchise fees are recorded in Account 796. Franchise fees are paid to certain local
5 governmental agencies on the basis of revenues collected within their respective
6 jurisdictions and other factors. San Gabriel calculated a 5-year average franchise fee rate
7 of 0.9934% for the Los Angeles County division, and 0.6772% for the Fontana Water
8 Company division, as shown in WORKPAPER EX2 (lines 532 and 967). Recorded and
9 forecasted franchise fees are shown in TABLE 6 of **EXHIBITS SG-2** and **SG-3** for the
10 Los Angeles County and Fontana Water Company divisions, respectively.

11 **21. Allocation of General Division Expenses**

12 **Q. HOW DID YOU ALLOCATE GENERAL DIVISION EXPENSES AND RATE**
13 **BASE TO THE LOS ANGELES COUNTY AND FONTANA WATER COMPANY**
14 **DIVISIONS?**

15 A. San Gabriel allocated General division rate base and expenses using the Company's long-
16 established four-factor allocation formula. The 2024 four-factor rates of 50.30% for the
17 Los Angeles County division and 49.70% for the Fontana Water Company division were
18 applied in all forecasted years of this application. The allocation of General division
19 expenses and rate base is shown on TABLE 8 of **EXHIBIT SG-1**.

20 **22. Depreciation Reserve and Expense**

21 **Q. PLEASE EXPLAIN YOUR METHODOLOGY FOR CALCULATING**
22 **DEPRECIATION EXPENSE.**

23 A. San Gabriel applied the proposed book depreciation accrual rates to the forecasted average
24 gross depreciable plant, by plant account. Chapter 7 of **EXHIBIT SG-1** and Chapter 9 of
25 **EXHIBITS SG-2** and **SG-3** show depreciation calculations for the General, Los Angeles
26 County, and Fontana Water Company divisions, respectively. These calculations are
27 supported by WORKPAPER P2.

28 **Q. IS SAN GABRIEL PROPOSING UPDATED DEPRECIATION RATES IN THIS**
29 **GRC?**

1 A. Yes. As shown in TABLE 7A of **EXHIBIT SG-1** for the General division, TABLE 9A of
2 **EXHIBIT SG-2** for the Los Angeles County division, and TABLE 9A of **EXHIBIT SG-**
3 **3** for the Fontana Water Company division, San Gabriel is proposing updated depreciation
4 rates in this proceeding. These proposed depreciation rates are the result of a
5 comprehensive depreciation study prepared by Gannett Fleming in 2024, and provided as
6 **ATTACHMENT H** to this testimony.

7 **23. Payroll Taxes**

8 **Q. HOW DID YOU FORECAST PAYROLL TAXES?**

9 A. Payroll taxes consist of Federal Insurance Contributions Act (“FICA”), Federal
10 Unemployment Insurance (“FUI”), and State Unemployment Insurance (“SUI”) taxes. The
11 current rates for each of these taxes are applied to each employee’s estimated salary up to
12 the maximum taxable limit. FICA consists of a Social Security tax (“SSI”) equal to 6.20%
13 of earnings up to the forecasted limit, as well as a Medicare tax equal to 1.45% of total
14 earnings. The maximum FICA-SSI taxable base is increased each October (applicable the
15 following year) and has been forecasted in this application, based on labor Escalation
16 Rates, to be \$178,600 in 2026 and \$183,800 in 2027. The maximum taxable limit for both
17 FUI and SUI is \$7,000, and is forecasted to remain constant. Therefore, San Gabriel
18 applied the current FUI and SUI tax rates of 0.6% and 1.7%, respectively, to each
19 employee’s estimated salary, up to the maximum limit of \$7,000. San Gabriel’s forecasted
20 payroll taxes are shown in TABLE 5 of **EXHIBIT SG-1** for the General division, and
21 TABLE 7A of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and Fontana Water
22 Company divisions, respectively. CONFIDENTIAL WORKPAPER PR4 contains the
23 detailed supporting calculations. These calculations are summarized in WORKPAPER
24 PR2.

25 **24. Ad Valorem Tax**

26 **Q. HOW DID YOU FORECAST AD VALOREM TAXES?**

27 A. San Gabriel forecasted ad valorem, or property taxes by applying the average tax rate
28 recorded in 2024 to the beginning-of-year forecasted net plant in service, less intangibles,
29 advances and contributions in aid of construction, and deferred taxes. Forecasted ad
30 valorem taxes are shown in TABLE 5 of **EXHIBIT SG-1** for the General division, and in

1 TABLE 7A of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and Fontana Water
2 Company divisions, respectively. These forecasts are supported by calculations shown in
3 WORKPAPER TX1.

4 **25. Income Tax Calculation**

5 **Q. PLEASE EXPLAIN SAN GABRIEL’S METHODOLOGY FOR CALCULATING**
6 **INCOME TAXES.**

7 A. Income taxes are presented in TABLE 7B of **EXHIBITS SG-2** and **SG-3** for the Los
8 Angeles County and Fontana Water Company divisions, respectively. San Gabriel
9 calculated income taxes by applying a 21.00% federal income tax rate and an 8.84% state
10 income tax rate to taxable income. The interest deduction is computed by multiplying San
11 Gabriel’s adopted weighted cost of debt by average rate base, as shown in WORKPAPER
12 TX2.

13
14 The California state tax depreciation deduction is reflected in the calculation of state
15 income taxes, while the ratemaking, or book, Depreciation Expense deduction is reflected
16 in the calculation of federal income taxes. The calculation of federal and state tax
17 depreciation, including the Repair Regulations deduction, is shown in WORKPAPER P4.

18 **Q. DOES YOUR INCOME TAX CALCULATION INCLUDE THE AMORTIZATION**
19 **OF EXCESS DEFERRED INCOME TAXES (“EDIT”) RESULTING FROM THE**
20 **2017 TAX CUTS AND JOBS ACT?**

21 A. Yes. The income tax calculation shown in TABLE 7B of **EXHIBITS SG-2** and **SG-3**
22 includes the amortization of EDIT. EDIT includes a “protected” portion, to which the
23 Internal Revenue Code’s (“IRC”) normalization rules apply, and an “unprotected” portion,
24 which is not subject to the normalization rules. In San Gabriel’s 2019 GRC (A.19-01-001),
25 the settling parties agreed, and the Commission adopted in D.20-08-006, the Company’s
26 proposal to amortize the unprotected portion of EDIT in both the Los Angeles County and
27 Fontana Water Company divisions over a one-year period during Test Year 2020-2021 –
28 essentially refunding the entire balance of unprotected EDIT during the test year in that

1 proceeding.¹⁷ The remaining, protected portion of EDIT is subject to the IRC's
2 normalization rules and must be amortized in accordance with the Average Rate
3 Assumption Method. The amortization of the protected portion of EDIT is shown in
4 WORKPAPER TX2 (lines 168, 169, 351 & 352).

5 **26. Rate Base**

6 **Q. WHAT IS RATE BASE?**

7 A. Rate base is the utility's net investment on which it is allowed to earn a rate of return. Rate
8 base consists of utility plant less accumulated depreciation, plus investor-funded items such
9 as materials and supplies, working cash, net taxes on advances and contributions, and an
10 allocation of General division net plant. From this amount, typical rate base deductions
11 (e.g. advances, contributions, and deferred taxes) are subtracted. The average balance for
12 the components of rate base is traditionally a two-point average of the beginning and end
13 of year balances.

14
15 Forecasted rate base for the Los Angeles County and Fontana Water Company divisions is
16 shown in TABLE 10A of **EXHIBITS SG-2** and **SG-3**, respectively. The various
17 components of rate base are developed in the tables provided in Chapters 6 and 7 of
18 **EXHIBIT SG-1** for the General division, and in Chapters 8 through 10 of **EXHIBITS**
19 **SG-2** and **SG-3** for the Los Angeles County and Fontana Water Company divisions,
20 respectively.

21 **Q. HOW DID SAN GABRIEL FORECAST RATE BASE?**

22 A. San Gabriel forecasted rate base by adding forecasted utility plant additions, including
23 developer-funded additions, to the recorded rate base based on the capital budgets attached
24 to and sponsored by the prepared testimony of Matt Y. Yucelen (**EXHIBIT SG-13**). As
25 explained by Mr. Yucelen, it is assumed that developer-funded utility plant additions will
26 be recorded as contributions in aid of construction.

¹⁷ See D.20-08-006, Appendix A, page 8 of 11 (Los Angeles County division Computation of Taxes on Income), and Appendix B, page 8 of 12 (Fontana Water Company division Computation of Taxes on Income).

1 **Q. HOW DID SAN GABRIEL FORECAST THE WORKING CASH COMPONENT**
2 **OF RATE BASE?**

3 A. The working cash component of rate base was forecasted based on the results of a lead/lag
4 study. A lead/lag study examines the net lag days between: (1) the time lag between
5 services rendered and the receipt of revenues for such services and (2) the time lag between
6 recording costs and the payment of such costs. San Gabriel’s lead/lag study was developed
7 in a manner consistent with prior lead/lag studies and CPUC Water Division Standard
8 Practice U-16-W. The calculations supporting San Gabriel’s lead/lag study are shown in
9 WORKPAPER WC1.

10
11 The calculations supporting the development of rate base are shown in WORKPAPERS
12 P1 through P4, WC1, and TX2.

13 **Q. DID SAN GABRIEL MAKE ANY SPECIAL ADJUSTMENTS TO RATE BASE IN**
14 **THIS PROCEEDING?**

15 A. Yes. Ratemaking adjustments, shown in WORKPAPER P3, were applied to the recorded
16 utility plant, construction work in progress (“CWIP”), depreciation accrual, and
17 depreciation reserve accounts to reflect prior Commission disallowances of capital
18 expenditures, and to move 66% of the Fontana Water Company division office from the
19 General division, where it is recorded, to the Fontana Water Company division. Additional
20 ratemaking adjustments included in WORKPAPER P3 for the first time in this GRC
21 include an adjustment to utility plant in the General division to reflect the \$14 million
22 agreed-upon cap on San Gabriel’s recent IT upgrade project (lines 24 - 27), as explained
23 in Section III.4 of **EXHIBIT SG-5** (Harris), an adjustment to utility plant in the Los
24 Angeles County division to reflect the disallowance of a portion of the purchase price for
25 the City of Montebello’s water system (lines 79 – 83), as explained in Section IV.1 of
26 **EXHIBIT SG-5** (Harris), and an adjustment to CWIP in the Fontana Water Company
27 division to exclude the construction costs incurred to-date related to the Summit surface
28 water treatment plant water quality improvement project (line 179), as explained in
29 **EXHIBIT SG-6** (Swift).

1 **27. Return on Rate Base**

2 **Q. WHAT RETURN ON RATE BASE DID SAN GABRIEL USE FOR THE**
3 **COMPANY’S REVENUE REQUIREMENT CALCULATIONS?**

4 A. San Gabriel used the 7.82% return on rate base that the Commission adopted for San
5 Gabriel in its most recent cost of capital proceeding. In D.24-12-007, dated December 5,
6 2024, the Commission adopted the following rate of return for San Gabriel:

7
8 **TABLE 8**

	Percent	Cost	Weighted Cost
Long-Term Debt	35.05%	4.99%	1.75%
Common Equity	64.95%	9.34%	6.07%
	100.00%		7.82%

9 Accordingly, San Gabriel used a 7.82% rate of return on rate base, as shown in the above
10 table, to calculate the revenue requirement in this GRC.

11 **28. Calculation of the Increases for Escalation Years 2027-2028 and 2028-2029**

12 **Q. HOW WERE THE ESTIMATED 2027-2028 AND 2028-2029 INCREASES**
13 **DETERMINED?**

14 A. The Escalation Year 2027-2028 is a Test Year for rate base-related items and an Escalation
15 Year for all other components of the revenue requirement. The RCP approved in
16 D.07-05-062 requires the application of the following escalation factors, published by Cal
17 Advocates, to the test year expense forecasts:

18 **TABLE 9**

Escalation Factor	Test Year Expense Forecast
Labor	Payroll, Pensions & Benefits, Payroll Taxes
Composite Non-Labor	Purchased Chemicals, Other O&M and A&G, and Other Taxes (excluding income tax)
CPI-U	Loans, Insurance, Contracted Services, and Rents

19
20 The RCP also states that, “Expense items subject to recovery via off-set accounts, e.g.,
21 balancing accounts, shall not be escalated,” but that “Escalation year water production-
22 related expenses will be based on escalation year sales.”

1
2 The increase for Escalation Year 2028-2029 was determined in a similar manner except
3 for rate base-related items, for which the dollar increase between the first two years was
4 assumed to continue through this third year of the GRC cycle.

5
6 Income taxes for both years were calculated based on the projected taxable income, as
7 shown in TABLE 7B of EXHIBITS SG-2 and SG-3 for the Los Angeles County and
8 Fontana Water Company divisions, respectively.

9 **V. Rate Design**

10 **1. Quantity Rates and Fixed Monthly Service Charges**

11 **Q. HOW DID YOU DEVELOP SAN GABRIEL'S PROPOSED RATE DESIGN IN**
12 **THIS PROCEEDING?**

13 A. The same process was used to design rates in both the Los Angeles County and Fontana
14 Water Company divisions. The initial step was the estimation of the test year revenue
15 requirement based on forecasted expenses and rate base. This is shown in WORKPAPER
16 RD1 (lines 27 and 151). The test year revenue requirement was then reduced by the
17 forecasted level of miscellaneous revenues (Accounts 611 through 614), and multiplied by
18 the proportion of the revenue requirement allocated to quantity rates to arrive at the
19 quantity rate target revenues (lines 36 and 160 of WORKPAPER RD1). The proposed
20 rates were set to come as close as possible to these targets while producing the overall
21 required rate of return of 7.82%, as discussed in Section IV.27 above.

22 **Q. WHAT PROPORTION OF THE PROPOSED REVENUE REQUIREMENT HAVE**
23 **YOU ALLOCATED TO QUANTITY RATES IN THIS PROCEEDING?**

24 A. As previously explained in Section IV.2 of this testimony, in the Los Angeles County
25 division, San Gabriel has allocated 64.6% of the revenue requirement to quantity rates,
26 consistent with the conservation rate design approved for the Los Angeles County division
27 in D.10-04-031, and in each subsequent GRC. In the Fontana Water Company division,
28 San Gabriel has allocated 70.0% of the revenue requirement to quantity rates, consistent
29 with the rate design adopted in D.20-08-006.

30 **Q. HOW DID YOU DEVELOP THE PROPOSED MONTHLY SERVICE CHARGES?**

1 A. Monthly service charges for meters sizes larger than $\frac{5}{8}$ x $\frac{3}{4}$ -inch, as developed on
2 WORKPAPER RD1, increase according to the current adopted meter capacity ratios
3 relative to a $\frac{5}{8}$ x $\frac{3}{4}$ -inch meter. As with the quantity rates, the proposed charges were set
4 to come as close as possible to the fixed revenue targets while producing the overall
5 required rate of return of 7.82%.

6 **Q. DOES SAN GABRIEL CHARGE TIERED CONSERVATION RATES?**

7 A. Yes. Prior to San Gabriel’s last GRC, A.22-01-003, the Company had a two-tiered
8 conservation rate design applicable to residential customers on Tariff Schedule LA-1C in
9 the Los Angeles County division and Tariff Schedule FO-1C in the Fontana Water
10 Company division. In the settlement adopted in D.24-03-005 (A.22-01-003), the parties
11 agreed to add a third tier to the conservation rate design adopted in each division. In the
12 Los Angeles County division, the parties agreed to set the monthly tier breakovers at 10
13 and 20 Ccf. In the Fontana Water Company division, the parties agreed to set the monthly
14 tier breakovers at 13 and 24 Ccf for Test Year 2023-2024, with the first tier breakover
15 being reduced to 12 Ccf in Escalation Year 2024-2025, and 11 Ccf in Escalation Year
16 2025-2026.

17
18 In both divisions, the parties agreed to allocate 68.4% of test year sales to Tier 1, 21.6% of
19 sales to Tier 2, and 10.0% of sales to Tier 3. (see ATTACHMENT J). Additionally, the
20 adopted Tier 2 quantity rate was set at a 15% premium over the Tier 1 quantity rate, and
21 the Tier 3 quantity rate was set at a 30% premium over the Tier 2 quantity rate.

22 **Q. IS SAN GABRIEL PROPOSING ANY CHANGES TO THE COMPANY’S**
23 **CONSERVATION RATE DESIGN?**

24 A. No. San Gabriel proposes to maintain the present adopted conservation rate designs in
25 each division for this GRC cycle, with the exception of updating the forecasted
26 percentage of conservation rate sales that are expected to occur in each tier. This forecast
27 is shown ATTACHMENT K. It is important to note that San Gabriel’s two-tiered
28 conservation rate design was in effect for nearly 14 years prior to a third tier being added
29 in each division. Adding a third tier can represent a sudden and drastic billing change for
30 some residential customers – particularly low-income customers with large families.

1 Moreover, a decision in San Gabriel’s last GRC (which adopted a third tier in each division)
2 was delayed by more than nine months, meaning the Company and its customers only have
3 a few months of experience under the present rate design. In the interest of gradualism,
4 and in recognition of the drastic declines in per-customer usage discussed in Section IV.2
5 above, the Company and its customers should have a reasonable amount of experience
6 under the present rate design before introducing additional changes.

7 **2. Compliance with D.20-08-047, Providing Guidance on Conservation Rate**
8 **Design**

9 **Q. PLEASE DISCUSS THE GUIDANCE PROVIDED BY THE COMMISSION IN**
10 **D.20-08-047 AS IT RELATES TO RATE DESIGN.**

11 A. As explained in Section IV.2 above, D.20-08-047 was issued in Phase I of R.17-06-024,
12 Order Instituting Rulemaking Evaluating the Commission’s 2010 Water Action Plan
13 Objective of Achieving Consistency between Class A Water Utilities’ Low-Income Rate
14 Assistance Programs, Providing Rate Assistance to All Low-Income Customers of
15 Investor-Owned Water Utilities, and Affordability. One of the issues examined in R.17-
16 06-024 was how best to consider potential changes in rate design such that there is a basic
17 amount of water that customers receive at a low quantity rate.¹⁸ To this end, in D.20-08-
18 047, the Commission directed water utilities to provide analyses in their GRCs to determine
19 the appropriate Tier 1 break over that is not lower than the baseline amount of water needed
20 for basic human needs in each operating division. This analysis for establishing a baseline
21 should consider and not be set below both the essential indoor usage (“EIU”) of 6 Ccf per
22 household per month, established in R.18-07-006, and the typical winter usage in each
23 operating division.¹⁹ The specific language in Ordering Paragraph No. 2 of D.20-08-047
24 states:

25
26 **ORDERING PARAGRAPH NO. 2:**

27 Water utilities shall provide analysis in their next general rate case applications to
28 determine the appropriate Tier 1 breakpoint that is not less than the baseline amount
29 of water for basic human needs for each ratemaking area.

¹⁸ See D.20-08-047, p. 15.

¹⁹ *Id.* pp. 76 – 77.

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Q. HAVE YOU PREPARED AN ANALYSIS TO DETERMINE WHETHER THE PRESENT RATE DESIGNS IN EACH DIVISION ARE IN COMPLIANCE WITH ORDERING PARAGRAPH NO. 2 OF D.20-08-047?

A. Yes, that analysis is provided as **ATTACHMENT I** to this testimony, and shows that San Gabriel’s adopted Tier 1 break overs of 10 Ccf in the Los Angeles County division and 11 Ccf in the Fontana Water Company division are appropriate, as they are not less than the baseline EIU of 6 Ccf, as determined in R.18-07-006, and typical winter season water usage.²⁰

Q. PLEASE EXPLAIN THE ANALYSIS SHOWN IN ATTACHMENT I.

A. The analysis shown in **ATTACHMENT I** shows the median monthly usage in Ccf per customer for the Residential Single Family class for the ten-year period ending 2023, based on customer usage data from San Gabriel’s billing system. As shown in the analysis, the winter median monthly usage per Residential Single Family customer averaged 8 Ccf in the Los Angeles County division and 9 Ccf in the Fontana Water Company division over the ten year period covered in the analysis. As also shown in the analysis, the average standard deviation of median usage per customer during the winter months (January, February and March) is less than 1 Ccf in both the Los Angeles County and Fontana Water Company divisions. This relatively consistent residential water usage during the winter months has led many analysts to rely upon winter usage as a convenient measure of indoor water usage year-round.²¹ Likewise, in referencing winter usage as the minimum quantity of water to be included in Tier 1 in D.20-08-047, the Commission implicitly recognized that such usage represents an estimate of the minimum quantity of water necessary for human health and hygiene.

Q. DO THE ADOPTED TIER 1 BREAK OVERS OF 10 CCF IN THE LOS ANGELES COUNTY DIVISION AND 11 CCF IN THE FONTANA WATER COMPANY DIVISION MEET THE REQUIREMENT IN D.20-08-047 THAT THEY NOT BE SET BELOW BOTH THE ESSENTIAL INDOOR USAGE OF 6 CCF PER

²⁰ *Id.* p. 77.
²¹ WRF-EPA Study. p. 51.

1 **HOUSEHOLD PER MONTH AND THE TYPICAL WINTER USAGE IN EACH**
2 **OPERATING DIVISION?**

3 A. Yes. In D.20-08-047, the Commission referenced California Water Code § 10609.4(a),
4 which established a 55 gallon per day per capita (“GPDC”) standard for necessary indoor
5 residential water usage. Under this standard, the EIU of 6 Ccf per month determined in
6 R.18-07-006, and referenced in D.20-08-047, represents a household of up to three
7 people.²² San Gabriel’s adopted Tier 1 break overs of 10 Ccf and 11 Ccf in the Los Angeles
8 County and Fontana Water Company divisions cover households of up to 5, as shown in
9 **ATTACHMENT I**. These adopted tier break overs are particularly appropriate in that
10 they address, to a certain extent, the additional water needs of large families (including
11 large low-income families) who might be efficient in their water usage but unable to reduce
12 their overall monthly indoor usage to levels more typical of smaller households, while still
13 providing an appropriate pricing signal for more discretionary water usage.

14 **3. Other Rate Design Issues**

15 **Q. IS SAN GABRIEL PROPOSING CHANGES TO THE MONTHLY DISCOUNT**
16 **CUSTOMERS RECEIVE UNDER THE COMPANY’S LOW INCOME**
17 **CUSTOMER ASSISTANCE (“CAP”) PROGRAM?**

18 A. Yes. San Gabriel proposes to increase the monthly CAP subsidy from \$10.35 in each
19 division, as adopted in the Company last GRC, D.24-03-005, to \$12.00 in each division.
20 The increase of \$1.65, from \$10.35 to \$12.00 is intended to produce typical bill increases
21 (in percentage terms) for CAP and non-CAP customers that are approximately equal, as
22 shown in TABLE 12 of **EXHIBITS SG-2** and **SG-3** for the Los Angeles County and
23 Fontana Water Company divisions, respectively.

24 **Q. WHAT ARE BATTERIES OF METERS, AND HOW DID YOU DESIGN THE**
25 **RATES FOR BATTERIES OF METERS?**

26 A. Batteries of meters consist of two or more meters set for the purpose of measuring water
27 usage at a single service connection. Tariff Schedules No. LA-1, and LA-6 in the Los

²² D.20-08-047, p. 77. $[(6 \text{ Ccf} \times 748.052 \text{ Gals/Ccf}) \div 30 \text{ Days}] \div 55 \text{ Gals/Person} = 2.72 \text{ persons per household (rounded to 3)}$.

1 Angeles County division, and Schedules No. FO-1, and FO-6 in the Fontana Water
2 Company division list service charges for batteries of various combinations of meter sizes.
3 The proposed rates for batteries of meters are simply the sum of the proposed rates for the
4 individual meter sizes, as shown in WORKPAPER RD1 (lines 92 – 99 and 217 – 221).

5 **Q. HOW DID YOU DESIGN PRIVATE FIRE SERVICE RATES?**

6 A. The existing monthly charges set forth in Tariff Schedules No. LA-4 for the Los Angeles
7 County division and FO-4 for the Fontana Water Company division were increased by the
8 same percentage increase as all other service charges.

9 **Q. ARE YOU PROPOSING ANY CHANGES TO SAN GABRIEL’S RECYCLED
10 WATER RATE TARIFFS?**

11 A. No.

12 **Q. ARE YOU PROPOSING ANY CHANGES TO FONTANA WATER COMPANY
13 DIVISION FACILITIES FEES?**

14 A. No.

15 **VI. Special Requests**

16 **Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

17 A. In this section of my testimony I summarize the Special Requests listed in Paragraph 19 of
18 San Gabriel’s Application that are sponsored by other Company witnesses, and provide an
19 explanation of those Special Requests summarized in Paragraph 19 of the Company’s
20 Application which I sponsor.

21 *Special Request No. 1: Compliance with Applicable Water Quality Standards*

22 **Q. PLEASE SUMMARIZE SPECIAL REQUEST NO. 1.**

23 A. Special Request No. 1 is sponsored by Mr. Fealy (**EXHIBIT SG-9**). In this GRC San
24 Gabriel requests that the Commission issue a Finding of Fact that the Los Angeles County
25 and Fontana Water Company divisions have operated in compliance with all applicable
26 safe drinking water quality standards since its last GRC, as reflected in Section V of
27 **EXHIBIT SG-9** (Fealy).

28 *Special Request No. 2: Incorporating Subsequent Rate Changes*

29 **Q. PLEASE EXPLAIN SPECIAL REQUEST NO. 2.**

1 A. I sponsor Special Request No. 2. Outside of a GRC, water rates are often changed through
2 the advice letter process or by special application. These rate changes can be temporary
3 surcharges and surcredits that do not impact the GRC decision, or they can be changes to
4 base rates that reflect such things as a newly adopted rate of return or a water supply cost
5 offset. When these types of base rate adjustments are implemented prior to a GRC
6 decision, but not reflected in that GRC decision, the utility is compelled to request
7 reinstatement of any such rate adjustments concurrently or after the adopted GRC rates are
8 implemented. Moreover, when these types of base rate adjustments are not incorporated
9 into the final GRC decision, customers and other stakeholders do not receive accurate
10 information regarding the final rates adopted. The potential for these types of rate changes
11 to cause confusion among parties if they are not incorporated in to the final GRC decision
12 has only grown as delayed GRC decision have become the norm, rather than the exception.

13
14 In order to avoid this situation, San Gabriel requests approval to incorporate such rate and
15 revenue changes into the calculation of the final rates adopted in this GRC. This requires
16 that such changes be incorporated into the revenue requirement workpapers used to
17 develop the final rates and adopted figures. For example, if San Gabriel implements water
18 and power cost offsets before a final decision is issued, those newly-adopted unit costs will
19 need to be incorporated into the workpapers supporting the water and power expense
20 forecasts, and the newly-adopted revenues and base rates will need to be incorporated into
21 the summaries of earnings and typical bills at present rates in this GRC.

22 ***Special Request No. 3: Balancing and Memorandum Accounts***

23 **Q. PLEASE EXPLAIN SPECIAL REQUEST NO. 3.**

24 A. Ms. Navarro sponsors Special Request No. 3 in her direct testimony (**EXHIBIT SG-12**).
25 As explained by Ms. Navarro, San Gabriel requests authority to transfer the balances
26 recorded in the Catastrophic Event Memorandum Accounts, Water Conservation
27 Memorandum Accounts, and Payment Options Memorandum Account to the Previously
28 Authorized Balances Balancing Accounts for each division. Additionally, to the extent the
29 one-way Conservation Program Balancing Accounts are under-spent (i.e. over-collected)
30 as of June 30, 2026 (the last day of the three-year cycle in the Company’s 2022 GRC, A.22-

1 01-003), San Gabriel requests authority to refund such balances by Tier 2 advice letter, or
2 to the extent such balancing accounts are over-spent (i.e. under-collected) as of June 30,
3 2026, reset the July 1, 2026 balance(s) to zero.

4 ***Special Request No. 4: PBOP Balancing Account***

5 **Q. PLEASE SUMMARIZE SPECIAL REQUEST NO. 4.**

6 A. Mr. Harris sponsors Special Request No. 4 in Section III.8 of his direct testimony
7 (EXHIBIT SG-5). As explained by Mr. Harris, San Gabriel requests authorization to open
8 a balancing account to track the difference between the costs of post-retirement benefits
9 other than pensions (“PBOP”) approved in the GRC and the amount of PBOP expense
10 actually recorded.

11 ***Special Request No. 5: Incorporating Most Recent Escalation and Inflation Rates***

12 **Q. PLEASE EXPLAIN SPECIAL REQUEST NO. 5.**

13 A. I sponsor Special Request No. 5. Each month, the Commission’s Public Advocates Office
14 publishes escalation rate memos, and U.S. Bureau of Labor Statistics publishes general
15 inflation (CPI-U) rates. These rates are used to forecast various categories of costs in
16 developing the test year and escalation year revenue requirements. As shown in
17 WORKPAPER G11 (lines 20 – 34), these rates can fluctuate significantly. In order to
18 protect both the Company and its ratepayers and better align the forecasted test year and
19 escalation years with actual economic conditions, San Gabriel requests that the most recent
20 escalation rates published by the Public Advocates Office, as well as the most recent annual
21 rate of inflation, as measured by the CPI-U, be incorporated into the final rates adopted in
22 this GRC.

23 ***Special Request No. 6: Interim Decision in the Event of Settlement on Revenue***
24 ***Requirement***

25 **Q. PLEASE EXPLAIN SPECIAL REQUEST NO. 6.**

26 A. In San Gabriel’s last GRC (A.22-01-003), the parties reached a full settlement of all issues.
27 Despite the fact that the parties submitted a proposed settlement agreement in December
28 2022, a final decision was not issued until March 2024 – approximately nine months after

1 the beginning of the test year in that proceeding. This special request will help mitigate
2 the effect of regulatory lag and customer surcharges to recover the difference between
3 interim rates (which are typically set at the same level as present rates) and the final rates
4 ultimately adopted by the Commission.

5 **VII. Miscellaneous**

6 **1. Minimum Data Requirements**

7 **Q. WHAT ARE MINIMUM DATA REQUIREMENTS?**

8 A. This GRC application is filed in accordance with the RCP adopted by D.07-05-062 in R.06-
9 12-016. To reduce formal discovery during GRC proceedings, the Commission adopted
10 Minimum Data Requirements (“MDRs”) to be completed by the utility as part of its GRC
11 testimony. The instructions therein state that the Application and testimony need not
12 respond to the MDRs in the order presented, but require only that a cross-reference to those
13 documents be provided. San Gabriel presents its response to the MDR in **APPENDIX A**,
14 appended hereto, for the General division, Los Angeles County division, and the Fontana
15 Water Company division.

16 **Q. WAS THIS APPENDIX PREPARED UNDER YOUR DIRECTION AND**
17 **SUPERVISION?**

18 A. Yes. Appendix A was prepared under my direction and supervision, and I am generally
19 familiar with its contents. However, I may defer to other witnesses regarding some of the
20 technical detail.

21 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

22 A. Yes, it does.

EXHIBIT SG-4 (Reiker)
ATTACHMENT A

	Regression Forecast				Test Year 2026-2027	R ²	All Coefficients Statistically Significant?
	2025	2026	2027	2028			
LOS ANGELES COUNTY							
LAC Residential - Single Family							
REGRESSION 1	140	139	138	137	138	0.80	Yes
REGRESSION 2	131	127	122	118	124	0.83	Yes
REGRESSION 3	137	134	132	130	133	0.89	No
REGRESSION 4	130	125	121	116	123	0.87	No
LAC Residential - Multi-Family							
REGRESSION 1	673	668	663	658	666	0.73	Yes
REGRESSION 2	649	634	620	605	627	0.78	Yes
REGRESSION 3	668	660	653	645	656	0.84	No
REGRESSION 4	646	631	616	601	623	0.83	No
LAC Commercial							
REGRESSION 1	630	638	646	654	642	0.78	Yes
REGRESSION 2	612	616	619	623	617	0.82	Yes
REGRESSION 3	618	622	626	631	624	0.86	No
REGRESSION 4	609	612	615	618	614	0.85	No

Notes:

REGRESSION 1:

- 10 YEARS MONTHLY DATA (JULY 2014 to JUNE 2024)
- NO EXPLANATORY VARIABLES
- NO DROUGHT ADJUSTMENT

REGRESSION 2:

- 10 YEARS MONTHLY DATA WITH PERIOD OF DROUGHT RESTRICTIONS/DLRMA REMOVED (AUGUST 2011 to MAY 2015, MAY 2017 to JUNE 2022, JULY 2023 to JUNE 2024)
- NO EXPLANATORY VARIABLES

REGRESSION 3:

- 10 YEARS MONTHLY DATA (JULY 2014 to JUNE 2024)
- EXPLANATORY VARIABLES FOR DROUGHT RESTRICTIONS/DLRMA AND MONTH OF YEAR

REGRESSION 4:

- 10 YEARS MONTHLY DATA WITH PERIOD OF DROUGHT RESTRICTIONS/DLRMA REMOVED (AUGUST 2011 to MAY 2015, MAY 2017 to JUNE 2022, JULY 2023 to JUNE 2024)
- EXPLANATORY VARIABLES FOR MONTH OF YEAR

	Regression Forecast				Test Year 2026-2027	R ²	All Coefficients Statistically Significant?
	2025	2026	2027	2028			
FONTANA WATER COMPANY							
FWC Residential - Single Family							
REGRESSION 1	173	171	169	167	170	0.83	Yes
REGRESSION 2	155	147	139	131	143	0.85	Yes
REGRESSION 3	173	169	166	163	168	0.90	No
REGRESSION 4	156	147	139	131	143	0.87	No
FWC Residential - Multi-Family							
REGRESSION 1	1,306	1,299	1,291	1,284	1,295	0.80	Yes
REGRESSION 2	1,229	1,197	1,165	1,133	1,181	0.82	Yes
REGRESSION 3	1,297	1,284	1,272	1,260	1,278	0.88	No
REGRESSION 4	1,231	1,198	1,166	1,134	1,182	0.86	No
FWC Commercial							
REGRESSION 1	1,050	1,062	1,074	1,086	1,068	0.85	Yes
REGRESSION 2	981	973	966	958	969	0.89	Yes
REGRESSION 3	1,053	1,060	1,067	1,075	1,064	0.91	No
REGRESSION 4	984	977	970	963	973	0.91	No

Notes:

REGRESSION 1:

- 10 YEARS MONTHLY DATA (JULY 2014 to JUNE 2024)
- NO EXPLANATORY VARIABLES
- NO DROUGHT ADJUSTMENT

REGRESSION 2:

- 10 YEARS MONTHLY DATA WITH PERIOD OF DROUGHT RESTRICTIONS/DLRMA REMOVED (AUGUST 2011 to MAY 2015, MAY 2017 to JUNE 2022, JULY 2023 to JUNE 2024)
- NO EXPLANATORY VARIABLES

REGRESSION 3:

- 10 YEARS MONTHLY DATA (JULY 2014 to JUNE 2024)
- EXPLANATORY VARIABLES FOR DROUGHT RESTRICTIONS/DLRMA AND MONTH OF YEAR

REGRESSION 4:

- 10 YEARS MONTHLY DATA WITH PERIOD OF DROUGHT RESTRICTIONS/DLRMA REMOVED (AUGUST 2011 to MAY 2015, MAY 2017 to JUNE 2022, JULY 2023 to JUNE 2024)
- EXPLANATORY VARIABLES FOR MONTH OF YEAR

REGRESSION 1: LAC - RESIDENTIAL SINGLE FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.896483735
R Square	0.803683087
Adjusted R Square	0.798605926
Standard Error	0.9896195
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	465.0734967	155.0244989	158.2937791	0.000000
Residual	116	113.6042236	0.979346755		
Total	119	578.6777202			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-0.966508211	1.428178498	-0.676741887	0.499916995	-3.79519568	1.862179257	-3.79519568	1.862179257
X Variable 1 (<i>Time</i>)	-0.006995157	0.002687408	-2.602938368	0.010449473	-0.012317907	-0.001672407	-0.012317907	-0.001672407
X Variable 2 (<i>Precipitation</i>)	-0.465942237	0.119092387	-3.912443519	0.000154468	-0.701819715	-0.230064759	-0.701819715	-0.230064759
X Variable 3 (<i>Temperature</i>)	0.208632935	0.019465738	10.7179564	4.78032E-19	0.170078587	0.247187282	0.170078587	0.247187282

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (3), and n (the number of observations) - k - 1 degrees of freedom in the denominator (116). At the 95% significance level the critical value of the F distribution with 3 and 116 degrees of freedom is 2.68. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 1: LAC - RESIDENTIAL MULTI FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.853277568
R Square	0.728082608
Adjusted R Square	0.721050261
Standard Error	2.817104008
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	2464.946072	821.6486905	103.5333828	1.16618E-32
Residual	116	920.5846993	7.936074994		
Total	119	3385.530771			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	28.13694231	4.0655296	6.920855358	2.63423E-10	20.08464867	36.18923595	20.08464867	36.18923595
X Variable 1 (<i>Time</i>)	-0.035815871	0.007650119	-4.681740068	7.77874E-06	-0.050967896	-0.020663845	-0.050967896	-0.020663845
X Variable 2 (<i>Precipitation</i>)	-0.636742573	0.339014783	-1.878214768	0.062862545	-1.308204068	0.034718922	-1.308204068	0.034718922
X Variable 3 (<i>Temperature</i>)	0.49749106	0.055412216	8.978003338	5.85306E-15	0.387740184	0.607241936	0.387740184	0.607241936

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 1: LAC - COMMERCIAL

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.883086628
R Square	0.779841992
Adjusted R Square	0.774148251
Standard Error	2.878249349
Observations	120

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	3403.979613	1134.659871	136.9647678	0.000000
Residual	116	960.9810404	8.284319314		
Total	119	4364.960654			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	8.749037375	4.153772061	2.106287308	0.037335408	0.521968422	16.97610633	0.521968422	16.97610633
X Variable 1 (<i>Time</i>)	0.053575842	0.007816166	6.854491735	3.66739E-10	0.038094941	0.069056743	0.038094941	0.069056743
X Variable 2 (<i>Precipitation</i>)	-1.528009277	0.346373111	-4.411454667	2.31064E-05	-2.214044868	-0.841973687	-2.214044868	-0.841973687
X Variable 3 (<i>Temperature</i>)	0.570934728	0.05661494	10.08452411	1.48934E-17	0.458801706	0.68306775	0.458801706	0.68306775

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 1: FWC - RESIDENTIAL SINGLE FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.910430228
R Square	0.8288832
Adjusted R Square	0.824457766
Standard Error	1.532616321
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1319.853014	439.9510047	187.2998467	0.000000
Residual	116	272.4738832	2.348912786		
Total	119	1592.326897			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-3.603972918	1.730189864	-2.082992736	0.039449228	-7.030831952	-0.177113884	-7.030831952	-0.177113884
X Variable 1 (<i>Time</i>)	-0.014339601	0.004088909	-3.506950137	0.000645633	-0.022438202	-0.006241001	-0.022438202	-0.006241001
X Variable 2 (<i>Precipitation</i>)	-0.594942168	0.187181551	-3.178423106	0.001898596	-0.965678816	-0.22420552	-0.965678816	-0.22420552
X Variable 3 (<i>Temperature</i>)	0.307232422	0.023143999	13.27482006	5.05272E-25	0.261392815	0.353072028	0.261392815	0.353072028

Notes:

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 1: RESIDENTIAL MULTI FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.894719234
R Square	0.800522507
Adjusted R Square	0.795363607
Standard Error	7.270289642
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	24606.0024	8202.000801	155.1730803	0.000000
Residual	116	6131.424931	52.85711147		
Total	119	30737.42733			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	30.5114204	8.207521528	3.717495019	0.000311329	14.25538985	46.76745095	14.25538985	46.76745095
X Variable 1 (<i>Time</i>)	-0.052169227	0.019396607	-2.689605901	0.008208789	-0.090586651	-0.013751804	-0.090586651	-0.013751804
X Variable 2 (<i>Precipitation</i>)	-2.774069645	0.887935275	-3.124180018	0.002252476	-4.53273734	-1.01540195	-4.53273734	-1.01540195
X Variable 3 (<i>Temperature</i>)	1.316952372	0.109788454	11.99536316	4.7329E-22	1.099502506	1.534402238	1.099502506	1.534402238

Notes:

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ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 1: FWC COMMERCIAL
SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.923988308
R Square	0.853754393
Adjusted R Square	0.849972179
Standard Error	7.503653291
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	38128.84335	12709.61445	225.7287403	0.000000
Residual	116	6531.358275	56.30481271		
Total	119	44660.20162			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-19.14202178	8.470968691	-2.25972052	0.025705448	-35.91984263	-2.364200922	-35.91984263	-2.364200922
X Variable 1 (<i>Time</i>)	0.082448099	0.020019204	4.118450449	7.17831E-05	0.042797543	0.122098655	0.042797543	0.122098655
X Variable 2 (<i>Precipitation</i>)	-5.380642634	0.916436453	-5.871266487	4.20072E-08	-7.195760503	-3.565524766	-7.195760503	-3.565524766
X Variable 3 (<i>Temperature</i>)	1.513830011	0.113312472	13.35978277	3.22217E-25	1.289400383	1.73825964	1.289400383	1.73825964

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (3), and n (the number of observations) - k - 1 degrees of freedom in the denominator (116). At the 95% significance level the critical value of the F distribution with 3 and 116 degrees of freedom is 2.68. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: LAC - RESIDENTIAL SINGLE FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.912210532
R Square	0.832128054
Adjusted R Square	0.827786539
Standard Error	1.12097345
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	722.5379832	240.8459944	191.6676308	0.000000
Residual	116	145.7634512	1.256581476		
Total	119	868.3014344			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-1.723295697	1.510899553	-1.140575953	0.256395819	-4.715822639	1.269231245	-4.715822639	1.269231245
X Variable 1 (<i>Time</i>)	-0.029731735	0.00300379	-9.898072653	4.09286E-17	-0.03568112	-0.02378235	-0.03568112	-0.02378235
X Variable 2 (<i>Precipitation</i>)	-0.530181421	0.150539265	-3.521881284	0.000613678	-0.828343405	-0.232019438	-0.828343405	-0.232019438
X Variable 3 (<i>Temperature</i>)	0.254673801	0.02113064	12.05234679	3.48154E-22	0.212821906	0.296525696	0.212821906	0.296525696

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: LAC - RESIDENTIAL MULTI FAMILY
SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.881186255
R Square	0.776489217
Adjusted R Square	0.770708765
Standard Error	3.284489946
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	4347.412112	1449.137371	134.3302066	1.38802E-37
Residual	116	1251.393408	10.78787421		
Total	119	5598.80552			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	30.30517218	4.426986555	6.84553246	3.83417E-10	21.53696749	39.07337686	21.53696749	39.07337686
X Variable 1 (<i>Time</i>)	-0.101405471	0.008801207	-11.52176897	6.11175E-21	-0.11883737	-0.083973572	-0.11883737	-0.083973572
X Variable 2 (<i>Precipitation</i>)	-0.910170473	0.441085115	-2.06348036	0.041298267	-1.783795122	-0.036545824	-1.783795122	-0.036545824
X Variable 3 (<i>Temperature</i>)	0.567202021	0.061913487	9.161203032	2.18902E-15	0.44457456	0.689829483	0.44457456	0.689829483

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

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MS - SS divided by df (degrees of freedom)

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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: LAC - COMMERCIAL
SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.905033165
R Square	0.81908503
Adjusted R Square	0.814406195
Standard Error	2.646209721
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	3677.570392	1225.856797	175.0617311	0.000000
Residual	116	812.2814028	7.002425886		
Total	119	4489.851795			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	5.925217861	3.566683122	1.661268371	0.099360005	-1.139047473	12.9894832	-1.139047473	12.9894832
X Variable 1 (<i>Time</i>)	0.024324089	0.007090854	3.430346851	0.000835738	0.010279759	0.038368419	0.010279759	0.038368419
X Variable 2 (<i>Precipitation</i>)	-1.657967117	0.355368334	-4.66548918	8.31429E-06	-2.36181888	-0.954115354	-2.36181888	-0.954115354
X Variable 3 (<i>Temperature</i>)	0.649763093	0.049881739	13.0260714	1.8927E-24	0.550966024	0.748560162	0.550966024	0.748560162

Notes:

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ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: FWC - RESIDENTIAL SINGLE FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.92227515
R Square	0.850591452
Adjusted R Square	0.846727438
Standard Error	1.776257388
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	2083.604811	694.5349371	220.1315554	0.000000
Residual	116	365.9904758	3.155090309		
Total	119	2449.595287			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-3.025449671	1.875744082	-1.612933076	0.10947636	-6.740597174	0.689697832	-6.740597174	0.689697832
X Variable 1 (<i>Time</i>)	-0.057204778	0.004734815	-12.08173409	2.97186E-22	-0.066582676	-0.04782688	-0.066582676	-0.04782688
X Variable 2 (<i>Precipitation</i>)	-0.678409574	0.238826933	-2.840590742	0.005319974	-1.151436407	-0.205382741	-1.151436407	-0.205382741
X Variable 3 (<i>Temperature</i>)	0.362037195	0.02595544	13.94841276	1.45352E-26	0.310629175	0.413445215	0.310629175	0.413445215

Notes:

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ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

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STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: FWC - RESIDENTIAL MULTI FAMILY
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.90368252
R Square	0.816642096
Adjusted R Square	0.811900082
Standard Error	8.286873466
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	35479.01326	11826.33775	172.2141621	0.000000
Residual	116	7965.983534	68.67227184		
Total	119	43444.9968			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	35.6374511	8.751014333	4.072379468	8.5394E-05	18.30496456	52.96993763	18.30496456	52.96993763
X Variable 1 (<i>Time</i>)	-0.223127057	0.0220896	-10.10100058	1.36199E-17	-0.266878293	-0.179375822	-0.266878293	-0.179375822
X Variable 2 (<i>Precipitation</i>)	-3.212224431	1.114212717	-2.882954378	0.004696262	-5.419063111	-1.005385751	-5.419063111	-1.005385751
X Variable 3 (<i>Temperature</i>)	1.487424451	0.121091375	12.28348797	1.00387E-22	1.247587725	1.727261178	1.247587725	1.727261178

Notes:

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 2: FWC - COMMERCIAL
 SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.943514634
R Square	0.890219864
Adjusted R Square	0.887380722
Standard Error	6.402594761
Observations	120

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	38560.57791	12853.52597	313.5524867	0.000000
Residual	116	4755.213482	40.99321968		
Total	119	43315.79139			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-12.4195038	6.76119875	-1.83687897	0.068787764	-25.81090985	0.971902254	-25.81090985	0.971902254
X Variable 1 (<i>Time</i>)	-0.052716899	0.017066841	-3.088849179	0.002514915	-0.086519928	-0.018913869	-0.086519928	-0.018913869
X Variable 2 (<i>Precipitation</i>)	-5.751033271	0.860861764	-6.680553736	8.67815E-10	-7.456078465	-4.045988077	-7.456078465	-4.045988077
X Variable 3 (<i>Temperature</i>)	1.598232319	0.093557481	17.08289178	1.86667E-33	1.41292994	1.783534698	1.41292994	1.783534698

Notes:

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t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: LAC - RESIDENTIAL SINGLE FAMILY
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.944585929
R Square	0.892242577
Adjusted R Square	0.876700641
Standard Error	0.774328618
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	15	516.3209002	34.42139334	57.40871496	0.000000
Residual	104	62.35682004	0.599584808		
Total	119	578.6777202			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	9.235173594	3.150233827	2.931583527	0.0041473	2.988141697	15.48220549	2.988141697	15.48220549
X Variable 1 (Time)	-0.014940391	0.002705561	-5.522103804	2.48232E-07	-0.020305621	-0.009575161	-0.020305621	-0.009575161
X Variable 2 (Precipitation)	-0.50838561	0.110973214	-4.581156038	1.28891E-05	-0.728449657	-0.288321562	-0.728449657	-0.288321562
X Variable 3 (Temperature)	0.054145809	0.04983505	1.086500552	0.279769444	-0.044678965	0.152970583	-0.044678965	0.152970583
X Variable 4 (Drought/DLRMA)	-1.092911076	0.166005985	-6.583564316	1.91116E-09	-1.422107173	-0.763714979	-1.422107173	-0.763714979
X Variable 5 (FEB)	-0.31559193	0.348048922	-0.906745892	0.366637301	-1.005786004	0.374602143	-1.005786004	0.374602143
X Variable 6 (MAR)	-0.222260415	0.358770492	-0.619505842	0.536938025	-0.933715764	0.489194933	-0.933715764	0.489194933
X Variable 7 (APR)	0.355538024	0.405372428	0.877065137	0.382472775	-0.448330712	1.15940676	-0.448330712	1.15940676
X Variable 8 (MAY)	0.557560266	0.459361223	1.213773034	0.227583658	-0.353370278	1.46849081	-0.353370278	1.46849081
X Variable 9 (JUN)	1.353738929	0.568414897	2.381603536	0.019055712	0.226550857	2.480927001	0.226550857	2.480927001
X Variable 10 (JUL)	3.034821368	0.774010392	3.920905194	0.000158359	1.499929714	4.569713022	1.499929714	4.569713022
X Variable 11 (AUG)	2.388859686	0.902472819	2.647015662	0.00938311	0.59922222	4.178497152	0.59922222	4.178497152
X Variable 12 (SEP)	2.548801968	0.889677849	2.864859423	0.00504843	0.784537408	4.313066528	0.784537408	4.313066528
X Variable 13 (OCT)	1.502009264	0.773289684	1.942362991	0.054797665	-0.031453199	3.035471726	-0.031453199	3.035471726
X Variable 14 (NOV)	0.275251524	0.558463422	0.492872967	0.62314138	-0.832202399	1.382705447	-0.832202399	1.382705447
X Variable 15 (DEC)	0.212569744	0.373610762	0.568960442	0.570609674	-0.528314417	0.953453905	-0.528314417	0.953453905

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (15), and n (the number of observations) - k - 1 degrees of freedom in the denominator (104). At the 95% significance level the critical value of the F distribution with 15 and 104 degrees of freedom is 1.75. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: LAC - RESIDENTIAL MULTI FAMILY
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.916534483
R Square	0.840035458
Adjusted R Square	0.816963649
Standard Error	2.281962884
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	15	2843.965892	189.5977261	36.40960537	1.60061E-34
Residual	104	541.5648788	5.207354604		
Total	119	3385.530771			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	51.66073316	9.283806004	5.564607138	2.05819E-07	33.25059746	70.07086885	33.25059746	70.07086885
X Variable 1 (Time)	-0.052419973	0.007973347	-6.574400156	1.99612E-09	-0.068231419	-0.036608527	-0.068231419	-0.036608527
X Variable 2 (Precipitation)	-0.888191251	0.327040419	-2.715845504	0.007742758	-1.536724675	-0.239657828	-1.536724675	-0.239657828
X Variable 3 (Temperature)	0.155588938	0.146864951	1.059401428	0.291871287	-0.13564977	0.446827647	-0.13564977	0.446827647
X Variable 4 (Drought/DLRMA)	-2.479168058	0.489223163	-5.067560671	1.75815E-06	-3.449315948	-1.509020168	-3.449315948	-1.509020168
X Variable 5 (FEB)	-1.124094871	1.025707566	-1.095921399	0.275644509	-3.158111466	0.909921724	-3.158111466	0.909921724
X Variable 6 (MAR)	-1.448048583	1.057304259	-1.369566584	0.173772251	-3.544722607	0.64862544	-3.544722607	0.64862544
X Variable 7 (APR)	0.712392142	1.194641155	0.596323121	0.552255157	-1.656626098	3.081410383	-1.656626098	3.081410383
X Variable 8 (MAY)	-0.747572926	1.353747283	-0.552224876	0.581979116	-3.432104589	1.936958737	-3.432104589	1.936958737
X Variable 9 (JUN)	1.761302911	1.675130776	1.051442035	0.295492595	-1.560544279	5.083150101	-1.560544279	5.083150101
X Variable 10 (JUL)	6.432564831	2.281025067	2.820032503	0.005751162	1.909206524	10.95592314	1.909206524	10.95592314
X Variable 11 (AUG)	3.14130453	2.659606567	1.181116248	0.240250549	-2.132795098	8.415404157	-2.132795098	8.415404157
X Variable 12 (SEP)	5.41198527	2.621899518	2.064146712	0.041492717	0.212660135	10.6113104	0.212660135	10.6113104
X Variable 13 (OCT)	3.215915207	2.278901124	1.411169257	0.161179257	-1.303231242	7.735061656	-1.303231242	7.735061656
X Variable 14 (NOV)	-1.069706361	1.645803567	-0.649959924	0.517151223	-4.333396597	2.193983874	-4.333396597	2.193983874
X Variable 15 (DEC)	-0.424972584	1.101038852	-0.385974195	0.700304225	-2.608373945	1.758428777	-2.608373945	1.758428777

Notes:

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R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.
ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.
SS - The sum of the squares of the differences between values of y and the average y.
MS - SS divided by df (degrees of freedom)
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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).
STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).
t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.
P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: LAC - COMMERCIAL
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.926750216
R Square	0.858865962
Adjusted R Square	0.838510091
Standard Error	2.433825181
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	15	3748.916132	249.9277421	42.19254336	0.000000
Residual	104	616.0445214	5.923505014		
Total	119	4364.960654			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	44.89171946	9.901633805	4.533768906	1.55529E-05	25.25640805	64.52703087	25.25640805	64.52703087
X Variable 1 (Time)	0.028906341	0.008503965	3.399160356	0.000959428	0.012042659	0.045770023	0.012042659	0.045770023
X Variable 2 (Precipitation)	-1.885832895	0.348804625	-5.406559324	4.11625E-07	-2.577525555	-1.194140235	-2.577525555	-1.194140235
X Variable 3 (Temperature)	0.003560343	0.156638663	0.022729657	0.981909473	-0.307060004	0.31418069	-0.307060004	0.31418069
X Variable 4 (Drought/DLRMA)	-2.547788381	0.521780464	-4.882874229	3.79592E-06	-3.582498622	-1.51307814	-3.582498622	-1.51307814
X Variable 5 (FEB)	0.407009412	1.093967356	0.372048955	0.710613412	-1.762368909	2.576387732	-1.762368909	2.576387732
X Variable 6 (MAR)	0.326339394	1.127666777	0.289393463	0.77285642	-1.909866143	2.562544931	-1.909866143	2.562544931
X Variable 7 (APR)	3.652676282	1.274143303	2.866770382	0.005020301	1.126002299	6.179350265	1.126002299	6.179350265
X Variable 8 (MAY)	2.200527611	1.443837781	1.524082304	0.130523331	-0.66265689	5.063712112	-0.66265689	5.063712112
X Variable 9 (JUN)	4.609481569	1.786609017	2.580016963	0.011275614	1.066568844	8.152394294	1.066568844	8.152394294
X Variable 10 (JUL)	10.39453779	2.432824954	4.272620508	4.28822E-05	5.570154612	15.21892097	5.570154612	15.21892097
X Variable 11 (AUG)	8.521765834	2.836600665	3.004217668	0.003336324	2.896680267	14.1468514	2.896680267	14.1468514
X Variable 12 (SEP)	10.54176985	2.796384251	3.769785875	0.000271507	4.99643494	16.08710476	4.99643494	16.08710476
X Variable 13 (OCT)	8.15065257	2.430559665	3.353405673	0.001114398	3.330761544	12.9705436	3.330761544	12.9705436
X Variable 14 (NOV)	2.879906892	1.755330113	1.640663982	0.103888286	-0.600978593	6.360792376	-0.600978593	6.360792376
X Variable 15 (DEC)	1.135745205	1.174311862	0.967158079	0.335708753	-1.192959285	3.464449694	-1.192959285	3.464449694

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

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t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: FWC - RESIDENTIAL SINGLE FAMILY
 SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.946186014
R Square	0.895267973
Adjusted R Square	0.880162392
Standard Error	1.266307562
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	15	1425.559274	95.03728493	59.2673651	6.5311E-44
Residual	104	166.7676236	1.603534842		
Total	119	1592.326897			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	6.771528006	4.481568628	1.510972735	0.13382796	-2.115590762	15.65864677	-2.115590762	15.65864677
X Variable 1 (Time)	-0.021699759	0.003827714	-5.669116954	1.29457E-07	-0.02929026	-0.014109258	-0.02929026	-0.014109258
X Variable 2 (Precipitation)	-0.59673055	0.185849168	-3.210832516	0.001761202	-0.965276424	-0.228184677	-0.965276424	-0.228184677
X Variable 3 (Temperature)	0.146741256	0.07378863	1.9886703	0.049364625	0.000415635	0.293066878	0.000415635	0.293066878
X Variable 4 (Drought/DLRMA)	-1.6321334	0.270423496	-6.03547186	2.47E-08	-2.168393341	-1.09587346	-2.168393341	-1.09587346
X Variable 5 (FEB)	-0.509943348	0.567833581	-0.898050705	0.371232898	-1.635978648	0.616091952	-1.635978648	0.616091952
X Variable 6 (MAR)	-0.838249134	0.584061259	-1.435207559	0.154228595	-1.996464528	0.31996626	-1.996464528	0.31996626
X Variable 7 (APR)	-0.052032502	0.671366822	-0.077502343	0.938372838	-1.383378103	1.2793131	-1.383378103	1.2793131
X Variable 8 (MAY)	0.906359203	0.794327513	1.14103967	0.256474072	-0.668822063	2.481540469	-0.668822063	2.481540469
X Variable 9 (JUN)	1.718702986	1.054565173	1.629774081	0.106174469	-0.372539326	3.809945298	-0.372539326	3.809945298
X Variable 10 (JUL)	4.123822767	1.474920817	2.795962143	0.006164401	1.198999439	7.048646095	1.198999439	7.048646095
X Variable 11 (AUG)	2.946404698	1.708662327	1.724392615	0.087607992	-0.441936817	6.334746212	-0.441936817	6.334746212
X Variable 12 (SEP)	3.364934128	1.636127277	2.0566457	0.042223534	0.12043234	6.609435916	0.12043234	6.609435916
X Variable 13 (OCT)	1.808781139	1.332296004	1.357642096	0.177515855	-0.833211833	4.45077411	-0.833211833	4.45077411
X Variable 14 (NOV)	0.587446366	0.909464293	0.645925707	0.51975018	-1.216055455	2.390948188	-1.216055455	2.390948188
X Variable 15 (DEC)	0.937790735	0.608793907	1.540407557	0.126498279	-0.269470428	2.145051897	-0.269470428	2.145051897

Notes:

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 SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).
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 t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.
 P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: FWC - RESIDENTIAL MULTI FAMILY
 SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.935721067
R Square	0.875573915
Adjusted R Square	0.857627845
Standard Error	6.06419009
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	15	26912.88958	1794.192639	48.78917313	4.41374E-40
Residual	104	3824.53775	36.77440145		
Total	119	30737.42733			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	88.16456028	21.46167714	4.107999561	7.97346E-05	45.60524913	130.7238714	45.60524913	130.7238714
X Variable 1 (Time)	-0.085850404	0.018330449	-4.683486212	8.55741E-06	-0.122200372	-0.049500436	-0.122200372	-0.049500436
X Variable 2 (Precipitation)	-2.943386348	0.890008647	-3.30714354	0.001294734	-4.708306894	-1.178465801	-4.708306894	-1.178465801
X Variable 3 (Temperature)	0.389316094	0.353364609	1.10174048	0.273117746	-0.311419186	1.090051374	-0.311419186	1.090051374
X Variable 4 (Drought/DLRMA)	-5.569143218	1.295024632	-4.300414897	3.85615E-05	-8.137225661	-3.001060776	-8.137225661	-3.001060776
X Variable 5 (FEB)	-2.51195867	2.719284697	-0.923757146	0.357751078	-7.904402269	2.880484929	-7.904402269	2.880484929
X Variable 6 (MAR)	-5.085991537	2.796997036	-1.818375734	0.071884939	-10.63254162	0.460558547	-10.63254162	0.460558547
X Variable 7 (APR)	5.649939231	3.215092564	1.75731775	0.081806361	-0.725709974	12.02558844	-0.725709974	12.02558844
X Variable 8 (MAY)	4.742578442	3.803936085	1.246755554	0.215287814	-2.800769563	12.28592645	-2.800769563	12.28592645
X Variable 9 (JUN)	10.82783099	5.050182011	2.144047672	0.034359062	0.813130541	20.84253143	0.813130541	20.84253143
X Variable 10 (JUL)	23.66686685	7.06321313	3.350722457	0.001124179	9.660250157	37.67348355	9.660250157	37.67348355
X Variable 11 (AUG)	13.84588966	8.182572275	1.692119445	0.093617316	-2.380458228	30.07223754	-2.380458228	30.07223754
X Variable 12 (SEP)	22.9316244	7.835210903	2.926739903	0.004207363	7.394107149	38.46914165	7.394107149	38.46914165
X Variable 13 (OCT)	12.38904656	6.380200564	1.941795785	0.054867231	-0.263130579	25.04122371	-0.263130579	25.04122371
X Variable 14 (NOV)	6.825530676	4.355311866	1.567173807	0.120111823	-1.811216194	15.46227755	-1.811216194	15.46227755
X Variable 15 (DEC)	3.177826014	2.915438622	1.089999285	0.278232576	-2.603598181	8.959250208	-2.603598181	8.959250208

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (15), and n (the number of observations) - k - 1 degrees of freedom in the denominator (104). At the 95% significance level the critical value of the F distribution with 15 and 104 degrees of freedom is 1.75. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 3: FWC - COMMERCIAL
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.953147337
R Square	0.908489847
Adjusted R Square	0.895291267
Standard Error	6.268711907
Observations	120

ANOVA

	df	SS	MS	F	Significance F
Regression	15	40573.33973	2704.889315	68.83239418	6.42342E-47
Residual	104	4086.861893	39.29674897		
Total	119	44660.20162			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	15.9803384	22.185497	0.72030563	0.472952676	-28.01433469	59.9750115	-28.01433469	59.9750115
X Variable 1 (Time)	0.051370504	0.018948664	2.711035634	0.007848302	0.013794592	0.088946417	0.013794592	0.08894642
X Variable 2 (Precipitation)	-5.173311844	0.920025217	-5.623010922	1.58921E-07	-6.997756374	-3.348867313	-6.997756374	-3.3488673
X Variable 3 (Temperature)	0.98104192	0.365282239	2.68570934	0.008425914	0.256673533	1.705410308	0.256673533	1.70541031
X Variable 4 (Drought/DLRMA)	-8.360079595	1.338700834	-6.244919989	9.38879E-09	-11.01477358	-5.705385605	-11.01477358	-5.7053856
X Variable 5 (FEB)	-2.088166039	2.810995715	-0.742856358	0.459243343	-7.662476028	3.486143951	-7.662476028	3.48614395
X Variable 6 (MAR)	-4.193758289	2.891328992	-1.450460429	0.149939528	-9.927372183	1.539855604	-9.927372183	1.5398556
X Variable 7 (APR)	-0.01931392	3.323525275	-0.005811275	0.995374432	-6.60998926	6.571361421	-6.60998926	6.57136142
X Variable 8 (MAY)	2.265680359	3.932228224	0.576182314	0.565736805	-5.532075772	10.06343649	-5.532075772	10.0634365
X Variable 9 (JUN)	4.188375236	5.220505234	0.802293082	0.42421297	-6.164082551	14.54083302	-6.164082551	14.540833
X Variable 10 (JUL)	11.15321659	7.301428153	1.527539045	0.129662752	-3.325789439	25.63222261	-3.325789439	25.6322226
X Variable 11 (AUG)	7.429242912	8.458538979	0.878312783	0.381798674	-9.344357301	24.20284313	-9.344357301	24.2028431
X Variable 12 (SEP)	15.05374585	8.099462443	1.858610489	0.065910116	-1.007792115	31.11528382	-1.007792115	31.1152838
X Variable 13 (OCT)	9.176305826	6.595380199	1.391323252	0.167096548	-3.90258061	22.25519226	-3.90258061	22.2551923
X Variable 14 (NOV)	5.538143233	4.50219979	1.230097173	0.221435984	-3.389887903	14.46617437	-3.389887903	14.4661744
X Variable 15 (DEC)	5.70131785	3.013765158	1.891759162	0.061304837	-0.275091554	11.67772726	-0.275091554	11.6777273

Notes:

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ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (15), and n (the number of observations) - k - 1 degrees of freedom in the denominator (104). At the 95% significance level the critical value of the F distribution with 15 and 104 degrees of freedom is 1.75. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: LAC - RESIDENTIAL SINGLE FAMILY
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.93434188
R Square	0.872994748
Adjusted R Square	0.856060715
Standard Error	1.024829103
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	14	758.0225921	54.14447086	51.55267609	0.000000
Residual	105	110.2788424	1.050274689		
Total	119	868.3014344			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.912344563	3.514547885	1.682248971	0.095492259	-1.056354664	12.88104379	-1.056354664	12.88104379
X Variable 1 (Time)	-0.031465343	0.00280537	-11.21611319	1.15134E-19	-0.037027873	-0.025902813	-0.037027873	-0.025902813
X Variable 2 (Precipitation)	-0.579423497	0.152832605	-3.791229608	0.000250581	-0.88246232	-0.276384673	-0.88246232	-0.276384673
X Variable 3 (Temperature)	0.132493956	0.057011199	2.323998782	0.022051263	0.019451281	0.245536632	0.019451281	0.245536632
X Variable 4 (FEB)	-0.346329538	0.462875106	-0.748213792	0.456003838	-1.264125368	0.571466291	-1.264125368	0.571466291
X Variable 5 (MAR)	-0.183792231	0.464851661	-0.395378239	0.693365896	-1.105507203	0.737922742	-1.105507203	0.737922742
X Variable 6 (APR)	0.135739368	0.513099989	0.264547595	0.791876585	-0.881643127	1.153121863	-0.881643127	1.153121863
X Variable 7 (MAY)	0.537114531	0.578729704	0.928092211	0.355488305	-0.610399566	1.684628629	-0.610399566	1.684628629
X Variable 8 (JUN)	1.733787255	0.710879635	2.438932234	0.016407737	0.324244258	3.143330253	0.324244258	3.143330253
X Variable 9 (JUL)	2.319804609	0.929230826	2.496478319	0.014098057	0.477311535	4.162297683	0.477311535	4.162297683
X Variable 10 (AUG)	1.688127456	1.042964642	1.618585509	0.108536514	-0.379878766	3.756133677	-0.379878766	3.756133677
X Variable 11 (SEP)	2.295574402	1.025369889	2.23877688	0.027279986	0.262455324	4.32869348	0.262455324	4.32869348
X Variable 12 (OCT)	0.63024188	0.883297004	0.713510718	0.477112706	-1.121172912	2.381656671	-1.121172912	2.381656671
X Variable 13 (NOV)	-0.114942336	0.655766645	-0.175279327	0.86119772	-1.415206455	1.185321783	-1.415206455	1.185321783
X Variable 14 (DEC)	-0.094810539	0.477568018	-0.198527822	0.843016006	-1.041739699	0.852118621	-1.041739699	0.852118621

Notes:

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R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

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SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two) from the estimated average.

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: LAC - RESIDENTIAL MULTI FAMILY
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.910261889
R Square	0.828576706
Adjusted R Square	0.805720267
Standard Error	3.023346747
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	14	4639.039836	331.3599883	36.25134695	8.69755E-34
Residual	105	959.7656833	9.140625555		
Total	119	5598.80552			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	50.72450073	10.36826227	4.89228565	3.61205E-06	30.16615193	71.28284952	30.16615193	71.28284952
X Variable 1 (Time)	-0.105141613	0.008276117	-12.70422098	5.87022E-23	-0.121551623	-0.088731603	-0.121551623	-0.088731603
X Variable 2 (Precipitation)	-1.124628277	0.450871231	-2.494344726	0.014178205	-2.018622641	-0.230633914	-2.018622641	-0.230633914
X Variable 3 (Temperature)	0.250784044	0.168188649	1.491087809	0.138936627	-0.082702978	0.584271066	-0.082702978	0.584271066
X Variable 4 (FEB)	-1.281470926	1.365527133	-0.938444133	0.350169916	-3.989058982	1.42611713	-3.989058982	1.42611713
X Variable 5 (MAR)	-1.36717702	1.371358164	-0.996951093	0.321080228	-4.086326933	1.351972892	-4.086326933	1.351972892
X Variable 6 (APR)	-0.216683975	1.513695482	-0.143148987	0.886446869	-3.218062496	2.784694547	-3.218062496	2.784694547
X Variable 7 (MAY)	-0.255486663	1.707309604	-0.149642843	0.881333463	-3.640766224	3.129792897	-3.640766224	3.129792897
X Variable 8 (JUN)	3.62634454	2.097164909	1.729165181	0.086718472	-0.531946073	7.784635153	-0.531946073	7.784635153
X Variable 9 (JUL)	5.379521046	2.741322419	1.962381736	0.052364273	-0.056014917	10.81505701	-0.056014917	10.81505701
X Variable 10 (AUG)	2.756927734	3.076848374	0.896023268	0.37228997	-3.343894216	8.857749684	-3.343894216	8.857749684
X Variable 11 (SEP)	6.290369931	3.024942122	2.079500922	0.040007037	0.292468488	12.28827137	0.292468488	12.28827137
X Variable 12 (OCT)	1.517365877	2.605813124	0.582300343	0.561612684	-3.649480186	6.684211941	-3.649480186	6.684211941
X Variable 13 (NOV)	-1.035391861	1.934576162	-0.535203463	0.593640877	-4.871299024	2.800515302	-4.871299024	2.800515302
X Variable 14 (DEC)	-0.478771253	1.408872669	-0.339825779	0.734666562	-3.272305501	2.314762995	-3.272305501	2.314762995

Notes:

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: LAC - COMMERCIAL
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.924178719
R Square	0.854106305
Adjusted R Square	0.834653812
Standard Error	2.497696214
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	14	3834.810726	273.9150518	43.90729343	0.000000
Residual	105	655.0410694	6.238486375		
Total	119	4489.851795			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	29.41890807	8.565596863	3.434542688	0.000850971	12.43491178	46.40290436	12.43491178	46.40290436
X Variable 1 (Time)	0.020057647	0.006837199	2.933605637	0.004114725	0.006500743	0.033614551	0.006500743	0.033614551
X Variable 2 (Precipitation)	-1.899672546	0.372481049	-5.100051542	1.51413E-06	-2.638233658	-1.161111434	-2.638233658	-1.161111434
X Variable 3 (Temperature)	0.260573721	0.138946732	1.875349757	0.063522864	-0.014931982	0.536079424	-0.014931982	0.536079424
X Variable 4 (FEB)	0.184182507	1.128111406	0.16326624	0.870622641	-2.052654019	2.421019033	-2.052654019	2.421019033
X Variable 5 (MAR)	0.110888673	1.132928631	0.097877898	0.92221585	-2.135499521	2.357276867	-2.135499521	2.357276867
X Variable 6 (APR)	2.14143814	1.250518644	1.712439995	0.089767346	-0.338109327	4.620985607	-0.338109327	4.620985607
X Variable 7 (MAY)	1.855794974	1.41047028	1.31572781	0.191130968	-0.940907041	4.652496989	-0.940907041	4.652496989
X Variable 8 (JUN)	4.777186605	1.732543863	2.757325057	0.006874283	1.341872172	8.212501039	1.341872172	8.212501039
X Variable 9 (JUL)	7.216872721	2.264705705	3.186671322	0.001895935	2.72637966	11.70736578	2.72637966	11.70736578
X Variable 10 (AUG)	5.502287546	2.541895844	2.164639263	0.032680754	0.462177642	10.54239745	0.462177642	10.54239745
X Variable 11 (SEP)	8.144273729	2.49901421	3.258994565	0.001507132	3.189190183	13.09935728	3.189190183	13.09935728
X Variable 12 (OCT)	4.578749284	2.15275657	2.126923846	0.03576868	0.310230676	8.847267892	0.310230676	8.847267892
X Variable 13 (NOV)	1.985450043	1.598223412	1.24228567	0.216898609	-1.18353175	5.154431836	-1.18353175	5.154431836
X Variable 14 (DEC)	0.730700717	1.163920723	0.627792514	0.531502866	-1.57713907	3.038540504	-1.57713907	3.038540504

Notes:

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: FWC - RESIDENTIAL SINGLE FAMILY
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.932122978
R Square	0.868853246
Adjusted R Square	0.851367013
Standard Error	1.749167066
Observations	120

ANOVA

	df	SS	MS	F	Significance F
Regression	14	2128.338818	152.0242013	49.68784335	0.000000
Residual	105	321.2564695	3.059585424		
Total	119	2449.595287			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	5.887624522	5.470729697	1.07620461	0.284302337	-4.959821881	16.73507092	-4.959821881	16.73507092
X Variable 1 (Time)	-0.057300447	0.004701104	-12.18872176	7.96763E-22	-0.066621868	-0.047979027	-0.066621868	-0.047979027
X Variable 2 (Precipitation)	-0.758409799	0.264869734	-2.863331301	0.005062273	-1.283597553	-0.233222046	-1.283597553	-0.233222046
X Variable 3 (Temperature)	0.21753531	0.092732117	2.34584647	0.020862189	0.033664651	0.401405968	0.033664651	0.401405968
X Variable 4 (FEB)	-0.697580871	0.786571985	-0.886862086	0.377179976	-2.257207816	0.862046074	-2.257207816	0.862046074
X Variable 5 (MAR)	-1.173961521	0.794000542	-1.478539949	0.142256987	-2.748317924	0.400394881	-2.748317924	0.400394881
X Variable 6 (APR)	-0.234699382	0.891418941	-0.263287408	0.792845035	-2.002218473	1.532819709	-2.002218473	1.532819709
X Variable 7 (MAY)	0.544575263	1.055397045	0.515990893	0.60694565	-1.548082117	2.637232644	-1.548082117	2.637232644
X Variable 8 (JUN)	2.084996074	1.39743166	1.492020064	0.138692374	-0.685852765	4.855844913	-0.685852765	4.855844913
X Variable 9 (JUL)	2.886357036	1.913425463	1.508476338	0.134435804	-0.907612198	6.68032627	-0.907612198	6.68032627
X Variable 10 (AUG)	2.236400084	2.140831709	1.044640769	0.298588063	-2.008473727	6.481273894	-2.008473727	6.481273894
X Variable 11 (SEP)	2.990829042	2.045119616	1.462422549	0.146612193	-1.064265369	7.045923453	-1.064265369	7.045923453
X Variable 12 (OCT)	0.981827571	1.643301076	0.597472724	0.551478152	-2.276534902	4.240190044	-2.276534902	4.240190044
X Variable 13 (NOV)	0.150194869	1.139943483	0.131756417	0.895429098	-2.110102481	2.410492219	-2.110102481	2.410492219
X Variable 14 (DEC)	0.161030978	0.817235023	0.197043658	0.844174288	-1.459395107	1.781457063	-1.459395107	1.781457063

Notes:

MULTIPLE R - The correlation coefficient which measures how well the data clusters around the regression line. The closer this value is to 1, the more "linear" the data is.

R SQUARE - The coefficient of determination, which measures the percentage of the variation in the dependent variable that is explained by the independent variables. The value of R2 will always be between 0 and 1.

ADJUSTED R SQUARE - Version of r-squared that has been adjusted for the number of predictors in the model. R-squared tends to over estimate the strength of the association when there are more than one explanatory variables.

SS - The sum of the squares of the differences between values of y and the average y.

MS - SS divided by df (degrees of freedom)

F-STATISTIC - If the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables is true, then the F statistic will have come from an F distribution with k (the number of explanatory variables in the model) degrees of freedom in the numerator (14), and n (the number of observations) - k - 1 degrees of freedom in the denominator (105). At the 95% significance level the critical value of the F distribution with 14 and 105 degrees of freedom is 1.75. Because the calculated F value is much larger than the critical value, we can reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables.

SIGNIFICANCE F - The associated P-value for the F-statistic. We reject the null hypothesis (H0) that there is no linear relationship between the dependent variable and the explanatory variables if P is less than α (.05).

STANDARD ERROR - Measure of the amount of variation there is in the estimate. The smaller the standard error, the more precise (believable) the estimate is. A general rule of thumb is that the width of the 95% confidence interval is four standard deviations (plus two and minus two from the estimated average).

t-STATISTIC - The ratio of the estimate to its standard error. If the absolute value of the t-statistic is greater than 1.658 (the critical value for a one-tailed t distribution with 119 degrees of freedom and a 95% significance level), then we reject the null hypothesis (H0) that the estimate is not statistically different from zero, and conclude that the estimate is statistically different from zero.

P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: FWC - RESIDENTIAL MULTI FAMILY
 SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.925671393
R Square	0.856867528
Adjusted R Square	0.837783199
Standard Error	7.69563251
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	14	37226.60703	2659.043359	44.89901131	0.000000
Residual	105	6218.389772	59.22275973		
Total	119	43444.9968			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	93.7339134	24.06901327	3.894381226	0.000173382	46.00950626	141.4583205	46.00950626	141.4583205
X Variable 1 (Time)	-0.223137837	0.020682969	-10.78848201	1.04195E-18	-0.264148344	-0.182127331	-0.264148344	-0.182127331
X Variable 2 (Precipitation)	-3.75188807	1.165320439	-3.219619208	0.001708466	-6.062503236	-1.441272904	-6.062503236	-1.441272904
X Variable 3 (Temperature)	0.543231649	0.407984068	1.331502112	0.185907333	-0.265725393	1.352188691	-0.265725393	1.352188691
X Variable 4 (FEB)	-6.004382934	3.460600794	-1.735069513	0.085662621	-12.86611505	0.857349177	-12.86611505	0.857349177
X Variable 5 (MAR)	-8.499432078	3.493283463	-2.433078268	0.016660632	-15.42596789	-1.572896271	-15.42596789	-1.572896271
X Variable 6 (APR)	1.923394946	3.921885287	0.49042611	0.624855697	-5.852979104	9.699768995	-5.852979104	9.699768995
X Variable 7 (MAY)	3.491093637	4.643323082	0.751852407	0.453821853	-5.715758291	12.69794556	-5.715758291	12.69794556
X Variable 8 (JUN)	11.16914423	6.148138003	1.816671036	0.07212026	-1.021477705	23.35976617	-1.021477705	23.35976617
X Variable 9 (JUL)	19.19074711	8.418303483	2.279645436	0.024650485	2.498806386	35.88268784	2.498806386	35.88268784
X Variable 10 (AUG)	12.09679256	9.418799622	1.284324229	0.201855026	-6.578947193	30.77253231	-6.578947193	30.77253231
X Variable 11 (SEP)	20.45534327	8.997704857	2.273395671	0.025037588	2.614556652	38.29612989	2.614556652	38.29612989
X Variable 12 (OCT)	8.435897611	7.229864679	1.166812656	0.245929192	-5.899588502	22.77138372	-5.899588502	22.77138372
X Variable 13 (NOV)	4.471927225	5.015293451	0.891658139	0.374614974	-5.472473232	14.41632768	-5.472473232	14.41632768
X Variable 14 (DEC)	-0.371246872	3.595505845	-0.10325303	0.917959104	-7.500470779	6.757977035	-7.500470779	6.757977035

Notes:

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P-VALUE - The observed level of significance, which is the smallest level at which the null hypothesis (H0) can be rejected. Thus we reject the null hypothesis (H0) that the estimate is not statistically different from zero if P is less than α (0.05).

REGRESSION 4: FWC - COMMERCIAL
SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.95484457
R Square	0.911728153
Adjusted R Square	0.899958573
Standard Error	6.034476286
Observations	120

ANOVA					
	df	SS	MS	F	Significance F
Regression	14	39492.22646	2820.873319	77.46480165	0.000000
Residual	105	3823.564924	36.41490404		
Total	119	43315.79139			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	33.48768436	18.87354803	1.774318443	0.078908884	-3.93507494	70.91044366	-3.93507494	70.91044366
X Variable 1 (Time)	-0.0495122	0.016218405	-3.052840276	0.002871997	-0.081670301	-0.017354099	-0.081670301	-0.017354099
X Variable 2 (Precipitation)	-6.35210132	0.913777854	-6.951472172	3.16723E-10	-8.163954005	-4.540248636	-8.163954005	-4.540248636
X Variable 3 (Temperature)	0.828834616	0.319917847	2.590773299	0.010936855	0.194496623	1.46317261	0.194496623	1.46317261
X Variable 4 (FEB)	-3.450966415	2.713605854	-1.271727215	0.206279653	-8.831545549	1.929612719	-8.831545549	1.929612719
X Variable 5 (MAR)	-4.690090655	2.73923374	-1.712190744	0.089813437	-10.12148515	0.741303843	-10.12148515	0.741303843
X Variable 6 (APR)	1.227429668	3.075318855	0.399122733	0.690613372	-4.87035953	7.325218866	-4.87035953	7.325218866
X Variable 7 (MAY)	3.627722157	3.641029244	0.99634524	0.321373013	-3.591766241	10.84721056	-3.591766241	10.84721056
X Variable 8 (JUN)	8.492155396	4.821019316	1.761485453	0.081067061	-1.067035339	18.05134613	-1.067035339	18.05134613
X Variable 9 (JUL)	12.46023813	6.601153663	1.887584923	0.061842852	-0.62863018	25.54910644	-0.62863018	25.54910644
X Variable 10 (AUG)	11.88908342	7.385685697	1.609746732	0.110455623	-2.755366992	26.53353382	-2.755366992	26.53353382
X Variable 11 (SEP)	19.11344439	7.055487189	2.709018369	0.00788168	5.123716632	33.10317216	5.123716632	33.10317216
X Variable 12 (OCT)	10.88268952	5.669247706	1.919600287	0.057622502	-0.358381418	22.12376047	-0.358381418	22.12376047
X Variable 13 (NOV)	7.521712216	3.932707202	1.912604176	0.058523406	-0.276119691	15.31954412	-0.276119691	15.31954412
X Variable 14 (DEC)	3.070058599	2.819390704	1.088908534	0.278687167	-2.520272351	8.660389549	-2.520272351	8.660389549

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EXHIBIT SG-4 (Reiker)
ATTACHMENT B

	LOS ANGELES COUNTY DIV.		FONTANA WATER COMPANY DIV.	
	Adopted Prior Test Year 2023-2024 <u>D.24-03-005</u>	Test Year 2026-2027 at Proposed <u>Rates</u>	Adopted Prior Test Year 2023-2024 <u>D.24-03-005</u>	Test Year 2026-2027 at Proposed <u>Rates</u>
Fixed Costs - Direct				
Maintenance Expenses	\$3,330.8	\$4,561.5	\$4,492.7	\$5,201.5
Transmission & Distribution Expenses	\$1,174.6	\$1,214.8	\$995.0	\$954.8
Customer Accounts Expenses (excl. Uncollectibles)	\$3,350.4	\$3,360.1	\$2,951.4	\$3,114.6
Administrative & General Expenses	\$3,034.9	\$4,818.7	\$358.5	\$3,557.3
Depreciation Expenses	\$8,717.8	\$12,627.3	\$9,894.4	\$11,996.5
Ad Valorem & Payroll Tax Expense	\$3,631.0	\$4,436.0	\$3,497.3	\$4,300.7
Gross Return on Rate Base	<u>\$24,856.9</u>	<u>\$33,761.3</u>	<u>\$23,226.8</u>	<u>\$30,183.6</u>
Subtotal	\$48,096.4	\$64,779.5	\$45,416.0	\$59,309.0
Fixed Costs - General Division Allocation				
Maintenance Expenses	\$51.0	\$16.5	\$52.0	\$16.3
Transmission & Distribution Expenses	\$37.6	\$35.4	\$38.4	\$35.0
Customer Accounts Expenses (excl. Uncollectibles)	\$826.4	\$359.5	\$843.0	\$355.2
Administrative & General Expenses	<u>\$9,971.3</u>	<u>\$12,993.6</u>	<u>\$10,172.8</u>	<u>\$12,838.6</u>
Subtotal	<u>\$10,886.3</u>	<u>\$13,405.0</u>	<u>\$11,106.2</u>	<u>\$13,245.1</u>
Total Fixed Costs	<u>\$58,982.7</u>	<u>\$78,184.6</u>	<u>\$56,522.2</u>	<u>\$72,554.1</u>
Total Cost of Service	\$92,263.9	\$117,726.3	\$88,943.8	\$109,348.5
Fixed Costs as % of Total Cost of Service	63.9%	66.4%	63.5%	66.4%
Variable Costs as % of Total Cost of Service	36.1%	33.6%	36.5%	33.6%

Supporting Work Paper(s):
 EX1, SOE1, GI1

EXHIBIT SG-4 (Reiker)

ATTACHMENT C

Key Takeaways

In December 2019, US president Donald Trump questioned the value of water-efficient toilets, saying the need for excessive flushing eliminated any potential water savings.

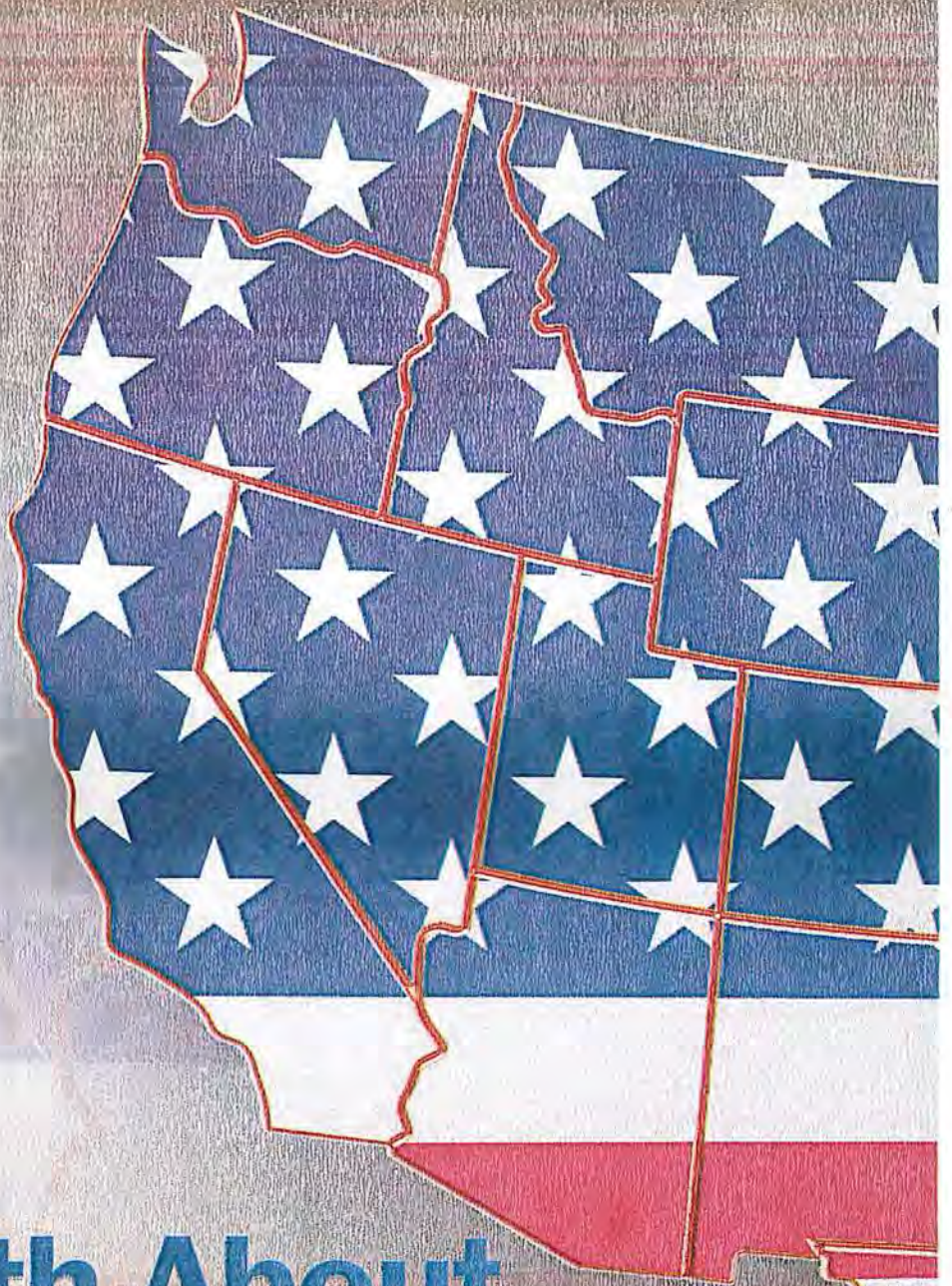
Research reports published in 1999 and 2016 demonstrate that water-efficient fixtures—primarily toilets and clothes washers—led to significant savings in residential water use.

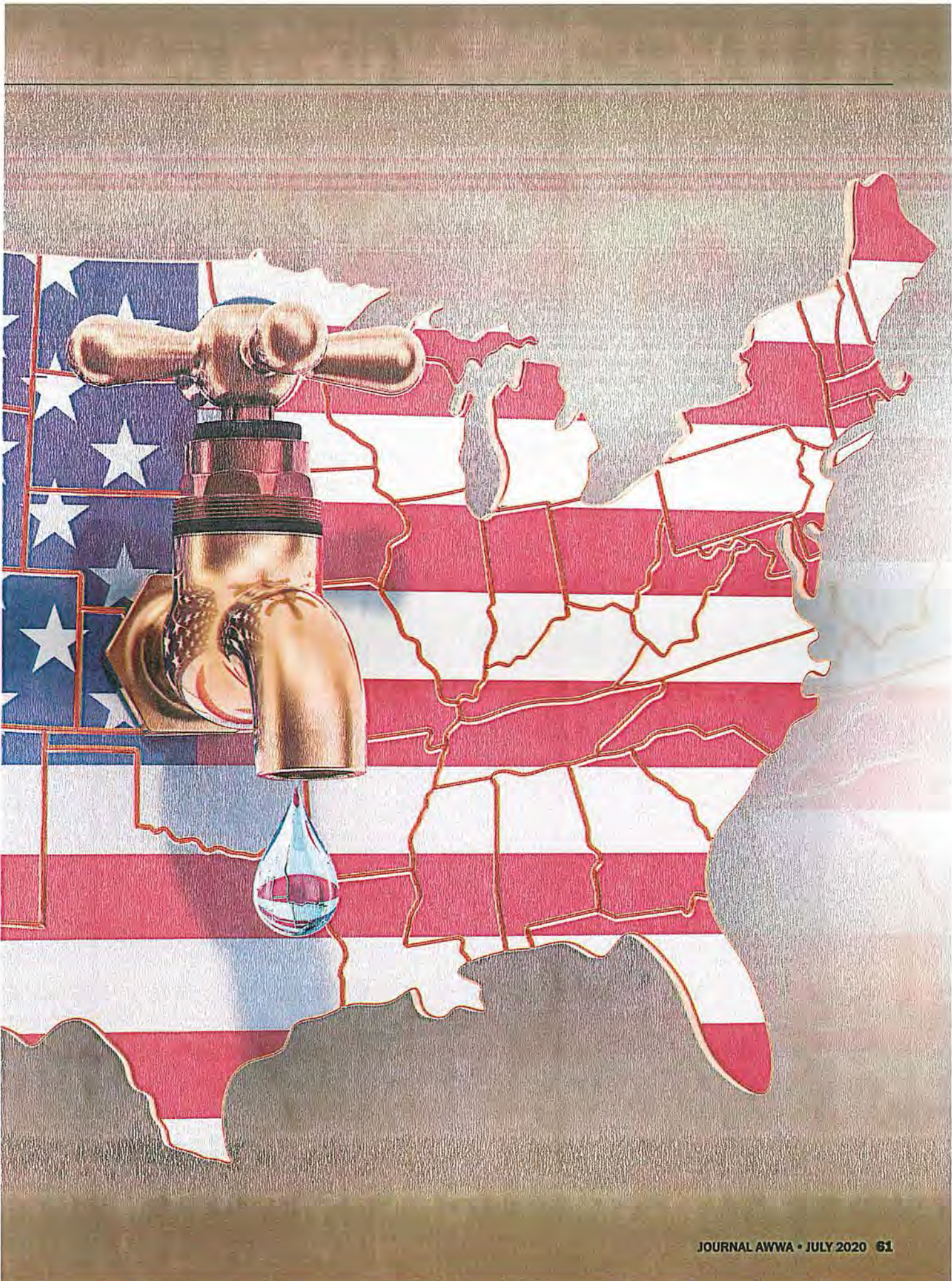
The 1993 Energy Policy Act and the voluntary WaterSense program, which provide guidelines for residential plumbing fixtures, have been successful in helping US residents conserve water.

Layout imagery by AlexLMX/Shutterstock.com

The Truth About Water Efficiency in the United States

William B. DeOreo





During a public meeting on Dec. 6, 2019, US president Donald Trump brought up water fixture efficiency standards and their efficacy. During his short remarks, the president voiced concerns and expressed opinions about water fixtures and their impact on overall water use. That he brought up such matters was a good thing, as it provided an opportunity to examine the data and provide thoughtful discussion about the US role in water conservation and efficiency. And while it might have been more productive to raise his objections in the form of questions rather than statements of fact, President Trump's somewhat hyperbolic statement about flow rates and toilet flushes provides an opening to dive into the actual data.

Current US Regulations

The questions raised by President Trump are the types of questions that water professionals should be able to answer. Frankly, I don't think anyone believes that people are flushing toilets 10 or 15 times, but many people wonder if there is enough double flushing going on to eliminate any water savings from a low-flow toilet. In addition, President Trump implied showers and low-flow faucets require longer run times to be effective and may, in the end, also fail to save water. The president also wondered why water efficiency standards were applied to areas with large water supplies (i.e., source water or where there is high rainfall) or those on the coast where wastewater gets discharged to the ocean. Finally, he said that the performance of high-efficiency fixtures was poor and that on that account their use should not be mandated, adding that the US Environmental Protection Agency (USEPA) was looking at changing the standard "soon."

To be clear, the only mandates governing the efficiency of water fixtures and appliances are those contained in the Energy Policy Act of 1992 (EPACT92). This act does not require the use of specific devices; it only requires manufacturers to adhere to the standards in new toilets and showerheads they build or sell in the United States. The three water-related requirements in EPACT92 for residential plumbing fixtures are as follows:

- Toilets may have maximum flush volumes of 1.6 gpf.
- Showerheads may have maximum flow rates of 2.5 gpm at 80 psi.
- Kitchen and lavatory faucets may have maximum flow rates of 2.5 gpm.

In addition, these devices must be clearly labeled with their flow rates and volumes so consumers can identify them. These requirements took effect in 1994, so consumers in the United States have lived with them for 25 years, and manufacturers have been improving their products continuously since then.

After the adoption of EPACT92, USEPA's next effort was the WaterSense program, which was patterned after the very successful Energy Star program. The goals of the WaterSense program were to encourage development of devices that would use 20% less water than "standard" devices and to provide clear product labeling that identified them to consumers as meeting WaterSense criteria (Figure 1).

The key thing to keep in mind about WaterSense is that it is a voluntary program. It imposes no mandates other than one: if a manufacturer wishes to have its products labeled as meeting the WaterSense criteria, the minimum requirement for water use must be achieved and the product must be labeled as such. If any mandates are in place with respect to WaterSense, they come from local governments and building officials, not from USEPA.

In the United States, decisions about conservation standards and programs are largely left to local water

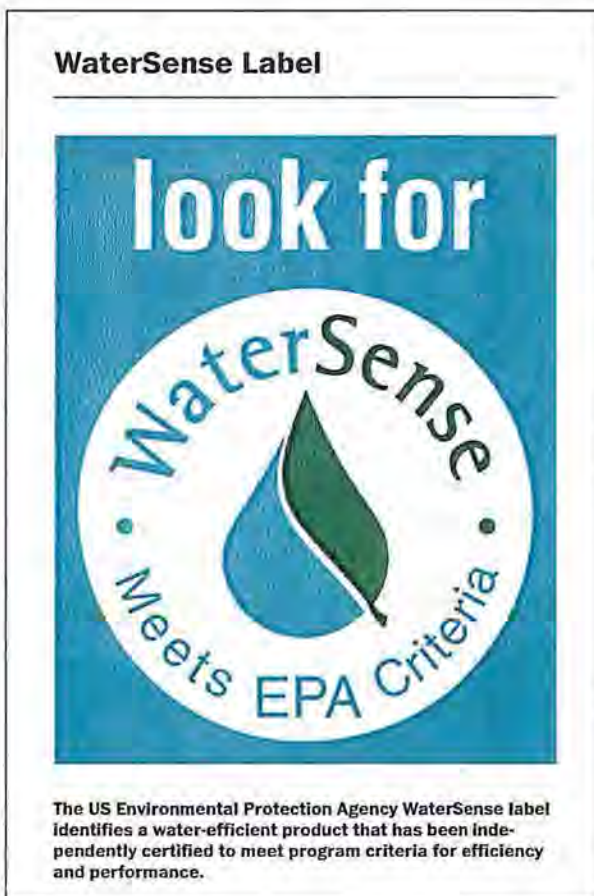


Figure 1

agencies and are based on detailed engineering studies of the relationship between their demands and supplies over time, as well as the extent to which they anticipate shortages in the future. Sometimes these decisions are wrong, or they're based on erroneous assumptions about the impact of a given conservation program, but they are being made at the local level.

The voluntary WaterSense standards for toilets, showers, and faucets are as follows:

- Toilets should have a maximum flush volume of 1.28 gpf.
- Showerheads should have a maximum flow rate of 2.0 gpm at 80 psi.
- Bathroom faucets should have a maximum flow rate of 1.5 gpm.

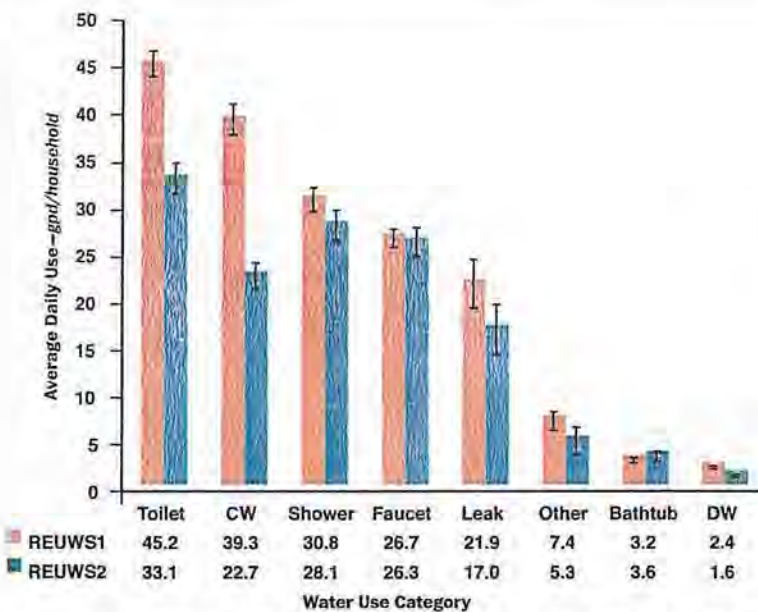
The WaterSense program doesn't specify a standard for kitchen sink faucets because many demands are for fixed volumes, such as filling pots for cooking or sinks for dishwashing, so flow rates are less relevant.

Given the current US regulatory situation with the EPACT92 rules and the voluntary WaterSense guidelines influencing fixture manufacturing, the question remains whether there are performance issues related to water-efficient fixtures and devices.

Evidence on Water Efficiency

Aquacraft, a water engineering and management firm based in Boulder, Colo., has collected and analyzed water use data since 1993 that clearly demonstrate that overall, the improvements in domestic water-using devices have decreased residential water use. Two key projects published by Water Research Foundation serve as bookends for this finding: the 1999 *Residential End Uses of Water* (REUWS1) and 2016 *Residential End Uses of Water—Version 2* studies (REUWS2). During the 17 years between these studies, major changes occurred in residential fixtures and appliances, and the average daily indoor water use dropped by 22%, or 39 gpd/household, from 177 to 138 gpd/household.

Comparison of Indoor End Uses Between REUWS1 and REUWS2



Source: DeOreo WB, Mayer P, Dziegielewski B, Kiefer J. 2016. *Residential End Uses of Water, Version 2*. Project 4309b. Water Research Foundation, Denver. Modified with permission. © The Water Research Foundation

CW—clothes washer, DW—dishwasher, REUWS1—*Residential End Uses of Water* study, REUWS2—*Residential End Uses of Water, Version 2* study

Error bars represent 95% confidence intervals

Figure 2

Toilets and Clothes Washers

The reduction in water use was not evenly distributed among typical residential indoor uses. As shown in Figure 2, clothes washing provided the biggest reduction in use, declining by 16.6 gpd/household, from 39.3 to 22.7 gpd/household, which accounts for 43% of the total 20-year savings. This reduction is from the widespread adoption of water-efficient, front-loading machines.

After clothes washers, the next greatest reduction in residential water use was in the toilet category. Water use for toilet flushing declined by 12.1 gpd/household, from 45.2 to 33.1 gpd/household, which accounts for another 31% of the total 20-year savings. This means that clothes washers and toilets accounted for 74% of the total water savings, or 28.7 gpd/household.

Figure 3 shows how the flush volume distribution declined between the two end-use studies. The dark-blue bars show that in 1999, most of the flushes were right

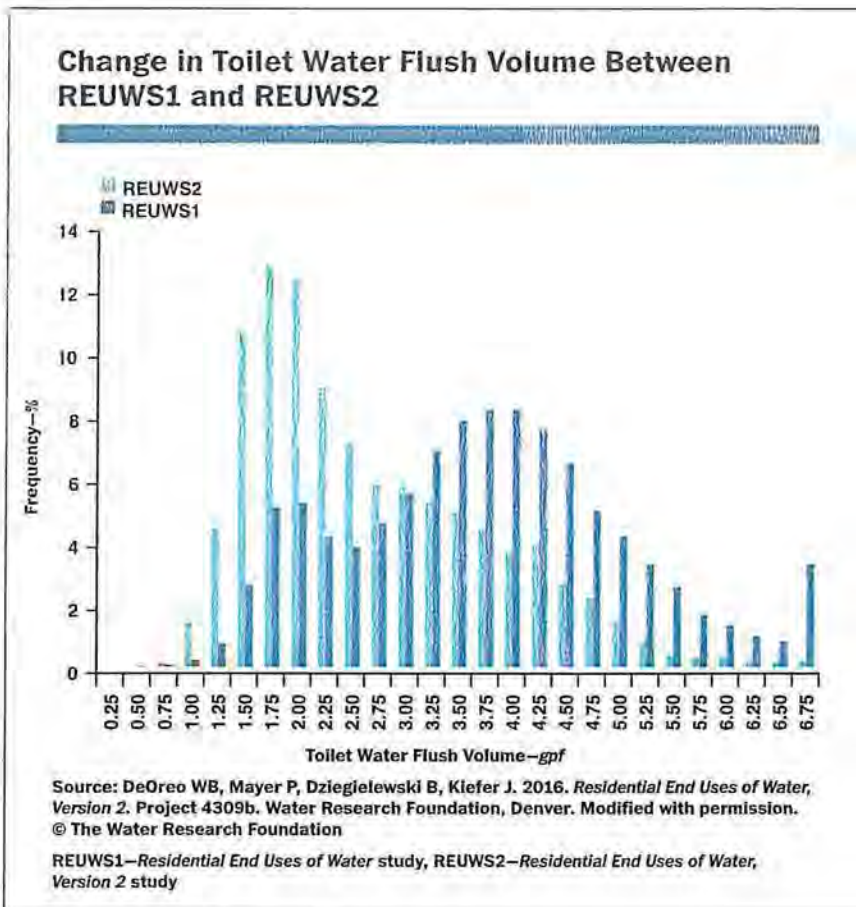


Figure 3

around 4.0 gpf, while the light-blue bars show that in 2016, most flushes were less than 2 gpf. This reduction in water used for flushing toilets occurred as a result of replacing older, high-volume toilets with newer, low-volume devices, primarily with EPACT92-mandated 1.6-gpf devices. Only 5% of the homes met the 1.6 gpf standard during REUWS1; this rose to 37% in REUWS2.

The reduction in water use for toilet flushing also includes any increase in the number of flushes per day. The data show that the average number of flushes per person per day for the combined data actually decreased slightly, from 5.05 flushes per person per day in REUWS1 to 5.0 flushes per person per day in REUWS2. This indicates that double flushing, while it may occur occasionally, is not nearly frequent enough to outweigh the water saving per flush with the 1.6-gpf toilets. In fact, that flush rates essentially remained unchanged suggests that the newer toilets do not require double flushing any more frequently than the older models (data available in REUWS2 Table 6.7).

Showers and Faucets

The situation for showers and bathroom faucets is not as clear as that for clothes washers and toilets. Average daily use for showers decreased only slightly between the two studies. The 1999 data show that the average household shower use was 30.8 gpd/household, but it dropped to only 28.1 gpd/household in 2016—this after more than 20 years of the 2.5 gpm showerhead standard. At the same time the average shower duration stayed exactly the same at 7.8 minutes per shower. This does not support the concern that lower-flow showerheads lead to longer showers. One possible reason for this may be that the average shower flow rates for both studies were below 2.5 gpm, suggesting that installing 2.5-gpm showerheads had little effect on actual shower flow rates since the heads that were replaced had flow rates less than 2.5 gpm.

In 1999 the average single-family home collectively used 27 gpd/household for all faucet uses; in 2016 that volume dropped to 26.3 gpd/household for a decrease in household use of ap-

proximately 3%. At the same time, the frequency of faucet use increased from 41 to 51 uses, but the average volume per use decreased from 0.7 to 0.5 gallons. These two data points are consistent with the notion that lower flow rates led to an increase in the frequency of use, which is precisely the point that President Trump raised. The evidence shows that the impact of the voluntary WaterSense standards was lowering the average use per faucet event by 0.2 gallons and increasing the frequency of use by 10 uses per day. The net effect was a slight decrease in average faucet use of 0.7 gpd/household, but this increase was hardly significant.

Location

In response to the question of whether water conservation is necessary in areas with large surpluses of source water or high rainfall, the answer is largely case by case. In general, there are very few water systems that rely solely on rainfall as their direct supply. Usually rainfall

is either stored in a reservoir, collected in a river, or retrieved via groundwater. Water conservation is a method of reducing demands, even in years with adequate supply, as well as storing water for later use during droughts. Even in extreme cases in which a water system has little to no storage (either through surface reservoirs or groundwater), lowering demands through conservation reduces the severity of any shortages. In most cases, however, water saved in average to wet years can be kept in storage for use in dry years, which is a huge benefit.

W/ Regulations Have Saved Water

It's good to regularly review regulations, and in the case of water conservation, it's necessary to have confidence that the regulations result in water savings to the extent that the savings outweigh the costs of the devices and any negative changes in the customer experience. The applicable regulations for water conservation are those of EPACT92, which mandate efficiency standards for manufacture of toilets, showerheads, and bathroom faucets. Of these three devices, the 1.6-gpf regulation of toilets has had the greatest impact on water use. There are many makes and models of these devices on the market, and while some of the first generation of the 1.6-gpf toilet had performance issues, these have largely been worked out. Removing this standard would eliminate one of the most successful and important water conservation measures ever adopted in the United States.


Should we cancel the extra 20% savings from the WaterSense program? Given that these are voluntary standards, no one is required to purchase WaterSense toilets, which flush with a maximum of 1.28 gallons of water, and some of which flush with as little as 1 gallon. The point is that none of these models are mandated by federal regulations. Individuals are free to put these devices in their homes or businesses as they see fit and based on the best available performance information. From the perspective of the federal government, repealing WaterSense would eliminate a valuable program that allows manufacturers to produce advanced water-conserving products and label them in a way that consumers can easily identify. Getting rid of them would make it harder for people who want the more advanced devices to find them, but it would have no real impact on people who do not want them since people are currently free to choose.

The same argument can be made for showers and bathroom faucets. The requirements of EPACT92 could be repealed, but the effect on water use would be minimal. This is because the change in use from showers

and bathroom faucets before and after EPACT92 was very small, so the reverse situation would probably hold: eliminating the 2.5 gpm requirement for showers would probably have a minimal effect.

As with toilets, the adoption of WaterSense standards for showers and bathroom faucets is voluntary. Having the program in place with its labeling requirements allows people who want these products to find them and people who don't to avoid them. If local agencies and building departments want to mandate the lower-flow devices, that decision is up to the community. Eliminating the WaterSense program would only make it harder for people to identify the devices that meet local codes.

Although clothes washers were not mentioned in EPACT92 and they are not part of the WaterSense program, water-efficient clothes washers are invaluable water savers. They rank number one in residential water savings and do so without any regulation, federal or local. The WaterSense program, however, does promote them and provides labeling guidelines.

In summary, the data that Aquacraft has collected and analyzed since 1993 show that the requirements of EPACT92 have significantly reduced water use, and there are no data to suggest that the savings have been nullified by the need for extra use, longer showers, or multiple flushes. In balance, then, the best way to protect US water is to keep in place existing regulations, both mandatory and voluntary, and further, to educate communities about the benefits of water conservation. 

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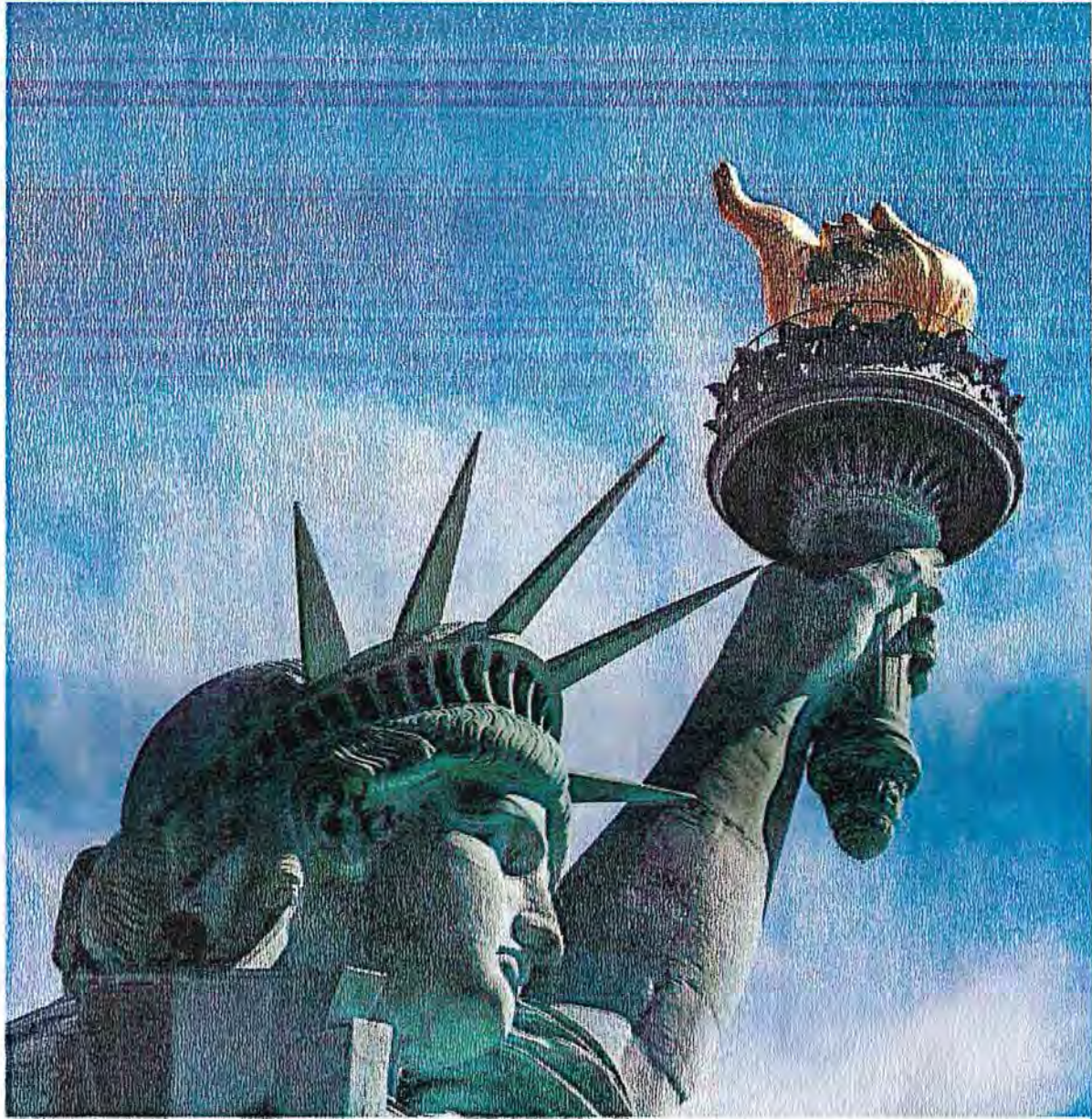
AWWA Resources

- The Energy Policy Act: Assessing Its Impact on Utilities. Vickers A. 1993. *Journal AWWA*. 85:8:56. <https://doi.org/10.1002/j.1551-8833.1993.tb06041.x>
- AWWA Policy Statement on Water Efficiency and Conservation. www.awwa.org/Policy-Advocacy/AWWA-Policy-Statements/Water-Use-Efficiency

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EXHIBIT SG-4 (Reiker)

ATTACHMENT D



2019 U.S. WaterSense Market Penetration

A GMP Research Industry Report
commissioned by Plumbing Manufacturers International (PMI)





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Executive summary

This study was commissioned by Plumbing Manufacturers International (PMI) and is a follow on to the initial market penetration study completed on WaterSense market penetration in May 2015 to determine how the market has evolved.

Products captured in this study include tank-type residential toilets, bathroom sink faucets, showerheads, flushometer-valve toilets and flushing urinals.

In 2015 we identified WaterSense-certified tank-type toilets had a 7.0% market penetration. WaterSense-certified bathroom sink faucets had a 25.4% market penetration and WaterSense-certified showerheads had a 28.7% market penetration. Flushometer-valve toilets and flushing urinals were not part of the research scope in 2015.

WaterSense market penetration is defined by the total number of WaterSense-certified products installed divided by the total number of installed products of that specific product type:

$$\text{total installed WaterSense products} \div \text{total installed products} = \text{WaterSense market penetration rate in \%}$$

According to this study, WaterSense-certified tank-type toilets have a 16.8% market penetration. WaterSense-certified bathroom sink faucets have a 40.1% market penetration, and WaterSense-certified showerheads have a 45.4% market penetration. Flushometer-valve toilets and flushing urinals were introduced much later into the WaterSense program (flushing urinals in 2010 and flushometer-valve toilets in 2016) and consequently have low single digit market penetration rates.

The key driver for high WaterSense market penetration is the replacement market. Plumbing fixtures have very long replacement cycles. Residential tank-type toilets are replaced in average every 30 years. Flushometer-valve toilets and flushing urinals are replaced in average every 35.9 years. Homeowners and commercial property managers are sometimes reluctant to replace a product unless it is defective, or they are undergoing a major remodel of the bathroom.

According to the leading manufacturers of plumbing fixtures and fittings, the National Association of Home Builders (NAHB) and the International Association of Certified Home Inspectors (InterNACHI), bathroom sink faucets are replaced on average every 15 years, while showerheads are replaced every 12 years.

As bathroom sink faucets and showerheads are replaced more frequently, the market penetration of WaterSense products is higher than for plumbing fixtures such as tank-type toilets, flushometer-valve toilets or flushing urinals.

Within the next 15 years, most bathroom sink faucets and showerheads installed in the United States will be WaterSense-certified or meet the WaterSense program. Within the next 30 years, most residential tank-type toilets will be WaterSense-certified or meet the WaterSense program. Within the next 40 years, most flushometer-valve toilets and flushing urinals will be WaterSense-certified or meet the WaterSense program.

Mount Pleasant, June 2019

About Plumbing Manufacturers International (PMI)

Plumbing Manufacturers International (PMI) is the trade association of plumbing product manufacturers that produce more than 90 percent of the United States' plumbing products, represent more than 150 iconic brands, and develop safe, reliable and innovative water-efficient plumbing technologies. PMI members contribute more than 464,000 jobs and \$85.5 billion in economic impact to America's economy.

With a vision of safe, responsible plumbing – always, PMI advocates for plumbing product performance contributing to water efficiency and savings, sustainability, public health and safety, consumer satisfaction, and a clean environment. PMI members manufacture water-efficient toilets, urinals, faucets, showerheads and other products at more than 70 locations across the country and market them online and in home improvement stores, hardware stores and showrooms in all 50 states. PMI member products include potable water supply system components, plumbing fixtures and fittings, flushing devices, sanitary drainage system components, and plumbing appliances.

PMI provides early warning notice on critical industry issues, serves as an educational forum for collecting and exchanging industry information, and works to enhance the plumbing manufacturing industry's growth and expansion. In addition, PMI serves as a coordinating and decision-making body for dealing with industry issues. PMI works closely with government agencies at all levels – federal, state and local – and is active in many industry arenas. PMI staff members sit on a variety of key industry committees, helping to develop and maintain codes and standards.

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About GMP Research

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Our mission is to supply our clients with the best market intelligence. We go to great lengths to research the subject matter at hand, and then spend an equal amount of time validating the data, to ensure our clients are receiving the best possible market intelligence.

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Why do a market penetration study for WaterSense products?

Water is a finite resource – even though about 70 percent of the Earth's surface is covered by water, less than 1 percent is available for human use. Despite the water supply and infrastructure challenges faced by many communities across the U.S., each American uses an average of 88 gallons of water each day at home. Water managers in at least 40 states expect local, statewide, or regional water shortages to occur over the next several years.

The average family spends more than \$1,000 per year in water costs but can save more than \$380 annually from retrofitting with WaterSense-labeled fixtures and Energy Star-certified appliances.

A first study on WaterSense market penetration was completed in May 2015. For consistency purposes, we have used the same methodology to examine how the market has evolved.

What is WaterSense?

WaterSense is a voluntary partnership program sponsored by the U.S. Environmental Protection Agency (EPA). It is both a label for qualified water-efficient products and a resource to help homeowners and business owners save water.

The WaterSense label makes it easy to find water-efficient products, water-efficient homes and programs that meet the EPA's criteria for efficiency and performance. WaterSense products and services are certified to use at least 20 percent less water, save energy, and perform as well as or better than non-WaterSense products.

The WaterSense website states they partner with manufacturers, retailers, distributors, homebuilders, irrigation professionals and utilities to bring WaterSense products to the market.

The following comments were taken from the WaterSense website and give an understanding of the importance of the WaterSense program:

- Bathrooms are the largest use of water in the home, using more than 50 percent of all indoor water.
- Approximately 5 to 10 percent of U.S. homes have easy-to-fix leaks that drip away 90 gallons a day or more.
- Residential outdoor water usage across the U.S. accounts for nearly 9 billion gallons of water each day, mainly for landscape irrigation.
- On average, a urinal in a public place gets flushed 18 times per day.
- Heating water is typically the second largest use of energy in a home (after space heating and cooling).



What are the benefits of WaterSense?

According to WaterSense, the average family can save 13,000 gallons of water and \$130 in water costs per year by replacing all old, inefficient toilets in their home with WaterSense-labeled models.

If all U.S. households replaced their inefficient toilets, this would represent water savings of approximately 520 billion gallons of water – roughly the amount of water that flows over Niagara Falls in about 12 days.

Replacing old, inefficient bathroom faucets and aerators with WaterSense-labeled models can save the average family \$250 in water and electricity costs over the faucets' lifetime.

Replacing showerheads with WaterSense-labeled models can reduce the average family's water and electricity costs by \$70 and can save the average family more than 2,700 gallons of water per year, equal to the amount of water needed to wash 88 loads of laundry.

Replacing inefficient flushometer-valve toilets and flushing urinals would result in water savings of more than \$500 million annually.

The U.S. Census Bureau reports there are 137.4 million homes and 11.8 million commercial non-residential facilities in the United States. If every home and commercial non-residential facility were equipped with WaterSense products, we would see an annual water savings of \$ 26.445 billion.

WaterSense action	Total annual savings in billion U.S. \$
Replacing inefficient residential tank-type toilets	\$19.236 billion
Replacing inefficient bathroom sink faucets	\$ 1.300 billion
Replacing inefficient residential showerheads	\$ 5.400 billion
Replacing inefficient flushing urinals and flushometer-valve toilets	\$ 0.509 billion
Total annual savings	\$26.445 billion

Source: U.S. Environmental Protection Agency, U.S. Census, GMP Research estimates

When was WaterSense launched? Which plumbing products are included?

WaterSense was launched in June 2006. Products included in the WaterSense program are residential toilets, bathroom faucets and accessories, showerheads, flushing urinals, flushometer-valve toilets and landscaping irrigation products.

Tank-type high efficiency toilets

WaterSense released its initial Tank-Type High-Efficiency Toilet Specification in January 2007 and issued the first revision to the specification in May 2011. Since that time, the American Society of Mechanical Engineers (ASME) and Canadian Standards Association (CSA) have revised ASME A112.19.2/CSA B45.1 Ceramic Plumbing Fixtures to include the waste media extraction test, fill valve integrity test, and tank trim adjustability test protocols established in the WaterSense Specification for Tank-Type Toilets.



The WaterSense specification establishes a maximum effective flush requiring 1.28 gallons per flush (GPF) or less for all residential toilets.

- Single flush toilets must use 1.28 GPF or less
- Dual flush toilets must have an effective flush volume that does not exceed 1.28 GPF which is the average flush volume of two reduced flushes and one full flush

Bathroom sink faucets and accessories

WaterSense-labeled bathroom sink faucets and accessories use a maximum of 1.5 gallons per minute. WaterSense-labeled bathroom sink faucets and accessories were introduced in 2007.



Showerheads

Water-saving showerheads that earn the WaterSense label must demonstrate that they use no more than 2.0 GPM. The WaterSense label also ensures that these products provide a satisfactory shower that is equal to or better than with conventional showerheads on the market. WaterSense-certified products were introduced in 2010.



Flushing urinals

WaterSense-labeled flushing urinals use no more than 0.5 GPF and comply with existing standards for flushing urinals. To ensure adequate performance, urinals must also be independently certified to ensure that they flush effectively and have properly functioning drain traps before they can earn the WaterSense label. WaterSense-certified urinals were introduced in 2010.

Flushometer-valve toilets

WaterSense-labeled flushometer-valve toilets, whether single- or dual-flush, use no more than 1.28 GPF, which is a 20 percent savings over the federal standard of 1.6 GPF. WaterSense has also included a minimum flush volume of 1.0 GPF to ensure plumbing systems have adequate flow to function effectively. WaterSense-certified flushometer-valve toilets were introduced in 2016.

A full list of WaterSense-labeled products can be found at <https://www.epa.gov/watersense/product-search>.



Research methodology

During the months of May and June 2019, GMP Research reviewed the penetration rate of residential and commercial WaterSense-certified products among the installed base of bathroom fixtures in homes and non-residential commercial properties in the United States.

According to the U.S. Census Bureau, there are 137.4 million existing homes and 11.8 million commercial non-residential facilities in the United States. We reviewed the number of homes by state and examined when they were constructed. For the commercial non-residential facilities, we examined the number of hotels and motels, office buildings, retail and wholesale operations, health care facilities, day care centers, schools, universities, churches and places of worship, public safety facilities, leisure and entertainment facilities, airports and other passenger terminals, communication facilities, and manufacturing facilities.

We reviewed OSHA regulations to determine the number of commercial toilets and urinals installed per commercial property.

To determine the number of installed residential tank-type toilets, bathroom sink faucets and showerheads, we first examined how many bathrooms the average U.S. home has. We reviewed the characteristics of new housing completed provided by the U.S. Census.

The Census Bureau provides data on homes with 1-1/2 baths or less, 2 baths, 2-1/2 baths and 3 baths or more. We supplemented this information by reviewing home descriptions of 1.135 million single family and 0.271 million multi-family homes currently for sale in all price ranges on Zillow.com and sorted the homes by the number of bathrooms (1, 1-1/2, 2, 3, 4, 5, 6 and 7 or more bathrooms).

In a next step, we reviewed home floorplans to determine the average number of toilets, bathroom sink faucets and showerheads per bathroom.

We reviewed when federal legislation was enacted, determining when low flow and WaterSense products became available. For each product examined, we reviewed the WaterSense accomplishment scorecard (https://www.epa.gov/sites/production/files/2018-06/documents/ws-aboutus-2017-accomplishments_0.pdf), which gave an indication of the number of certified products that were available in a given year.

We worked closely with John Koeller of Koeller & Company of Yorba Linda, CA, to review our assumptions and to ensure they were in line with general industry views. John Koeller is a registered professional engineer with extensive experience in water-efficient technologies and products. Widely recognized as a water efficiency specialist, Koeller is a consultant to numerous water providers, green-building organizations, and private-sector firms. He is co-developer of Maximum Performance (MaP) testing for toilet fixtures (www.map-testing.com).

We interviewed the leading suppliers of plumbing fixtures and fittings and reviewed the websites of various plumbing manufacturers, wholesalers and retailers to determine the level of WaterSense-certified products available for purchase.

PMI provided us with a summary of current U.S. Plumbing Provisions by state/municipality. This list highlighted the effective date when these plumbing provisions went into effect and which products were covered. We used this information to determine when WaterSense products were required in these municipalities/states and to calculate the market penetration in these areas.

Every year GMP Research publishes the U.S. Kitchen + Bath Industry report. This is a detailed industry report card on the kitchen + bath industry, which provides market information by plumbing fixture and fitting. We referred to these studies to determine how many of the tank-type toilets, bathroom sink faucets, showerheads, flushometer-valve toilets and flushing urinals were sold during the investigation period.

This led to a detailed assessment of the market penetration of WaterSense-certified products installed in each of the 50 U.S. states and cumulatively in the United States. While the study is based on certain product life expectancy assumptions, GMP Research interviewed several of the leading plumbing fixture and fittings manufacturers, and reviewed guidelines published by the National Association of Home Builders and International Association of Certified Home Inspectors (InterNACHI) to get as accurate a read as possible of the type of plumbing fixtures and fittings that are installed in the United States.

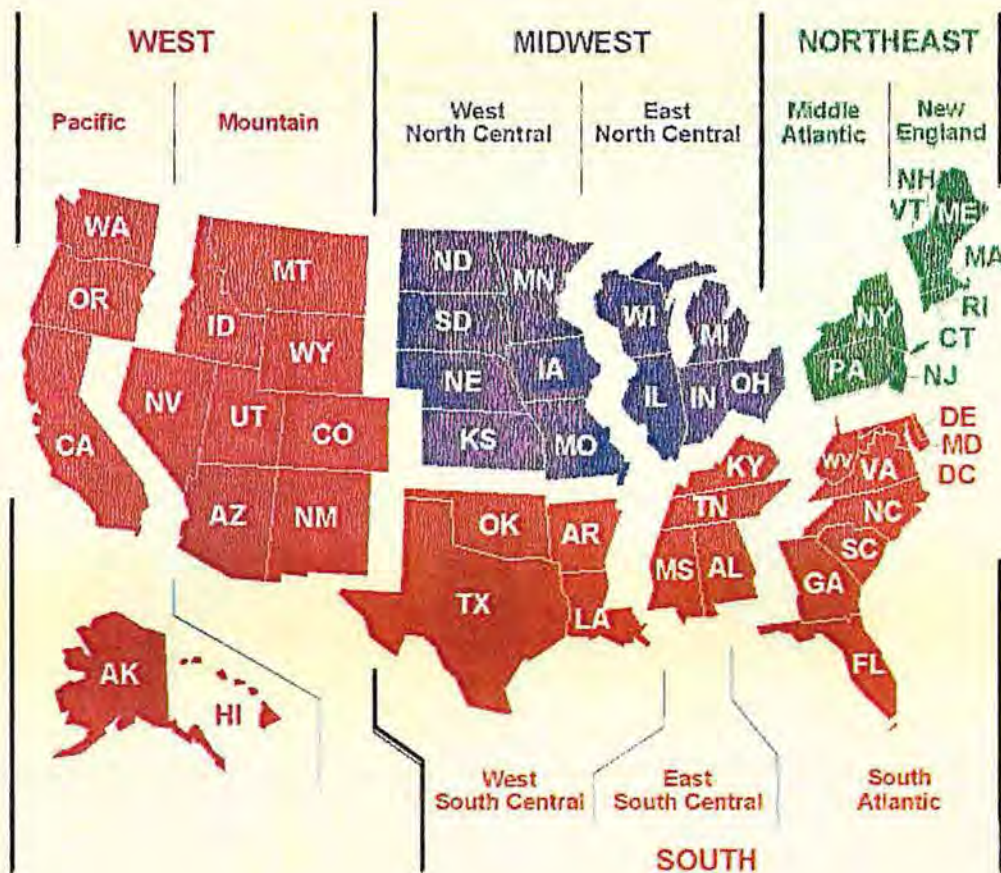
It is important to note that we define WaterSense market penetration as a percentage of all installed products.

- The market penetration rate of WaterSense tank-type high efficiency toilets is therefore the number of WaterSense-certified tank-type toilets installed divided by the total number of tank-type residential toilets in the United States (regardless of flushing criteria).
- The market penetration rate of WaterSense bathroom sink faucets is the number of WaterSense-certified bathroom sink faucets installed divided by the total number of installed bathroom sink faucets.
- The market penetration rate of WaterSense showerheads is the number of WaterSense-certified showerheads installed divided by the total number of installed showerheads.
- The market penetration rate of WaterSense flushometer-valve toilets is the number of WaterSense-certified flushometer-valve toilets installed divided by the total number of installed flushometer-valve toilets.
- The market penetration rate of WaterSense flushing urinals is the number of WaterSense-certified flushing urinals installed divided by the total number of installed urinals.

U.S. Census regions

The U.S. Census Bureau segments the country into nine U.S. Census regions. We followed this approach to determine the regional market penetration of WaterSense products:

Release date: June 14, 2000



Source: U.S. Census Bureau

Residential WaterSense products

To determine the market penetration of residential WaterSense products, we first need to determine the installed base of the target residential products. This is achieved by examining the number of existing homes in the United States. Next, we need to determine how many bathrooms per home exist to identify the number of toilets, bathroom sink faucets and showerheads per bathroom are installed.

- a) The U.S. Census provides information on the characteristics of homes completed from 1973 to present for both single family and multi-family homes. Based on the U.S. Census data, we completed an analysis of the number of bathrooms per completed home for every year from 1973 to present.

For single family homes, census data was available for 1-1/2 or less bathrooms, 2 bathrooms, 2-1/2 bathrooms and 3 bathrooms or more. For multi-family homes, Census data was available for 1 bathroom, 1-1/2 bathrooms and 2 or more bathrooms.

To get a finer estimate of the number of bathrooms per home, we examined the characteristics of 1.135 million single family homes and 0.271 million multi-family homes in all nine U.S. Census regions currently for sale by number of bathrooms, number of rooms and price point. We used this information to fine tune the 1 and 1-1/2 bathroom category and the 3+ bathroom category for single family homes and for 2+ bathrooms for multi-family homes.

- b) In a third step, we calculated the number of toilets, bathroom sink faucets and showerheads per single family and multi-family homes to arrive at the total installed base of products in the U.S.
- c) U.S. Census provided housing starts per state by housing type from 1939 to present.
- d) For residential tank-type toilets, we assumed a replacement cycle of 30 years. For bathroom sink faucets we assumed a replacement cycle of 15 years. For showerheads we assumed a replacement cycle of 12 years. This is based on data from the NAHB/Bank of America Study of Life Expectancy of Home Components, InterNACHI's standard estimated life expectancy for homes and input from manufacturers.

a) Existing homes in the U.S. by number of bathrooms per home

	Existing homes with one bathroom	Existing homes with 1-1/2 bathrooms	Existing homes with two or 2-1/2 bathrooms	Existing homes with three bathrooms	Existing homes with four bathrooms	Existing homes with five bathrooms	Existing homes with six bathrooms	Existing homes with more than 6 bathrooms	Average
Single family homes	27.1%	11.8%	35.0%	5.9%	6.3%	5.8%	4.6%	3.5%	2.5 bathroom per home
Multi-family homes	47.0%	10.1%	9.5%	9.4%	9.2%	8.2%	3.8%	2.8%	2.3 bathrooms per home

Source: U.S. Census Bureau Characteristics of New Homes (completed 1973-present), GMR Research analysis of 1.135 million and 0.271 million multi-family homes currently for sale in the United States; 2019 U.S. Kitchen + Bath Industry Report; 2018 GMR Research study on the RV and mobile home market

b) Average number of toilets, bathroom sink faucets and showerheads per bathroom

	Average number of toilets per bathroom	Average number of sink faucets per bathroom	Average number of showerheads per bathroom
Products per bathroom	1.0	1.46	0.93








Source: U.S. Census Bureau Characteristics of New Homes (completed 1973-present), GMR Research analysis of 1.135 million and 0.271 million multi-family homes currently for sale in the United States; 2019 U.S. Kitchen + Bath Industry Report; 2018 GMR Research study on the RV and mobile home market

c) Total existing homes, bathrooms, installed toilets, bathroom sink faucets and showerheads

	Total number of existing homes	Number of bathrooms	Number of installed toilets	Number of installed bathroom sink faucets	Number of installed showerheads
	Million units	Million units	Million units	Million units	Million units
Single family homes	92.790	231.975	231.975	338.684	215.737
Multi-family homes	44.617	102.619	102.619	149.824	95.436
Total installed base	137.407	334.594	334.594	488.508	311.173







Source: U.S. Census Bureau Characteristics of New Homes (completed 1973-present), GMR Research analysis of 1.135 million and 0.271 million multi-family homes currently for sale in the United States; 2019 U.S. Kitchen + Bath Industry Report; 2018 GMR Research study on the RV and mobile home market

d) 2019 U.S. existing home inventory by type of home, U.S. Census region and by state

Census region	State	Total existing homes								
			Single Family	Duplex	3 or 4 units	5 to 9 units	10 to 19 units	20 or more units	Mobile home	Boat, RV, Van
USA	USA	137,407,308	92,789,782	4,914,617	5,990,555	6,424,836	6,065,580	12,593,793	8,500,432	127,713
New England	CT	1,517,495	983,758	119,504	132,115	80,228	52,840	137,718	11,234	98
	MA	2,894,590	1,660,911	287,664	315,792	168,362	120,201	316,227	24,452	981
	ME	742,644	542,841	32,540	40,354	26,866	11,598	26,704	61,456	285
	NH	634,689	442,805	33,034	36,650	26,110	17,695	44,853	31,123	419
	RI	468,266	272,371	54,576	56,054	21,729	18,432	39,961	4,905	238
Middle Atlantic	VT	335,248	232,849	21,447	19,952	17,496	6,538	13,981	22,664	321
	NJ	3,615,891	2,286,170	338,282	238,440	168,054	168,772	383,252	32,601	320
	NY	8,327,621	3,917,640	848,967	574,232	430,141	351,697	2,009,212	193,493	2,239
South Atlantic	PA	5,694,402	4,303,251	248,439	225,305	180,953	147,157	358,682	228,843	1,772
	DC	314,843	116,774	9,412	19,932	22,674	26,974	118,528	485	64
	DE	432,853	321,466	7,605	9,450	16,309	26,927	19,603	31,086	407
	FL	9,441,585	5,728,688	197,887	374,130	460,321	534,477	1,291,572	841,439	13,071
	GA	4,282,254	3,021,894	91,124	127,997	198,552	190,908	272,298	376,636	2,845
	MD	2,449,123	1,781,539	35,660	51,684	130,110	192,247	220,923	36,318	742
	NC	4,622,656	3,220,365	92,756	130,588	188,327	191,787	207,588	587,857	3,388
	SC	2,284,820	1,497,253	43,463	70,377	96,995	75,961	122,507	375,996	2,288
	VA	3,512,917	2,549,764	53,602	95,855	170,365	198,295	262,067	181,909	1,060
	WV	892,240	646,833	19,699	26,410	25,517	14,678	24,427	134,178	498
East South Central	AL	2,258,669	1,565,024	51,442	67,368	97,107	78,662	90,580	305,749	2,737
	KY	1,984,235	1,383,423	66,135	87,231	83,807	65,932	64,115	231,981	1,611
	MS	1,323,754	921,423	32,196	39,698	52,464	34,988	32,060	209,273	1,652
	TN	2,958,799	2,109,694	81,170	95,049	141,497	120,188	135,829	272,708	2,664
West South Central	AR	1,370,109	977,060	40,078	45,766	48,876	53,308	35,708	167,714	1,599
	LA	2,061,582	1,400,672	85,237	84,349	65,886	57,253	94,150	271,171	2,364
	OK	1,734,074	1,293,394	33,753	45,371	66,271	60,510	66,093	165,848	2,834
	TX	10,933,375	7,394,305	206,625	348,816	519,410	689,692	959,301	795,075	20,151
East North Central	IL	5,359,416	3,463,847	302,686	347,719	338,175	200,939	572,846	131,258	1,946
	IN	2,885,342	2,215,331	73,367	99,374	128,198	104,851	126,752	136,756	713
	MI	4,595,274	3,536,356	107,770	118,485	196,420	159,995	236,214	238,789	1,245
	OH	5,201,701	3,798,575	220,911	229,039	245,072	208,027	297,891	200,183	2,003
	WI	2,695,303	1,905,393	169,684	103,038	131,333	95,580	198,445	90,931	899
West North Central	IA	1,397,739	1,087,859	31,487	45,907	48,117	53,936	79,499	50,464	470
	KS	1,273,776	986,121	32,095	46,613	48,115	44,136	61,014	55,117	565
	MN	2,437,726	1,812,073	49,496	52,937	55,051	87,233	300,890	79,268	777
	MO	2,792,445	2,060,417	94,730	129,174	102,717	100,843	132,051	169,846	2,667
	ND	374,591	233,619	8,479	14,168	12,934	22,447	55,564	27,234	146
	NE	837,540	641,008	15,989	23,176	36,108	36,827	58,170	28,010	252
	SD	392,650	277,941	7,996	14,128	16,224	17,571	25,889	32,717	184
Mountain	AZ	2,999,185	2,085,747	39,482	98,192	121,005	130,585	210,979	300,378	12,817
	CO	2,385,495	1,671,624	42,249	73,355	111,073	132,664	258,111	94,905	1,514
	ID	721,818	559,580	14,993	30,957	18,485	15,151	28,190	53,556	906
	MT	510,408	375,062	14,132	21,386	16,036	11,130	17,092	54,696	874
	NM	937,976	629,008	17,641	36,862	27,601	23,044	37,827	163,897	2,096
	NV	1,249,733	806,457	14,674	80,171	108,726	62,385	112,210	63,237	1,873
	UT	1,084,685	808,706	29,814	50,477	38,457	44,083	75,630	36,944	674
	WY	276,733	198,004	6,724	11,115	10,050	6,765	7,173	38,674	228
Pacific	AK	316,968	223,887	17,076	22,198	13,478	9,002	15,917	14,685	725
	CA	14,177,270	9,210,270	342,567	770,463	844,841	735,724	1,738,818	519,658	14,929
	HI	542,955	336,324	10,568	21,532	36,860	29,323	106,799	1,099	450
	OR	1,768,582	1,211,751	46,578	77,305	75,894	66,943	149,903	135,265	4,943
	WA	3,103,263	2,084,655	70,732	113,819	137,439	158,679	342,080	188,670	7,189

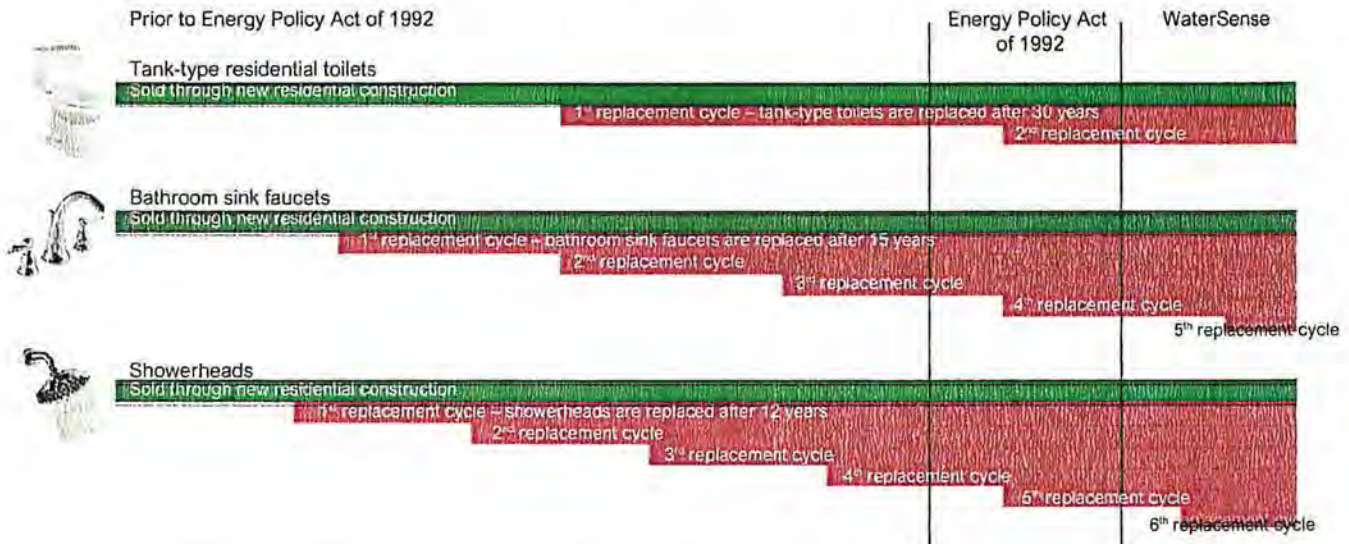
Source: U.S. Census Bureau

Total installed residential plumbing products by state and region

U.S. Census Region	State	Total existing homes						
			Existing single family homes	Existing multi-family homes	Total existing bathrooms	Total installed residential toilets	Total installed bathroom sink faucets	Total installed showerheads
USA	USA	137,407,309	92,789,782	44,617,526	334,594,765	334,575,763	488,508,357	311,173,131
New England	CT	1,517,485	983,758	533,737	3,686,990	3,686,523	5,383,006	3,428,901
	MA	2,894,590	1,660,911	1,233,679	6,989,739	6,989,043	10,205,019	6,500,457
	ME	742,544	542,841	199,803	1,816,549	1,816,468	2,652,308	1,689,484
	NH	634,659	442,805	191,884	1,548,346	1,548,192	2,260,585	1,439,962
	RI	468,266	272,371	195,895	1,131,486	1,131,373	1,651,970	1,052,282
	VT	335,248	232,849	102,399	817,640	817,559	1,193,755	780,405
Middle Atlantic	NJ	3,615,881	2,286,170	1,329,721	8,773,783	8,772,946	12,809,724	8,159,618
	NY	8,327,621	3,917,640	4,409,981	19,937,956	19,935,156	29,108,102	18,544,462
	PA	5,694,402	4,303,251	1,391,151	13,957,775	13,956,444	20,378,351	12,980,731
South Atlantic	DC	314,843	116,774	198,069	747,494	747,404	1,091,341	695,169
	DE	432,853	321,466	111,387	1,059,556	1,059,736	1,547,388	985,685
	FL	9,441,585	5,728,688	3,712,897	22,861,383	22,859,451	33,377,619	21,261,086
	GA	4,282,251	3,071,894	1,260,380	10,453,563	10,452,680	15,262,202	9,721,814
	MD	2,449,123	1,781,539	667,564	5,989,291	5,988,785	8,744,364	5,570,040
	NC	4,622,656	3,220,365	1,402,291	11,278,182	11,275,229	16,463,225	10,486,849
	SC	2,284,820	1,487,253	787,567	5,554,537	5,554,067	8,109,623	5,165,719
	VA	3,512,917	2,549,764	963,153	8,589,662	8,588,936	12,540,906	7,988,386
	WV	892,240	646,833	245,407	2,181,519	2,181,334	3,185,017	2,028,812
	WY	2,258,669	1,565,024	693,645	5,507,944	5,507,735	8,041,598	5,122,387
East South Central	KY	1,984,235	1,383,423	600,812	4,840,425	4,840,286	7,067,021	4,501,585
	MS	1,323,754	921,423	402,331	3,228,919	3,228,826	4,714,221	3,002,894
	TN	2,958,299	2,109,694	849,105	7,227,127	7,226,969	10,551,678	6,721,274
West South Central	AR	1,370,109	977,060	393,049	3,346,663	3,346,570	4,886,128	3,112,396
	LA	2,061,582	1,400,672	660,910	5,021,773	5,021,634	7,331,789	4,670,249
	TX	10,933,375	7,394,305	3,539,070	26,625,624	26,624,887	38,873,410	24,761,830
East North Central	IL	5,359,416	3,463,847	1,895,569	13,019,426	13,018,986	19,008,362	12,108,066
	IN	2,885,342	2,215,331	670,011	7,079,353	7,079,114	10,335,855	6,583,798
	MI	4,595,274	3,536,356	1,058,918	11,276,401	11,276,020	16,463,546	10,487,053
	OH	5,201,701	3,708,575	1,403,126	12,723,627	12,723,197	18,576,496	11,832,973
West North Central	WI	2,695,303	1,905,393	789,910	6,580,276	6,580,054	9,607,202	6,119,656
	IA	1,397,739	1,087,659	309,880	3,432,372	3,432,268	5,011,262	3,192,105
	KS	1,273,276	986,121	287,655	3,126,909	3,126,815	4,585,287	2,908,025
	MN	2,437,726	1,812,073	625,653	5,969,184	5,969,004	8,715,009	5,551,341
	MO	2,792,445	2,060,417	732,028	6,834,707	6,834,500	9,978,672	6,358,277
	ND	374,591	233,619	140,972	908,283	908,256	1,326,093	844,703
	NE	837,540	641,008	196,532	2,054,544	2,054,482	2,999,634	1,910,726
Mountain	SD	392,650	277,941	114,709	958,683	958,654	1,399,677	891,575
	AZ	2,999,185	2,085,747	913,438	7,315,275	7,315,087	10,680,301	6,803,206
	CO	2,385,495	1,671,624	713,871	5,820,963	5,820,814	8,498,606	5,413,496
	ID	721,818	559,580	162,238	1,772,097	1,772,052	2,587,262	1,648,051
	MT	510,408	375,062	135,346	1,248,951	1,248,919	1,823,466	1,161,524
	NM	937,976	629,008	308,968	2,283,146	2,283,087	3,333,394	2,123,326
	NV	1,249,733	806,457	443,276	3,035,677	3,035,600	4,432,089	2,823,180
	UT	1,084,685	608,706	275,979	2,656,517	2,656,448	3,878,514	2,470,561
	WY	276,733	196,004	80,729	675,687	675,670	986,503	628,389
Pacific	AK	316,968	223,887	93,081	773,804	773,776	1,129,754	719,638
	CA	14,177,270	9,210,270	4,967,000	34,449,775	34,448,513	50,296,672	32,038,291
	HI	542,955	336,324	206,631	1,316,061	1,316,012	1,921,449	1,223,937
	OR	1,768,582	1,211,751	556,831	4,310,089	4,309,931	6,292,730	4,008,383
WA	3,103,263	2,084,655	1,018,608	7,554,436	7,554,160	11,029,476	7,025,625	

Source: U.S. Census Bureau + GMP Research (2011-2012)

Estimated replacement cycles for tank-type toilets, bathroom sink faucets and showerheads



Source: NAHB's Bank of America Study of Life Expectancy of Home Components, InterNACHI's Market Penetration Study for Toilets and Faucets, and GMP Research interviews with leading plumbing manufacturers of toilets, faucets and showerheads; Resnik & Benjamin; GMP Research interviews with leading plumbing manufacturers.

To determine the average replacement cycle of the examined plumbing fixtures and fittings, we spoke with the manufacturers of the products and reviewed product replacement studies completed by the National Association of Home Builders (NAHB) and the International Association of Certified Home Inspectors (InterNACHI):

- A residential tank-type toilet has an average life expectancy of 30 years
- Bathroom sink faucets have an average life expectancy of 15 years
- Showerheads have an average life expectancy of 12 years

By 2018, the homeowner of a house built in 1939 will have experienced two replacement cycles for the toilets based on the life expectancy of the product (1st replacement in 1969; 2nd replacement in 1999).

The same homeowner would have experienced five replacement cycles for the bathroom sink faucets (1954, 1969, 1984, 1999, and 2014).

The homeowner would have experienced six replacement cycles for the showerheads (1951, 1963, 1975, 1987, 1999, and 2011).

Note: Several of the utilities offering rebates for water conserving toilets refer to a 25 year replacement cycle for residential tank-type toilets. In the 2015 market penetration study, based on input from the leading manufacturers, we used a 30 year replacement cycle for residential tank-type toilets. For consistency purposes, and to better evaluate how the market has evolved, we have chosen to use a 30-year replacement cycle for tank-type toilets. If a 25 year replacement cycle were used, this would marginally increase the market penetration of WaterSense products.

Determining the market penetration of WaterSense products

According to the EPA WaterSense website, WaterSense-labeled tank-type residential toilets and bathroom sink faucets were introduced to the market in 2007. WaterSense-labeled showerheads were introduced in 2010.

Tank-type residential toilets



Toilets are by far the main source of water use in the home, accounting for nearly 30 percent of an average home's indoor water consumption.

Recent advancements have allowed toilets to use 1.28 gallons per flush or less while still providing equal or superior performance. This is 20 percent less water than the current federal standard of 1.6 gallons per flush. The WaterSense label is used on toilets that are independently certified to meet rigorous criteria for both performance and efficiency. Only water-saving toilets that complete the certification process can earn the WaterSense label.

GMP Research estimates there are currently 334.577 million residential toilets installed in the 137.407 million homes in the United States, assuming there is one toilet installed in every residential bathroom.

During the period of 2007-2018, a total of 118.126 million toilets were sold, or roughly 10.1 million toilets per year. These toilets are sold into the new residential construction market, hospitality (hotel/motel) market, and to homeowners who are replacing older toilets in their homes.

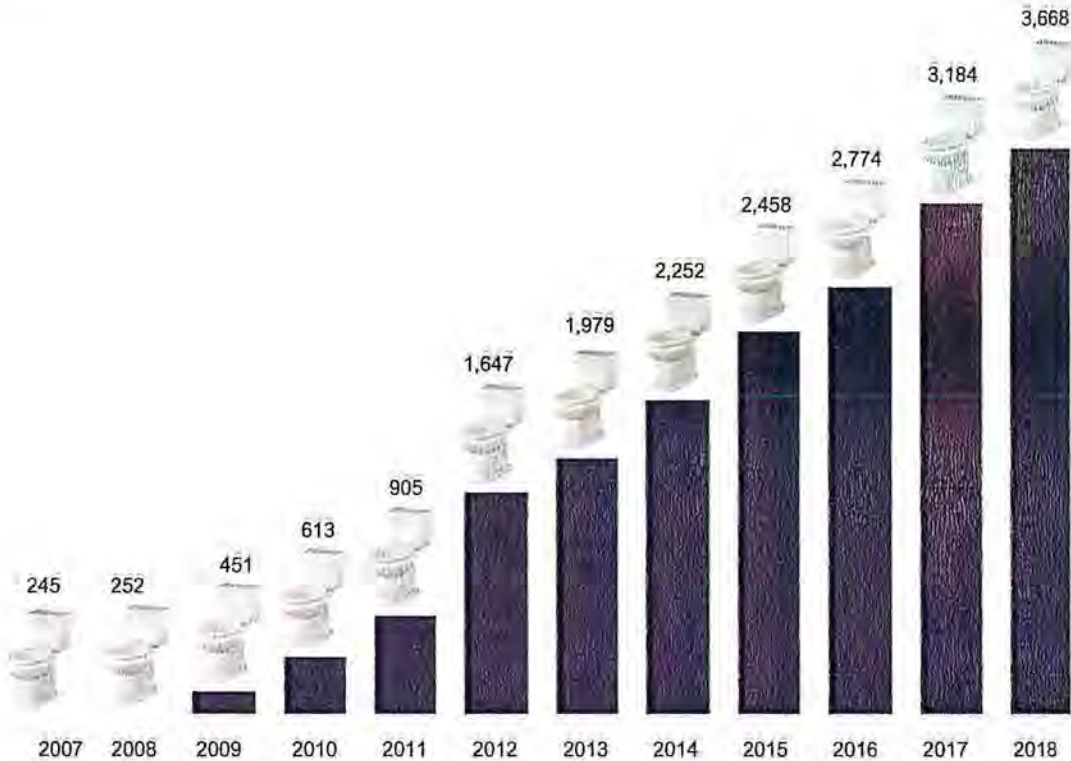
Toilets used in guest rooms of hotels are considered residential toilets and are included in these calculations. Toilets used in public restrooms are considered commercial toilets and are not included in these market estimates.

Availability of WaterSense-certified toilets

Based on information from the U.S. Environmental Protection Agency, from John Koeller & Company, from Gauley Associates, and from the manufacturers of residential toilets, we see the following availability of certified WaterSense toilets since inception of the WaterSense program.

The leading suppliers of residential tank-type toilets indicated that in 2007 roughly 25% of the toilets for sale were WaterSense-certified. At the end of 2018, roughly 75% of the tank-type toilets offered for sale were WaterSense-certified (76.8%). A list of the WaterSense-certified tank-type toilets can be found at <https://www.epa.gov/watersense/product-search>.

Number of certified WaterSense toilet models available for purchase



Source: <https://www.epa.gov/watersense/accomplishments-and-history>

Assumptions to determine the market penetration of WaterSense-certified tank-type toilets

- There is one toilet installed per residential bathroom
- Residential tank-type toilets are replaced every 30 years
- All toilets installed prior to 1992 used 3.5 gallons or more per flush. Toilets installed from 1992 to 2007 used 1.6 gallons per flush. By January 1, 1994, all replacement residential toilets installed needed to comply with the energy Policy Act of 1992. By January 1, 1997, all newly installed commercial toilets needed to comply with the Energy Policy Act.
- WaterSense-certified toilets were introduced to the marketplace in 2007. In 2007, 25% of the toilets offered for sale were WaterSense-certified or met the WaterSense specification. In 2018, 76.8% of the toilets offered for sale were WaterSense-certified or met the WaterSense specification.
- Municipalities/states requiring toilets of 1.28 gpf or less are listed below:

State/County/Municipality	Effective date	Maximum allowed flushing performance in gallons per flush	Applies to new construction only	Applies to new construction and replacement
Miami-Dade County, FL	1/1/2009	1.28 gpf	☑	
State of Georgia	7/1/2012	1.28 gpf		☑
Broward County, FL	6/1/2012	1.28 gpf	☑	
New York City, NY	7/1/2012	1.28 gpf		☑
State of Texas	1/1/2014	1.28 gpf		☑
Greater Chicago, IL	11/18/2014	1.28 gpf	☑	
Washington, DC	3/28/2014	1.28 gpf	☑	
State of California	1/1/2014	1.28 gpf		☑
State of Colorado	9/1/2016	1.28 gpf		☑
Scottsdale, AZ	1/1/2017	1.28 gpf	☑	
State of Oregon	10/1/2017	1.28 gpf	☑	
State of New York – except NYC	10/31/2017	1.3 gpf	☑	

Source: EPA's Summary of Current U.S. Plumbing Provisions

WaterSense-certified tank-type toilet market penetration

According to our research, there are 334.577 million residential toilets installed in the United States. During 2007-2018, a total of 118.126 million tank-type toilets were sold and installed in homes throughout the United States. Based on our research, 56.212 million WaterSense toilets or those which met the WaterSense specification of not flushing more than 1.28 gallons per flush were sold. This represents 16.8% of all residential toilet installations.

Maximum flushing performance	Million installed residential tank-type toilets	% of total
1.28 gpf or less 	56.212	16.8%
1.6 gpf	216.137	64.6%
3.5 gpf	52.893	15.8%
5.0 gpf or more	9.335	2.8%
Million installed residential tank-type toilets	334.577	100.0%

Source: U.S. Census + GMP Research field interviews + PMI summary of current U.S. plumbing provisions



U.S. Census Region	State	Total number of toilets installed in all homes	Total WaterSense toilets installed	WaterSense market penetration	1.6 gpf in % of total	3.5 gpf or more in % of total
USA	USA	334,773,222	56,212,198	16.8%	64.6%	18.6%
New England	CT	3,700,911	573,388	15.5%	68.0%	16.5%
	MA	7,049,856	920,293	13.1%	75.3%	11.6%
	ME	1,824,379	240,678	13.2%	69.0%	17.8%
	NH	1,553,166	254,652	16.4%	59.8%	23.8%
	RI	1,143,837	147,719	12.9%	68.5%	18.6%
	VT	819,797	107,369	13.1%	69.0%	17.9%
Middle Atlantic	NJ	8,800,251	1,430,861	16.3%	64.5%	19.2%
	NY ¹	20,190,580	3,412,900	16.9%	64.5%	18.6%
	PA	13,922,069	1,858,144	13.3%	68.5%	18.2%
South Atlantic	DC ²	754,981	110,906	14.7%	65.6%	19.7%
	DE	1,061,712	179,839	16.9%	66.1%	17.0%
	FL ³	22,879,484	4,067,787	17.8%	63.5%	18.7%
	GA ⁴	10,471,896	2,565,135	24.5%	57.0%	18.5%
	MD	5,984,197	944,112	15.8%	68.0%	16.2%
	NC	11,312,937	1,793,494	15.9%	67.0%	17.1%
	SC	5,602,712	909,938	16.2%	68.7%	15.1%
	VA	8,595,719	1,378,147	16.0%	66.8%	17.2%
	WV	2,182,412	286,478	13.1%	67.0%	19.9%
East South Central	AL	5,516,352	813,836	14.8%	64.8%	20.4%
	KY	4,837,302	663,756	13.7%	66.2%	20.1%
	MS	3,235,295	444,824	13.7%	66.7%	19.6%
	TN	7,218,671	1,120,737	15.5%	64.0%	20.5%
	AR	3,337,407	477,601	14.3%	67.0%	18.7%
West South Central	LA	5,036,969	764,690	15.2%	64.7%	20.1%
	OK	4,232,638	636,309	15.0%	64.4%	20.6%
	TX ⁵	26,522,714	6,840,050	25.8%	55.0%	19.2%
	IL ⁶	13,038,956	1,702,057	13.1%	68.0%	18.9%
East North Central	IN	7,049,271	907,545	12.9%	67.6%	19.5%
	MI	11,232,329	1,565,477	13.9%	66.5%	19.6%
	OH	12,672,646	1,650,419	13.0%	68.4%	18.6%
	WI	6,653,833	781,988	11.8%	69.0%	19.2%
	IA	3,407,892	406,973	11.9%	68.5%	19.6%
	KS	3,103,341	450,515	14.5%	66.0%	19.5%
West North Central	MN	5,947,901	855,702	14.4%	66.0%	19.6%
	MO	6,810,447	946,240	13.9%	66.2%	19.9%
	ND	904,764	154,395	17.1%	62.0%	20.9%
	NE	2,043,721	260,763	12.8%	68.1%	19.1%
	SD	956,147	135,268	14.1%	66.1%	19.8%
	AZ ⁷	7,335,651	1,222,328	16.7%	64.1%	19.2%
	CO ⁸	5,812,107	1,116,440	19.2%	62.0%	18.8%
	ID	1,772,191	261,527	14.8%	65.6%	19.6%
Mountain	MT	1,240,092	183,019	14.8%	65.0%	20.2%
	NV	3,043,633	371,557	12.2%	68.2%	19.6%
	NM	2,299,329	448,158	19.5%	57.1%	23.4%
	UT	2,653,861	438,544	16.5%	63.4%	20.1%
	WY	677,699	100,866	14.9%	61.5%	23.6%
	AK	765,908	127,109	16.6%	62.5%	20.9%
	CA ⁹	34,403,742	7,212,207	21.0%	62.1%	16.9%
Pacific	HI	1,311,809	192,952	14.7%	66.1%	19.2%
	OR ¹⁰	4,303,036	612,085	14.2%	66.8%	19.0%
	WA	7,544,672	1,164,421	15.4%	64.5%	20.1%

Notes	State / county	Effective	Construction application
1	New York New York City	10/31/2017 7/1/2012	New construction All sales
2	Washington DC	3/28/2014	New construction
3	Miami-Dade, FL Broward County, FL	1/1/2009 8/1/2012	New construction New construction
4	Georgia	7/1/2012	All sales
5	Texas	1/1/2014	All sales

Notes	State/county	Effective	Construction application
6	Chicago, IL	11/18/2014	New construction
7	Scottsdale, AZ	1/1/2017	New construction
8	Colorado	9/1/2016	All sales
9	California	1/1/2014	All sales
10	Oregon	10/1/2017	New construction

Observations concerning WaterSense tank-type toilet market penetration

WaterSense was introduced to the marketplace in June 2006. The first series of products were introduced in 2007.

By August 2006, the construction boom had noticeably cooled in all regions of the United States. At the end of 2006, more than 1.25 million homes were in foreclosure. One in 92 homes in the United States were in some stage of foreclosure.

RealtyTrac.com – a wholly owned subsidiary of Attom Data Solutions LLC - is the leading authority on reporting foreclosure market information in the United States. In February 2007, more than 25 sub-prime lenders declared bankruptcy or put themselves up for sale. By August 2007, many mortgage lenders stopped offering home equity loans. By the end of 2007, a total of 2.2 million foreclosures were filed on 1.3 million properties, with more than 1% of all households in the U.S. in some stage of foreclosure.

The National Association of Realtors announced 2007 had the largest drop in existing home sales over the last 25 years. According to senior research economists, the collapse of the subprime mortgage market set in motion a chain reaction of economic and financial adversity and created depression-like conditions in the housing market.

Dropping valuations of mortgage backed securities caused by the skyrocketing default and foreclosure rates forced margin calls by the largest Wall Street banks. Rumors of major bank failings caused worldwide fear of a total financial collapse.

The Great Recession began in December 2007 and lasted until June 2009, making it the longest recession since World War II. According to senior economic and policy advisors of the Federal Reserve Bank, real gross domestic product (GDP) fell 4.3 percent from its peak in Q4 2007 to its trough in Q2 2009. The U.S. Bureau of Labor Statistics reported the unemployment rate, which was 5 percent in December 2007, rose to 9.5 percent in June 2009, and peaked at 10 percent in October 2009.

According to data from the U.S. Census Bureau, home prices fell approximately 30 percent, on average, from their mid-2006 peak to mid-2009. The Federal Reserve Bank indicated the S&P 500 index fell 57 percent from its October 2007 peak to its trough in March 2009. The net worth of U.S. households and nonprofit organizations fell from a peak of approximately \$69 trillion in 2007 to a trough of \$55 trillion in 2009.

Because of the financial turmoil impacting everything, homeowners were putting off the purchases of new homes and delaying any type of remodeling project, unless it was essential. In addition, consumers were cautious about the new high efficiency toilets, and did not believe these products would perform as proclaimed by the manufacturers.

As a result of these extraneous effects, our research indicates WaterSense products gained little initial traction in the marketplace. By the end of 2014, our analysis indicated 7% of the installed tank-type toilets were WaterSense-certified or complied with the WaterSense specification.

At that time, we wrote WaterSense market penetration will increase over time, as new construction continues to expand, and more homeowners were again investing in remodeling activities.

At the end of 2014, the manufacturers of tank-type toilets indicated 30% of toilets offered for sale were WaterSense-certified or met the WaterSense specification. By the end of 2018 they indicated 76.8% of the toilets offered for sale were WaterSense-certified.

Over the last 10 years, both new residential construction and residential remodeling expenditures have been expanding year over year. By 2018 remodeling accounted for 80% of all tank-type toilets while 20% were sold into new residential and light commercial construction.

Based on the proven performance of the new 1.28 gpf toilets, builders and consumers have embraced the technology. With over 3,668 models of WaterSense-certified toilets to choose from, the market penetration of these toilets was inevitably going to increase.

WaterSense-certified tank-type toilets will continue to gain market share over an extended period. With an average replacement cycle of 30 years, we can safely project WaterSense tank-type toilets will have a significant market share within the next 30 years.

Focus needs to be on motivating the homeowners to swap out their existing toilets. Consumers are reluctant to replace toilets. They perceive it as a cumbersome and messy task, that requires the services of a plumber. They are only interested in replacing a toilet if it is broken or is not working properly or because they do not like the style of the toilet.

Bathroom sink faucets



WaterSense-labeled bathroom sink faucets and accessories that use a maximum of 1.5 gallons per minute can reduce a sink's water flow by 30 percent or more from the standard flow of 2.2 gallons per minute without sacrificing performance. We could save billions of gallons nationwide each year by retrofitting bathroom sink faucets with models that have earned the WaterSense label.

All products bearing the WaterSense label complete an independent certification process to ensure they meet EPA criteria. Bathroom sink faucets and faucet accessories—products that can be attached easily to existing bathroom sink faucets to save water—that obtain the WaterSense label have demonstrated both water efficiency and the ability to provide ample flow.

According to the WaterSense website, replacing old, inefficient bathroom sink faucets and aerators with WaterSense-labeled models can save the average family 700 gallons of water per year, equal to the amount of water needed to take 40 showers. As these water savings reduce demands on water heaters, households will also save enough energy to run a hairdryer 10 minutes a day for a year.

GMP Research estimates there are 488.508 million residential bathroom sink faucets installed in the United States, assuming there are 1.46 bathroom sink faucets per residential bathroom. In addition to the existing stock, approximately 22 million new bathroom sink faucets are sold every year into the new residential and light commercial construction market and to homeowners who are replacing existing older bathroom sink faucets.

Bathroom sink faucets sold into the guest rooms of hotels are considered residential faucets and are included in these calculations. Faucets used in public restrooms are considered commercial faucets and are excluded from this exercise.

All bathroom sink faucets installed prior to 1992 had flow rates in excess of 2.2 gallons per minute (gpm). All bathroom sink faucets installed from 1992-2006 had flow rates of 2.2 gallons per minute, as stipulated by the Energy Policy Act of 1992.

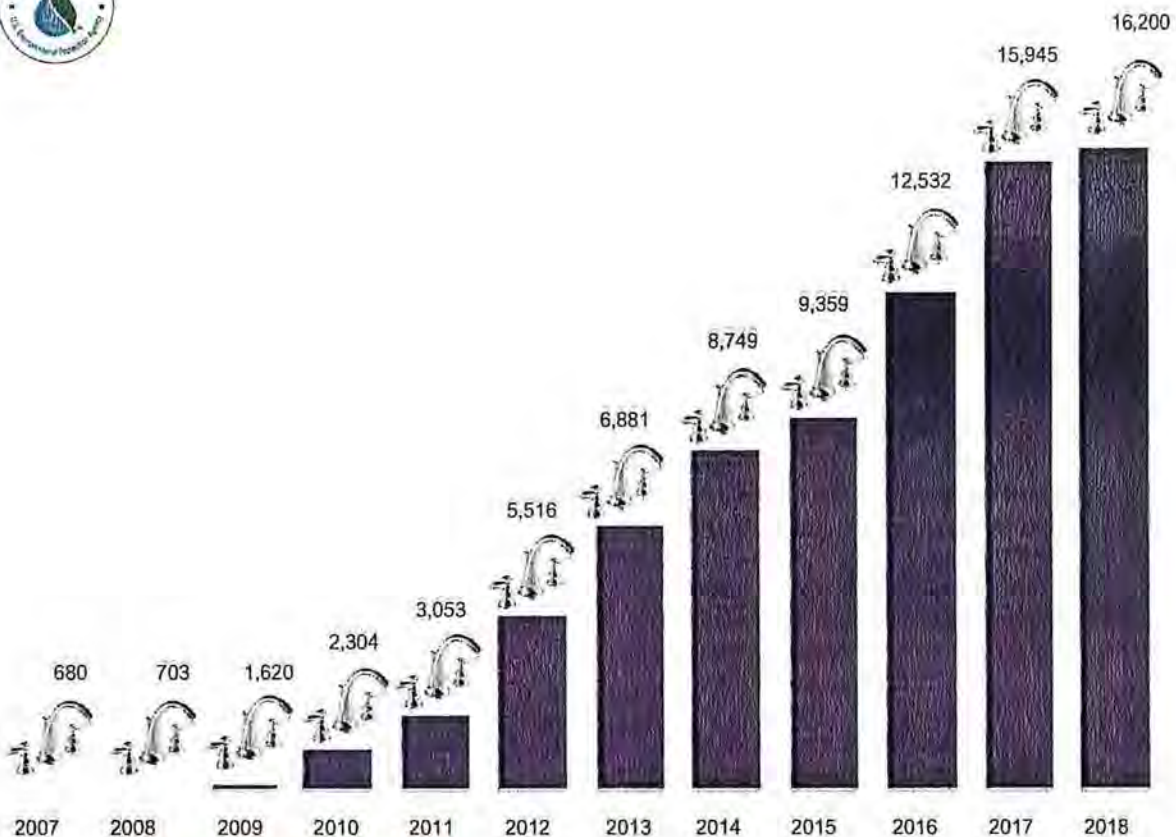
WaterSense bathroom sink faucets were introduced to the marketplace in 2007. From 2007-2018, a total of 242.5 million bathroom sink faucets were sold in the United States. Of these 242.5 million bathroom sink faucets, 195.672 million were WaterSense-certified or met the WaterSense specification.

Availability of WaterSense-certified bathroom sink faucets

Based on information from the U.S. Environmental Protection Agency, and from the manufacturers of bathroom sink faucets, the following illustrates the availability of certified WaterSense bathroom sink faucets since inception of the WaterSense program.

In 2015, the manufacturers indicated 98% of the bathroom sink faucets were either WaterSense-certified or met the requirements of the WaterSense specification. At the end of 2018, according to input from the manufacturers, 99.0% of the bathroom sink faucets for sale were either WaterSense-certified or met the requirements of the WaterSense program. **A list of WaterSense-certified bathroom sink faucets can be found at <https://www.epa.gov/watersense/product-search>.**

Number of certified WaterSense bathroom sink faucet models available for purchase



Source: <https://www.epa.gov/watersense/accomplishments-and-history>

Assumptions to determine the market penetration of WaterSense bathroom sink faucets


- There are 1.46 bathroom sink faucets installed per residential bathroom
- Residential bathroom sink faucets are replaced every 15 years
- All bathroom sink faucets installed prior to 1992 had flow rates in excess of 2.2 gallons per minute (gpm). All bathroom sink faucets installed from 1992-2006 had flow rates of 2.2 gallons per minute, as stipulated by the Energy Policy Act of 1992
- WaterSense-certified bathroom sink faucets were introduced to the marketplace in 2007
- In 2007, 25% of the bathroom sink faucets offered for sale were WaterSense-certified or met the requirements of the WaterSense specification. In 2018, 99% of the bathroom sink faucets offered for sale were WaterSense-certified or met the requirements of the WaterSense specification
- Municipalities/states requiring faucets with flow rates of 1.5 gpm or less listed below:

State/County/Municipality	Effective date	Maximum allowed flow performance in gallons per minute	Applies to new construction only	Applies to new construction and replacement
Miami-Dade County, FL	1/1/2009	1.5 gpm	•	
State of Georgia	7/1/2012	1.5 gpm		•
Broward County, FL	6/1/2012	1.5 gpm	•	
New York City, NY	7/1/2012	1.5 gpm		•
Greater Chicago, IL	11/18/2014	1.5 gpm	•	
Washington, DC	3/28/2014	1.5 gpm	•	
State of California	1/1/2016	Product manufactured on or after 9/1/2015 to 7/1/2016 was 1.5 gpm and after 7/1/2016 is 1.2 gpm		•
State of Colorado	9/1/2016	1.5 gpm		•
Scottsdale, AZ	1/1/2017	1.5 gpm	•	
State of New York – except NYC	10/31/2017	1.5 gpm	•	

SOURCE: EPA's summary of current U.S. Plumbing Regulations

WaterSense-certified bathroom sink faucet market penetration

- According to our research, there are 488.508 million residential bathroom sink faucets installed in the United States
- During 2007-2018, a total of 242.5 million residential bathroom sink faucets were sold and installed in homes throughout the United States
- Of the 242.5 million bathroom sink faucets, 195.672 million were WaterSense-certified or met the WaterSense program:

Maximum flow performance in gallons per minute	Million installed bathroom sink faucets	% of total
1.5 gpm or less 	195.672	40.1%
2.2 gpm or more	292.836	59.9%
Million installed bathroom sink faucets	488.508	100.0%

Source: U.S. Census + GMP Research field interviews + PMI summary of current U.S. plumbing installations



Census Region	State	Total number of bathroom sink faucets installed	Total WaterSense bathroom sink faucets installed	WaterSense market penetration	2.2 gallons per minute or more
USA	USA	488,508	195,672	40.1%	59.9%
New England	CT	5,383	1,189	22.09%	77.9%
	MA	10,205	2,770	27.14%	72.9%
	ME	2,652	0,996	37.55%	62.4%
	NH	2,261	0,848	37.51%	62.5%
	RI	1,652	0,376	22.76%	77.2%
	VT	1,194	0,298	24.96%	75.0%
Middle Atlantic	NJ	12,810	3,746	29.24%	70.8%
	NY ¹	29,108	7,772	26.70%	73.3%
	PA	20,378	5,397	26.48%	73.5%
South Atlantic	DC ²	1,091	0,285	26.11%	73.9%
	DE	1,547	0,679	43.88%	56.1%
	FL ³	33,378	17,846	53.47%	46.5%
	GA ⁴	15,262	8,214	53.82%	46.2%
	MD	8,744	2,824	32.30%	67.7%
	NC	16,463	7,759	47.13%	52.9%
	SC	8,110	3,920	48.34%	51.7%
	VA	12,541	5,133	40.93%	59.1%
	WV	3,185	0,846	26.56%	73.4%
East South Central	AL	8,042	3,151	39.18%	60.8%
	KY	7,067	2,395	33.89%	66.1%
	MS	4,714	1,811	38.42%	61.6%
	TN	10,552	4,005	37.95%	62.0%
West South Central	AR	4,886	1,969	40.30%	59.7%
	LA	7,332	2,840	38.74%	61.3%
	OK	6,201	2,247	36.23%	63.8%
	TX	38,873	18,840	48.47%	51.5%
East North Central	IL ⁵	19,008	5,690	29.93%	70.1%
	IN	10,336	3,438	33.26%	66.7%
	MI	16,464	4,496	27.31%	72.7%
	OH	18,576	5,164	27.80%	72.2%
	WI	9,607	3,469	36.11%	63.9%
West North Central	IA	5,011	1,628	32.49%	67.5%
	KS	4,565	1,420	31.10%	68.9%
	MN	8,715	3,268	37.50%	62.5%
	MO	9,979	3,579	35.87%	64.1%
	ND	1,326	0,566	42.68%	57.3%
	NE	3,000	1,014	33.80%	66.2%
	SD	1,400	0,634	45.30%	54.7%
Mountain	AZ ⁶	10,680	6,144	57.53%	42.5%
	CO ⁷	8,499	4,666	54.90%	45.1%
	ID	2,587	0,454	17.56%	82.4%
	MT	1,823	0,845	46.35%	53.6%
	NM	3,333	0,596	13.45%	86.6%
	NV	4,432	1,500	44.99%	55.0%
Pacific	UT	3,879	1,707	44.00%	56.0%
	WY	0,987	0,394	39.94%	60.1%
	AK	1,130	0,368	32.57%	67.4%
	CA ⁸	50,297	26,195	52.08%	47.9%
	HI	1,921	0,789	41.06%	58.9%
	OR	6,293	2,673	42.48%	57.5%
	WA	11,029	6,821	61.84%	38.2%

Notes	State / county	Effective	Construction application
1	New York New York City	10/31/2017 7/1/2012	New construction All sales
2	Washington DC	3/28/2014	New construction
3	Miami-Dade, FL Broward County, FL	1/1/2019 6/1/2012	New construction New construction
4	Georgia	7/1/2012	All sales

Notes	State/county	Effective	Construction application
5	Chicago, IL	11/18/2014	New construction
6	Scottsdale, AZ	1/1/2017	New construction
7	Colorado	9/1/2016	All sales
8	California	1/1/2016	All sales

Observations concerning WaterSense bathroom sink faucet market penetration

Bathroom sink faucets are replaced much more often than tank-type toilets. Consumers do not perceive a bathroom sink faucet replacement to be cumbersome or messy. While they may engage a plumber to do the replacement, more often they will either do it themselves (DIY) or hire a handyman to swap out the faucet.

Swapping out an aerator to achieve a higher water efficiency is a very easy and affordable task. A quick search at www.homedepot.com revealed 98.5% of the aerators cost less than \$20, with 70% costing less than \$10.

Swapping out the existing aerator for a water efficient aerator is the most cost effective way to significantly boost the water savings of the bathroom sink faucet.

According to input from the manufacturers, by the end of 2018, almost all the faucets for sale are either WaterSense-certified or meet the WaterSense specification (99% of all bathroom sink faucets are either WaterSense or meet the WaterSense specification).

When a homeowner replaces an existing bathroom sink faucet, they will, with 99% certainty, be replacing it with a WaterSense-certified bathroom sink faucet, or one that meets the WaterSense specification.

When a builder installs bathroom sink faucets into new homes being built, with a 99% certainty, these products will be WaterSense-certified, or will meet the WaterSense specification.

During the last study conducted in May of 2015, we identified that 25.4% of the installed bathroom sink faucets were WaterSense-certified or met the WaterSense specification. At that time, manufacturers had indicated 98% of all bathroom sink faucets available for purchase were WaterSense-certified or met the WaterSense specification.

In the last WaterSense market penetration study, we stated the market penetration of the bathroom sink faucets would steadily increase due to the high availability of the products, new home construction demand and homeowners replacing their current bathroom sink faucets as they reached their typical end of life.

And that is exactly what we are seeing in this study.

The market penetration nationwide of WaterSense bathroom sink faucets grew from 25.4% to 40.1%. As the products are replaced every 15 years, we can safely state, within the next 15 years, WaterSense will enjoy a much higher overall market penetration than we are seeing today.

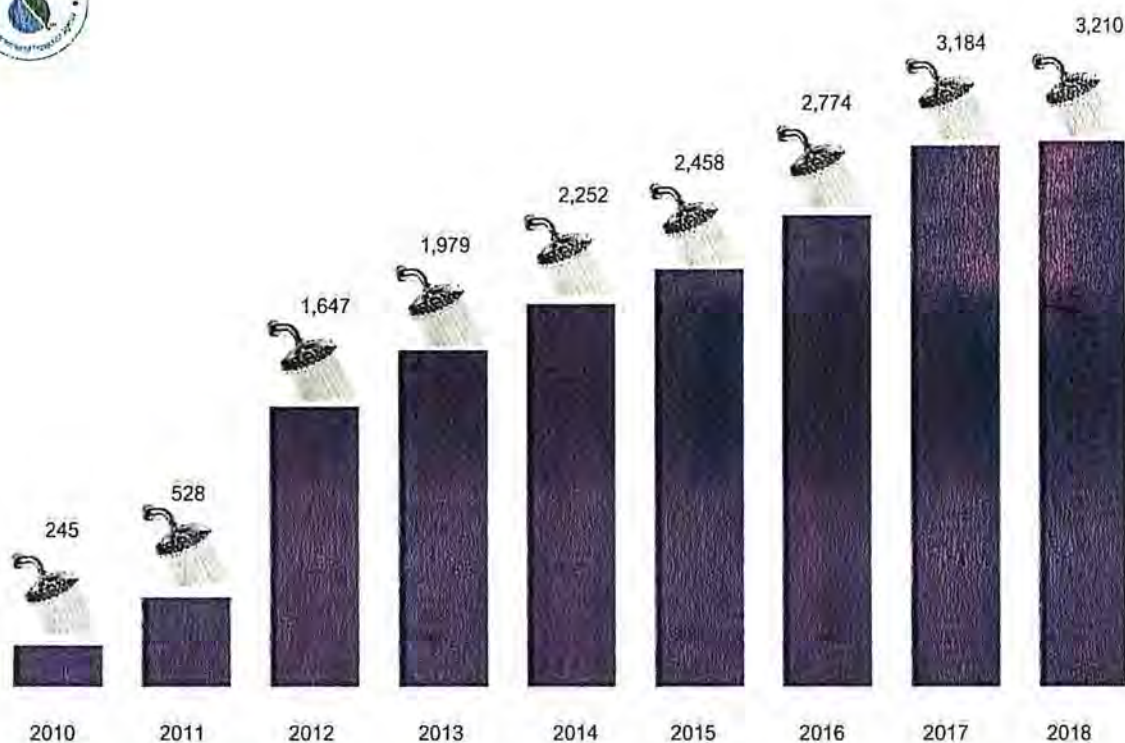
59.9% of the bathroom sink faucets are still using 2.2 gallons per minute or more. To increase the water efficiency, focus needs to be on getting the homeowner to replace the existing water guzzling faucets, or at a minimum to replace the current aerator with one that meets the WaterSense program.

Availability of WaterSense-certified showerheads

Based on information from the U.S. Environmental Protection Agency, and from the manufacturers of showerheads, we see the following availability of certified WaterSense showerheads since inception of the WaterSense program.

In 2015, the manufacturers indicated 60% of the showerheads were either WaterSense-certified or met the requirements of the WaterSense specification. At the end of 2018, according to input from the manufacturers, 67.5% of the showerheads were either WaterSense-certified or met the requirements of the WaterSense program. A list of WaterSense-certified showerheads can be found at <https://www.epa.gov/watersense/product-search>.

Number of certified WaterSense showerhead models available for purchase



Source: <https://www.epa.gov/watersense/ accomplishments-and-history>

Assumptions to determine the market penetration of WaterSense-certified showerheads


- There are 0.93 showerheads installed per residential bathroom
- Residential showerheads are replaced every 12 years
- All showerheads installed prior to 1992 had flow rates in excess of 2.5 gallons per minute (gpm). All showerheads installed from 1992-2006 had flow rates of 2.5 gallons per minute, as stipulated by the Energy Policy Act of 1992
- WaterSense-certified showerheads were introduced to the marketplace in 2010
- In 2010, 40% of the showerheads offered for sale were WaterSense-certified or met the requirements of the WaterSense specification. In 2018, 67.5% of the showerheads offered for sale were WaterSense-certified or met the requirements of the WaterSense specification.
- Municipalities/states requiring showerheads with flow rates of 2.0 gpm or less listed below:

State/County/Municipality	Effective date	Maximum allowed flow performance in gallons per minute	Applies to new construction only	Applies to new construction and replacement
Miami-Dade County, FL	1/1/2009	1.5 gpm or WS certified	†	
Broward County, FL	6/1/2012	2.0 gpm	†	
New York City, NY	7/1/2012	2.0 gpm		‡
Greater Chicago, IL	11/18/2014	2.0 gpm	†	
Washington, DC	3/28/2014	2.0 gpm	†	
State of California	1/1/2016	Product manufactured on or after 7/1/2016 to 7/1/2018 was 2.0 gpm and after 7/1/2018 is 1.8 gpm	†	
State of Colorado	9/1/2016	2.0 gpm		‡
Scottsdale, AZ	1/1/2017	2.0 gpm	†	
State of Oregon	10/1/2017	2.0 gpm	†	
State of New York – except NYC	10/31/2017	2.0 gpm	†	

Sources: PMI summary of current U.S. Plumbing Provisions

WaterSense-certified showerhead market penetration

- According to our research, there are 311.173 million residential showerheads installed in the USA
- During 2010-2018, a total of 141.136 million showerheads were sold, which were either WaterSense-certified or met the WaterSense specification

Maximum flow performance In gallons per minute	Million installed showerheads	% of total
2.0 gpm or less 	141.136	45.4%
2.5 gpm or more	170.037	54.6%
Million installed residential showerheads	311.173	100.0%

Source: U.S. Census + GMP Research field interviews + PADI summary of current U.S. plumbing provisions



Census Region	State	Total number of showerheads installed	Total WaterSense showerheads installed	WaterSense market penetration	2.5 gallons per minute or more	
USA	USA	311,173	141,136	45.36%	54.6%	
New England	CT	3,429	0,789	23.00%	77.0%	
	MA	6,500	1,940	29.85%	70.2%	
	ME	1,689	0,720	42.60%	57.4%	
	NH	1,440	0,615	42.70%	57.3%	
	RI	1,052	0,253	24.04%	76.0%	
	VT	0,760	0,209	27.50%	72.5%	
Middle Atlantic	NJ	8,160	2,709	33.20%	66.8%	
	NY ¹	18,541	5,618	30.30%	69.7%	
	PA	12,981	3,764	29.00%	71.0%	
South Atlantic	DC ²	0,695	0,207	29.80%	70.2%	
	DE	0,986	0,484	49.10%	50.9%	
	FL ³	21,261	12,884	60.60%	39.4%	
	GA	9,722	5,950	61.20%	38.8%	
	MD	5,570	1,981	35.56%	64.4%	
	NC	10,487	5,537	52.80%	47.2%	
	SC	5,166	2,746	53.15%	46.9%	
	VA	7,988	3,619	45.30%	54.7%	
	WV	2,029	0,590	29.10%	70.9%	
	East South Central	AL	5,122	2,228	43.50%	56.5%
KY		4,502	1,702	37.80%	62.2%	
MS		3,003	1,150	38.30%	61.7%	
TN		6,721	2,890	43.00%	57.0%	
West South Central	AR	3,112	1,217	39.10%	60.9%	
	LA	4,670	1,959	41.95%	58.1%	
	OK	3,950	1,572	39.80%	60.2%	
	TX	24,762	13,594	54.90%	45.1%	
East North Central	IL ⁴	12,108	4,105	33.90%	66.1%	
	IN	6,584	2,410	36.60%	63.4%	
	MI	10,487	3,157	30.10%	69.9%	
	OH	11,833	3,616	30.56%	69.4%	
	WI	6,120	2,469	40.35%	59.7%	
West North Central	IA	3,192	1,117	35.00%	65.0%	
	KS	2,908	1,006	34.60%	65.4%	
	MN	5,551	2,348	42.30%	57.7%	
	MO	6,356	2,492	39.20%	60.8%	
	ND	0,845	0,403	47.70%	52.3%	
	NE	1,911	0,710	37.15%	62.9%	
	SD	0,892	0,453	50.80%	49.2%	
	WY	0,628	0,280	44.60%	55.4%	
Mountain	AZ ⁵	6,803	4,436	65.20%	34.8%	
	CO ⁶	5,413	3,367	62.20%	37.8%	
	ID	1,648	1,023	62.10%	37.9%	
	MT	1,162	0,594	51.15%	48.9%	
	NM	2,823	1,390	49.25%	50.8%	
	NV	2,123	1,094	51.50%	48.5%	
	UT	2,471	1,233	49.90%	50.1%	
	WY	0,628	0,280	44.60%	55.4%	
	Pacific	AK	0,720	0,261	36.30%	63.7%
		CA ⁷	32,038	18,903	59.00%	41.0%
HI		1,224	0,551	45.05%	55.0%	
OR ⁸		4,008	1,936	48.30%	51.7%	
WA		7,026	4,855	69.10%	30.9%	

Notes	State / county	Effective	Construction application
1	New York New York City	10/31/2017 7/1/2012	New construction All sales
2	Washington DC	3/28/2014	New construction
3	Miami-Dade, FL Broward County, FL	1/1/2019 6/1/2012	New construction New construction
4	Chicago	11/18/2014	New construction

Notes	State/county	Effective	Construction application
5	Scottsdale, AZ	1/1/2017	New construction
6	Colorado	9/1/2016	All sales
7	California	1/1/2016	All sales
8	Oregon	10/1/2017	New construction

Observations concerning WaterSense showerhead market penetration

Showerheads are frequently replaced by the homeowner. This can be because of mineral deposit buildup causing clogs or reducing water pressure. It can be because the showerhead has become defective and is either rusty or is leaking. It can also be the homeowner wishes to replace an older showerhead because it does not match newer bathroom décor – especially after a remodel. And it can be because homeowners realize their showerhead is inefficient and replacing it can lower their water utility costs.

As WaterSense showerheads were first introduced in 2010 – 3 years after WaterSense tank-type toilets and WaterSense bathroom sink faucets - one would assume the market penetration rate for showerheads would be lower. But because the showerhead is replaced more often than both the bathroom sink faucet and the tank-type toilet, this works as an accelerating factor. As more products are swapped out, the probability increases that it is replaced with a WaterSense-certified product.

In 2015, we reported the market penetration for WaterSense showerheads stood at 28.7%. At the end of 2018, our research indicates 45.4% of the installed showerheads were WaterSense-certified or met the WaterSense specification.

We can safely assume, by 2030, most of the showerheads will be WaterSense-certified or will be products that meet the WaterSense specification.



Flushing urinals and flushometer-valve toilets

Flushing urinals and flushometer-valve toilets are installed in non-residential commercial buildings. The non-residential commercial market is not a homogeneous market. It is a compilation of multiple industries, each with their own market dynamics.

Non-residential commercial construction markets

Non-residential commercial market	Examples of buildings	2018 Market Size in Million U.S. \$
Lodging	Hotels, motels, resorts, and casinos	\$32,744
Office buildings	Single + multi-level office buildings, high rises and skyscrapers	\$74,096
Commercial	Retail and wholesale operations	\$89,225
Health care	Hospitals, clinics, physician offices, dentist offices, medical laboratories, nursing homes	\$42,186
Education	Daycares, kindergartens, primary/middle school, high schools, junior colleges, universities, vocational schools	\$96,780
Religious	Churches and other places of worship	\$3,083
Public safety	Police departments, fire stations, Coast Guard	\$9,139
Amusement + recreations	Cinemas, museums, theatres, amusement parks	\$26,863
Transportation	Airports and other types of passenger terminals	\$52,495
Communication	Telephone, internet, cell towers, data centers	\$25,390
Manufacturing	Places of production	\$68,091

Source: U.S. Census

Existing non-residential commercial inventory in the United States

Based on U.S. Census data coupled with our own research, we believe there are 11.8 million commercial facilities in the United States.

The following table gives an overview of the non-residential construction expenditures in million U.S. \$ from 2013-2018 with forecasts to 2022.

Non-residential buildings	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Lodging	13,484	16,783	21,908	26,969	28,672	32,744	31,845	30,236	30,663	31,539
Office buildings	37,979	46,582	55,521	67,616	66,850	74,096	78,307	75,606	73,980	75,867
Commercial	53,159	62,841	65,899	78,151	87,733	89,225	93,163	90,782	89,552	92,231
Health care	40,689	38,647	39,147	40,157	41,916	42,186	43,270	43,989	45,060	46,740
Education	79,060	79,681	84,771	90,348	91,213	96,780	102,640	106,057	110,801	114,994
Religious	3,590	3,386	3,577	3,721	3,366	3,083	2,975	2,837	2,853	2,931
Public safety	9,506	9,437	8,484	8,023	8,290	9,139	9,850	10,288	10,553	11,066
Amusement + recreation	15,207	16,773	20,258	23,155	24,851	26,863	27,980	27,229	25,641	26,780
Transportation	39,459	42,043	44,843	43,274	45,173	52,495	56,754	61,113	66,182	70,573
Communication	17,783	17,298	21,696	22,178	24,831	25,390	26,415	26,965	27,719	28,827
Manufacturing	50,548	58,648	79,930	76,380	66,448	68,091	72,091	70,977	68,461	70,564
Total	360,464	392,074	446,034	479,972	489,343	520,093	545,291	545,979	551,463	572,130

Source: Fitch Research Group, Inc. © 2018

The U.S. non-residential commercial building floor space is estimated at 128.5 billion square feet and represents approximately 20% of the 642.5 billion global commercial floor space. In the last three years, roughly 1 billion square feet of new inventory was delivered. By 2025, we believe the U.S. commercial building floor space will increase by another 166.4 billion square feet, while the global commercial floor space will experience an increase of an additional 409.02 billion square feet.

The following map gives an overview where the commercial non-residential floor space is concentrated. States highlighted in yellow are home to at least 1% of the national commercial non-residential floor space.



Source: U.S. Bureau of Economic Analysis

Determining the number of installed flushing urinals and flushometer-valve toilets

- The number of restrooms in a workplace is a requirement that is set forth by OSHA. For 15 employees, 1 restroom room is needed. For 150 employees, six restrooms are needed. If there are more than 150 employees, then there must be one restroom for every 40 people.
- U.S. Census provides accurate figures concerning the number of commercial establishments, while the Bureau of Labor Statistics provides the total number of people employed in the various fields.
- The Commercial Buildings Energy Consumption Survey provides insight to the types of buildings, the square footage, and the number of floors.
- The Federal Aviation Authority has a detailed website covering all the public and private airports in the United States.
- The CIA World Factbook/USA provides additional information on non-residential commercial facilities.
- Using all these information sources, we put together the following table, which gives an overview of the commercial non-residential properties in the United States and an estimate of the number of commercial toilets and flushing urinals installed:

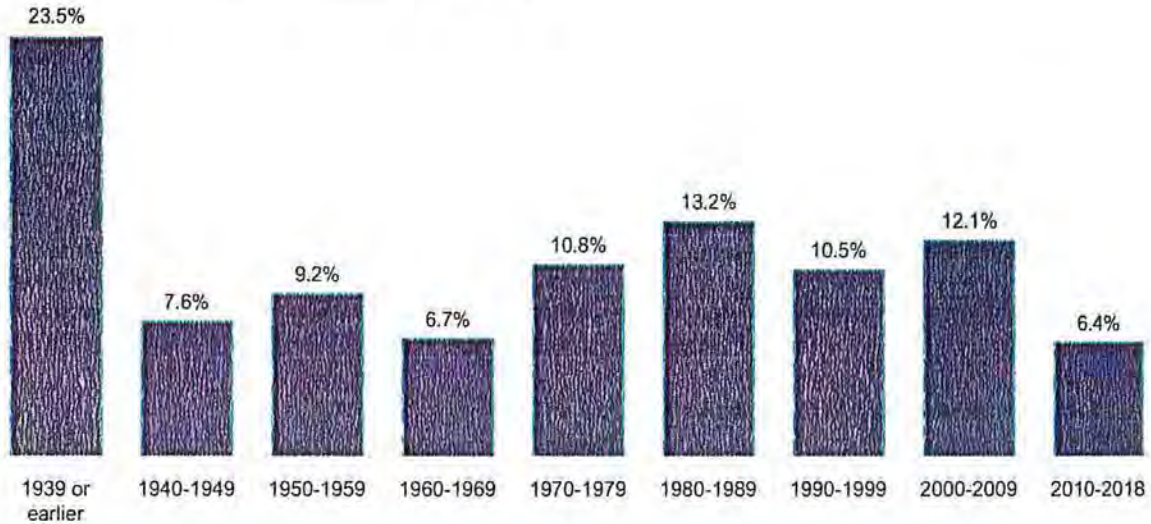
Non-residential commercial facilities and the installed base of flushing urinals and commercial toilets

Non-residential commercial facilities	Number of facilities	Number of Restrooms	Number of women's bathrooms	Number of men's bathroom	Toilets per women's bathroom	Toilets per men's bathroom	Flushing urinals per men's bathroom	Toilets installed in women's bathroom	Toilets installed in men's bathroom	Flushing urinals installed in men's bathroom
International airport	221	78	47	31	8	6	12	83,096	41,106	82,212
Major airport hub	1994	38	21	17	7	6	10	293,118	203,388	338,980
Regional airport hub	2661	6	4	3	6	5	10	57,478	39,915	79,830
Small public airport	1080	4	2	2	5	3	6	10,900	6,540	13,080
Sport stadiums	2617	17	10	7	9	6	12	235,530	109,914	219,828
Office buildings	6,100,000	5	3	2	3	2	3	54,900,000	24,400,000	36,600,000
Shopping centers	115857	14	8	6	5	4	8	4,634,280	2,780,568	5,561,136
Gas stations	128000	2	1	1	1	1	1	126,000	126,000	88,200
Wholesale operations	412,526	4	2	2	1	1	2	825,052	825,052	1,320,912
Retail operations	827,239	3	2.0	1.0	2	2	2	3,308,956	1,654,478	1,654,478
Educational buildings on university campus	106,000	5	3	2	3	2	3	954,000	318,000	636,000
Public or private elementary and middle schools	139,874	6	3	3	3	2	4	1,258,866	839,244	1,678,488
Public or private high schools	37,100	6	3	3	3	2	2	333,900	222,600	222,600
Junior colleges	1,013	6	3	3	3	2	2	9,117	6,078	6,078
Business/office management schools	7,783	4	2	2	2	2	1	31,132	31,132	15,566
Vocational schools	8,167	4	2	2	2	2	1	32,668	32,668	16,334
Other schools	50,886	6	3	3	3	3	1	457,974	457,974	152,858
Hospitals (community hospitals, federal hospitals, non-federal psychiatric hospitals, other hospitals)	6,210	10	5	5	5	2	3	155,250	62,100	93,150
Regulated long-term care service providers (nursing homes)	65,600	4	2	2	5	2	3	656,000	262,400	393,600
Offices of physicians, dentists, and other health practitioners	501,594	2	1	1	1	1	0	501,594	501,594	-
Outpatient care facilities	40,589	2	1	1	2	1	1	81,178	40,589	40,589
Medical and diagnostic laboratories	4,652	2	1	1	2	1	1	9,304	4,652	4,652
Home health care services	32,464	2	1	1	2	1	1	64,928	32,464	32,464
Other health care	239,410	4	2	2	2	1	1	957,640	478,820	478,820
Museums	7,655	6	3	3	5	4	1	114,825	91,860	22,965
Cinemas	40,313	4	2	2	5	4	1	403,130	322,504	80,626
Other amusement + entertainment	89,242	4	2	2	5	4	1	892,420	713,936	178,484
Hotels / Motels	54,882	4	2	2	1	1	3	109,764	109,764	164,646
Restaurants (independent, chain and fast food)	691,273	2	1	1	1	1	2	691,273	691,273	1,382,546
Drinking places + bars	43,985	2	1	1	1	1	1	43,985	43,985	43,985
Manufacturing establishments	291,543	4	2	2	3	2	1	1,749,258	1,166,172	583,086
Mining, quarrying and oil/gas extraction establishments	22,594	2	1	1	1	1	0	22,594	22,594	-
Construction companies	683,352	6	3	3	1	1	0	2,050,056	2,050,056	-
Government owned buildings	112,113	10	5	5	4	3	1	2,242,260	1,681,695	560,565
Utility buildings	18,160	2	1	1	2	1	1	36,320	18,160	18,160
EDP and data processing sites	146,407	4	2	2	2	1	1	585,628	292,814	292,814
Other	754,229	4	2	2	2	1	1	3,016,916	1,508,458	1,508,458
Total	11,787,295	4.53	2.57	1.96	2.70	1.83	2.37	81,936,390	42,190,547	54,565,990

U.S. Plans: Accounting by the Federal Aviation Authority, Bureau of Economic Analysis (BLS) private airports. These are not included in the survey figures.

Sources: U.S. Census Bureau Number of Establishments; Federal Aviation Authority (FAA) Research and Civil Aviation; U.S. Shopping Centers, Commercial Buildings Energy Consumption Survey (CBECS); U.S. Department of Commerce-American Hospital Association; U.S. Department of Health and Human Services, American Hotel and Lodging Association; American Restaurant Association; Federal Real Property Public Data Set of the GSA; National Association of Manufacturers (NAM); GMP Research Input.

Age of U.S. non-residential commercial buildings



Source: U.S. Census, American Fact Finder ES160311, Estimated Commercial Property Database, GMP Research (includes only building housing future manufacturers)

Average age of non-residential commercial buildings by building type

Non-residential commercial building type	Average age of building	Typical toilet replacement time frame	Typical flushing urinal replacement time frame
Lodging	43.5 years	15 years	15 years
Office buildings	49 years	30 years	30 years
Commercial	61 years	40 years	40 years
Health care	45 years	35 years	35 years
Education	63 years	40 years	40 years
Religious	50 years	50 years	50 years
Public Safety	48 years	40 years	40 years
Amusement + recreation	51 years	35 years	35 years
Transportations	33 years	30 years	30 years
Communications	12 years	30 years	30 years
Manufacturing	50 years	50 years	50 years

Source: U.S. Census, American Fact Finder ES160311, Estimated Commercial Property Database, GMP Research (includes only building housing future manufacturers)

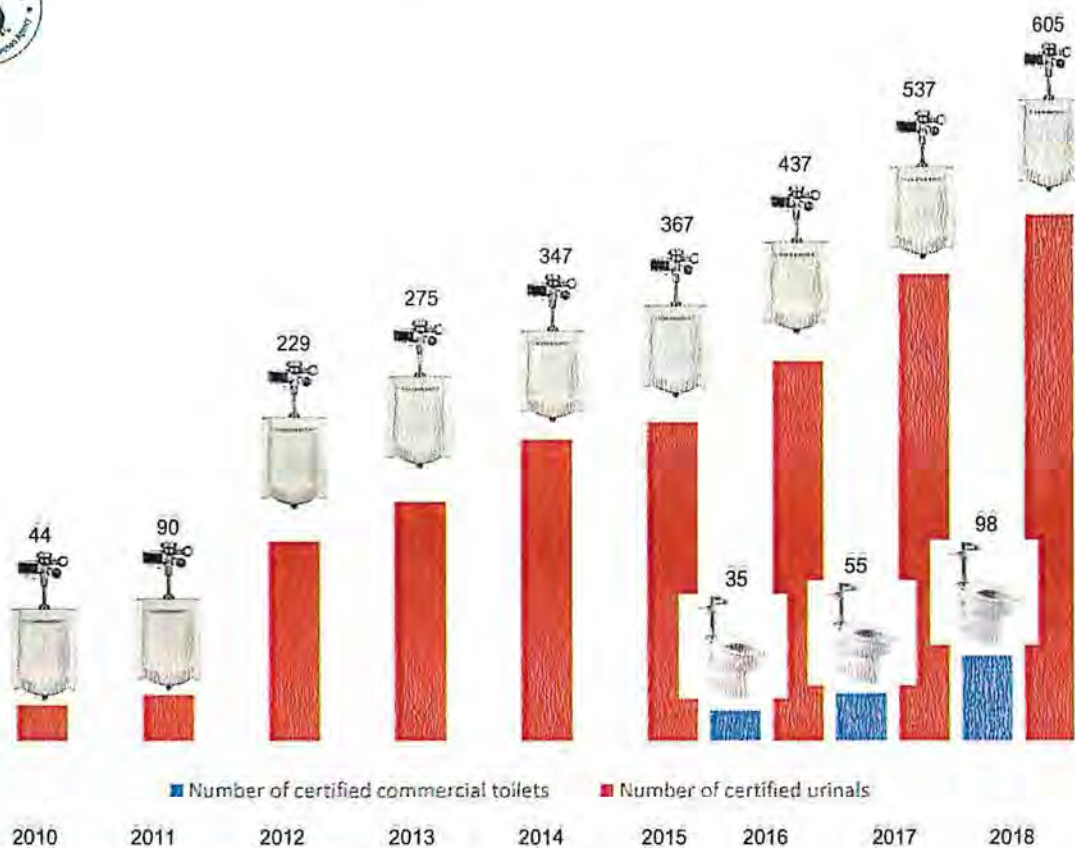
Note: Commercial toilets are frequently replaced well before they are "run out" or inoperable. In some cases, for tank-type toilets in heavy use commercial areas (e.g., a gas station, water, etc.) the economic lifetime may be reduced to 30 years or less, just because of physical wear and tear from usage. For flushometer-valve toilets, replacement is not as frequent, as refurbishing the flushometer valve is often the preferred choice, rather than replacing the entire toilet and flushometer valve.

Many water utilities offering rebate programs geared toward replacing commercial toilets, generally use a 30 year replacement cycle as basis for their rebate program. They typically do not distinguish among toilets used in the various commercial/industrial buildings, because there are too many variables in play.

Availability of WaterSense-certified flushing urinals and flushometer-valve toilets

The WaterSense website indicates, WaterSense-certified flushing urinals were introduced to the market in 2010. WaterSense-certified flushometer-valve toilets were introduced in 2016. A list of WaterSense-certified flushing urinals and flushometer-valve toilets can be found at <https://www.epa.gov/watersense/product-search>.

Number of certified WaterSense flushing urinals and flushometer-valve toilets available for purchase



Source: <https://www.epa.gov/watersense/accomplishments-and-history>

According to input from the plumbing fixture and fitting manufacturers, 39.2% of the flushing urinals were WaterSense-certified, while 56.8% of the flushometer-valve toilets available for purchase were WaterSense-certified products.

WaterSense-certified flushing urinal market penetration

According to our research, there are some 54.5 million installed flushing urinals in non-residential commercial buildings. Every year roughly 400,000 - 450,000 flushing urinals are sold into new commercial construction and as replacement units for older fixtures.

The Energy Policy Act of 1992 established the maximum flush volume for all flushing urinals manufactured in the United States after January 1, 1994, at 1.0 gallons per flush (gpf).

Since the federal standards were enacted, manufacturers have developed flushing urinals that use significantly less water than the standard 1.0 gpf fixtures. These high-efficiency fixtures can save at least 0.5 gallons of water per flush compared to standard 1.0 gpf fixtures.

Since 2010 roughly 3.1 million flushing urinals have been sold. According to the WaterSense flushing urinal roll-out, we estimate approximately 1.0 million WaterSense urinals have been installed. With 54.5 million installed flushing urinals, WaterSense market penetration stands at 1.8% nationwide.

In the WaterSense® Specification for Flushing Urinals Supporting Statement from 2009, WaterSense estimates there are 12 million flushing urinals currently in use in the United States.

<https://www.epa.gov/sites/production/files/2017-01/documents/ws-products-support-statement-urinals.pdf>

This is based on a 2005 report published by D&R International titled "Plumbing Fixtures Market Overview: Water Savings Potential for Residential and Commercial Toilet and Urinals".

We do not agree with that assessment, and believe the figures listed on page 40 of this report reflect the installed base of flushing urinals in the United States.

If the WaterSense Specification for Flushing Urinals Supporting Statement is correct, then by 2018, there would be 12 million existing flushing urinals + 3.1 million new flushing urinals = a total installed base of 15.1 million flushing urinals. With a total installed base of 15.1 million flushing urinals, and roughly 1.0 million WaterSense-certified flushing urinals installed, then the WaterSense market penetration for flushing urinals would be 6.6% nationwide.

WaterSense-certified flushometer-valve toilet market penetration

According to our research, there are some 124.127 million toilets installed in commercial non-residential buildings. Not all these toilets will be equipped with a flushometer valve. We believe some 20% of the toilets will be either equipped with a pressure-assist tank or are gravity-fed tank-type toilets. This would indicate there are 99.302 million installed wall- and floor-mounted flushometer-valve toilets in the United States.

WaterSense-certified flushometer-valve toilets entered the market in 2016. According to the manufacturers, roughly 56.8% of the flushometer-valve toilets currently for sale are WaterSense-certified.

Since 2016, roughly 4.0 million wall-hung and floor-mount flushometer-valve toilets have been sold. According to the WaterSense flushometer-valve toilet roll-out, we estimate 2.0 million are WaterSense-certified or meet the WaterSense specification.

According to our research, there are 99.302 million flushometer-valve toilets installed in non-residential commercial buildings. With 2.0 million WaterSense-certified flushometer-valve toilets sold, this would indicate the market penetration for WaterSense flushometer-valve toilets is 2.0% nationwide.

In the WaterSense Specification for Flushometer-Valve Water Closets Supporting Statement, WaterSense states there are approximately 27 million flushometer-valve toilets currently in use in the United States. <https://www.epa.gov/watersense/watersense-specification-flushometer-valve-water-closets-supporting-statement>.

This is based on the 2005 study by D&R International titled "Plumbing Fixtures Market Overview: Water Savings Potential for Residential and Commercial Toilets and Urinals".

We do not agree with that assessment, and believe the figures listed on page 40 of this report reflect the installed base of flushometer-valve toilets in the United States.

If the 27 million flushometer-valve toilet numbers were correct, that would imply that the current installed base would be 27,000,000 + 4.0 million newly sold flushometer-valve toilets since 2015 = 31.0 million installed flushometer-valve toilets.

With 2.0 million WaterSense-certified flushometer-valve toilets sold and a total installed base of 31 million flushometer-valve toilets, then the market penetration for WaterSense-certified flushometer-valve toilets would be 6.5% nationwide.

Observations concerning WaterSense flushing urinals and flushometer-valve toilets

WaterSense flushing urinals were introduced to the market in 2010. WaterSense flushometer-valve toilets were introduced in 2016.

According to the manufacturers, 39.2% of the available flushing urinals are WaterSense-certified or meet the WaterSense specification. 56.8% of the available flushometer-valve toilets are WaterSense-certified or meet the WaterSense specification.

Both WaterSense flushing urinals and flushometer-valve toilets have low single digit market penetration nationwide. As with the residential tank-type toilet, the time of replacement for commercial plumbing fixtures is the main driver of market penetration.

The commercial building inventory in the United States is well advanced in years, as can be seen from the following table. Commercial toilets are frequently replaced well before they are “worn out” or inoperable. In some cases, for tank-type toilets in heavy use commercial areas (e.g., a gas station, theater, etc.) the economic lifetime may be reduced to 20 years or less, just because of physical wear and tear from abuse. For flushometer-valve toilets, replacement is not as frequent, as retrofitting the flushometer valve is often the preferred choice, rather than replacing the entire toilet and flushometer valve.

Public restrooms with low traffic volume will have fixtures and fittings in good functioning order. These products are typically only replaced if they are defective, or if the building is being remodeled.

With an average replacement happening 35.9 years after initial installation, it will take roughly 40 years before WaterSense-certified flushing urinals or flushometer-valve toilets gain any serious market penetration.

Non-residential commercial building type	Average age of building	Typical flushometer-valve toilet replacement time frame	Typical flushing urinal replacement time frame
Lodging	43.5 years	15 years	15 years
Office buildings	49 years	30 years	30 years
Commercial	61 years	40 years	40 years
Health care	45 years	35 years	35 years
Education	63 years	40 years	40 years
Religious	50 years	50 years	50 years
Public safety	48 years	40 years	40 years
Amusement + recreation	51 years	35 years	35 years
Transportation	33 years	30 years	30 years
Communications	12 years	30 years	30 years
Manufacturing	50 years	50 years	50 years

Conclusions and final thoughts

Products captured in this study included tank-type residential toilets, bathroom sink faucets, showerheads, flushing urinals and flushometer-valve toilets.

WaterSense market penetration is defined by the total number of WaterSense-certified products installed divided by the total number of installed products of that specific product type.

WaterSense Products	2015 market penetration	2019 market penetration
Tank-type residential toilets	7.0%	16.8%
Bathroom sink faucets	25.4%	40.1%
Showerheads	28.7%	45.4%
Flushing urinals	Not included	1.8%
Flushometer-valve toilets	Not included	2.0%

Source: GMP Research estimates

Based on the data reviewed, we believe the key driver for high WaterSense market penetration is the replacement market. Plumbing fixtures have very long replacement cycles. Homeowners and commercial property owners are reluctant to replace a plumbing fixture unless it is either broken or is being replaced as part of a major remodeling project.

Bathroom sink faucets and showerheads are easier to replace and are often completed by the homeowner or a handyman. WaterSense-certified showerheads were introduced a few years after the bathroom sink faucets. As showerheads are replaced more often than bathroom sink faucets, the market penetration for the WaterSense-certified showerheads is higher and will continue to outpace the other products.

Within the next 15 years, most bathroom sink faucets and showerheads installed in the United States will be WaterSense-certified or meet the WaterSense program. Within the next 30 years, most residential tank-type toilets will be WaterSense-certified or meet the WaterSense program. Within the next 40 years, most flushometer-valve toilets and flushing urinals will be WaterSense-certified or meet the WaterSense program.

Mount Pleasant, June 2019

EXHIBIT SG-4 (Reiker)
ATTACHMENT E

SAN GABRIEL VALLEY WATER COMPANY
Additional Expected Decline in Indoor Water Use
as a Result of WaterSense Toilet Installations

Toilets Installed in California ¹		
% of	Weighted	
<u>Total</u>	<u>GPF</u>	<u>Usage</u>
21.00%	1.28	0.2688
62.10%	1.60	0.9936
<u>16.90%</u>	<u>3.50</u>	<u>0.5915</u>
100.00%		1.8539

100% WaterSense Installations		
% of	Weighted	
<u>Total</u>	<u>GPF</u>	<u>Usage</u>
100.00%	1.28	1.280
0.00%	1.60	0.000
<u>0.00%</u>	<u>3.50</u>	<u>0.000</u>
100.00%		1.280

Decline in Toilet Usage (GPF) -0.574
% Decline in Toilet Usage (GPF) -31.0%

Toilet Use as % of Indoor Use¹ 30.0%

Additional Expected Decline in Indoor Use -9.3%

¹2019 U.S. WaterSense Market Penetration Report.

EXHIBIT SG-4 (Reiker)
ATTACHMENT F

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Water Use in California

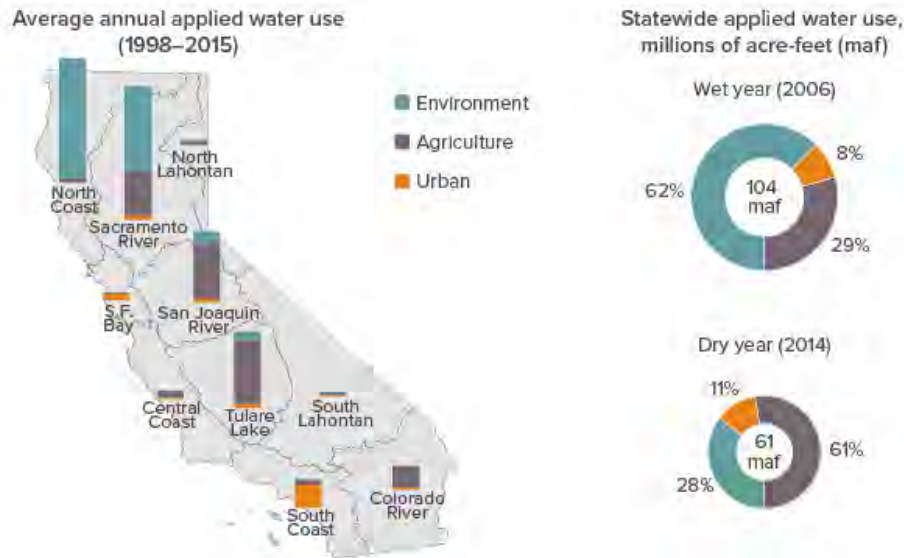
Water in California is shared across three main sectors.

Statewide, average water use is roughly 50% environmental, 40% agricultural, and 10% urban, although the percentage of water use by sector varies dramatically across regions and between wet and dry years. Some of the water used by each of these sectors returns to rivers and groundwater basins where it can be used again.

▶ **Environmental water provides multiple benefits.**

Environmental water use falls into four categories: water in rivers protected as “wild and scenic” under federal and state laws, water required for maintaining habitat within streams, water that supports wetlands within wildlife preserves, and water needed to maintain water quality for agricultural and urban use. Half of California’s environmental water use occurs in rivers along the state’s north coast. These waters are largely isolated from major agricultural and urban areas, and their wild and scenic status protects them from significant future development. In dry years, the share of water that goes to the environment decreases dramatically as flows diminish in rivers and streams. At the height of the 2012–16 drought, the state also reduced water allocations for the environment to reserve some supplies for farms and cities.

Water use varies dramatically across regions and between wet and dry years



SOURCE: Department of Water Resources, *California Water Plan Update 2018 (Public Review Draft)*.

NOTES: The figure shows applied water use. The statewide average for 1998–2015 was 77.2 maf. Environment (38.3 maf average) includes water for “wild and scenic” rivers, required Delta outflow, instream flows, and managed wetlands. Urban (7.9 maf) includes residential, commercial, and industrial uses; and large landscapes. Agriculture (31 maf) includes water for crop production. Net water use—i.e., the volume consumed by people or plants, embodied in manufactured goods, evaporated, or discharged to saline waters—is lower. The figure excludes water used to actively recharge groundwater basins (3% for urban and 1% for agriculture on average), conveyance losses (3% for urban and 8% for agriculture), and water used for energy production (less than 2% of urban use).

► Agricultural water use is falling, while the economic value of farm production is growing.

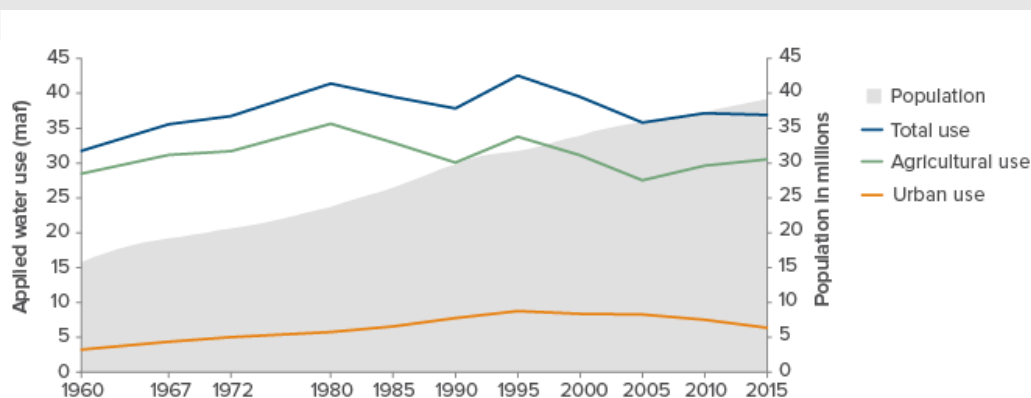
More than nine million acres of farmland in California are irrigated, representing roughly 80% of all water used for businesses and homes. Higher-revenue perennial crops—nuts, grapes, and other fruit—have increased as a share of irrigated acreage (from 16% in 1980 to 33% in 2015 statewide, and from 21% to 45% in the southern Central Valley). This shift, plus rising crop yields, has increased the economic return on water used for agriculture. Farm production generated 38% more gross state product in 2015 than in 1980, even though farm water use was about 14% lower. But even as the agricultural economy is growing, the rest of the economy is growing faster. Today, farm production and food processing generate about 2% of California’s gross state product, down from about 5% in the early 1960s.

► Despite population growth, total urban water use has also fallen.

The San Francisco Bay and South Coast regions account for most

urban water use in California. Both rely heavily on water imported from other parts of the state. Total urban water use has been falling even as the population grows. Even before the latest drought, per capita water use had declined significantly—from 231 gallons per day in 1990 to 180 gallons per day in 2010—reflecting substantial efforts to reduce water use through pricing incentives and mandatory installation of water-saving technologies like low-flow toilets and shower heads. In 2015, per capita use fell to 146 gallons per day in response to drought-related conservation requirements. Much of the recent savings came from reducing landscape watering, which makes up roughly half of all urban water use. Per capita use has since rebounded slightly, but a new state law will require further long-term reductions.

Both agricultural and urban water use have fallen over the past two decades



SOURCES: Water use: *California Water Plan Updates* (Department of Water Resources, various years). Population: Department of Finance.

NOTES: Except for 2015 (a severe drought year), the figure reports estimates for normal rainfall years. Pre-2000 estimates are adjusted to levels that would have been used in a year of normal rainfall. Estimates are for water years (October to September).

► Drought will pose major water use challenges.

California needs to adapt to increasing drought intensity. Agriculture relies heavily on groundwater during droughts—particularly in the Central Valley—but more sustainable groundwater management is needed to maintain this key drought reserve. An increase in tree and vine crops—which need to be watered every year—is making farming more vulnerable to water shortages. State law now requires water users to bring their groundwater basins into long-term balance by the early 2040s. This will likely require farm water use to fall in regions that have been over-pumping, including the southern Central Valley and the Central Coast. In urban areas, the greatest potential for further water savings lies in long-term reductions in landscape

irrigation—a shift requiring changes in plantings and watering habits. Finally, state and federal regulators will need new approaches to reduce harm to fish and wildlife during increasingly intense droughts. This will require better drought planning, investments in new habitat, and setting aside water during wet years for ecosystem uses in dry years.

Sources: Department of Water Resources (water use and population for 1998–2015), State Water Resources Control Board (post-2015 urban water use), US Bureau of Economic Analysis (gross state product), and National Agricultural Statistics Service (crop acreage).

MAY 2019

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Vice President and Director of the Water Policy Center and Senior Fellow

VIDEO

Water Use in California



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EXHIBIT SG-4 (Reiker)
ATTACHMENT G

SAN GABRIEL VALLEY WATER COMPANY

Test Year 2026-2027 General Rate Case

Regulatory Expense Forecast

	<u>Combined / Allocable</u>	<u>General Office</u>	<u>L.A. County</u>	<u>Fontana Water Co.</u>	<u>Total</u>
Four Factor Ratio			0.5030	0.4970	
2028 GRC (GRC Cycle from July 2029 - June 2032)					
Urban Water Management Plan - 2030 Plan (prepared every 5 yrs.)			\$147,025	\$147,025	\$294,049
Public Noticing	\$76,160		\$38,309	\$37,852	\$76,160
Printing & Binding	\$50,758		\$25,531	\$25,227	\$50,758
Shipping	\$9,613		\$4,835	\$4,778	\$9,613
Travel	\$4,814		\$2,421	\$2,392	\$4,814
Expedited Transcripts	\$2,000		\$1,006	\$994	\$2,000
Outside Counsel/Legal	\$934,754		\$470,181	\$464,573	\$934,754
Subtotal	<u>\$1,078,099</u>		<u>\$689,308</u>	<u>\$682,840</u>	<u>\$1,372,148</u>
2029 Cost of Capital Proceeding					
Outside Cost of Capital Expert Witness		\$75,103			\$75,103
Public Noticing		\$76,160			\$76,160
Travel		\$4,814			\$4,814
Expedited Transcripts		\$1,000			\$1,000
Outside Counsel/Legal		\$150,644			\$150,644
Subtotal		<u>\$307,721</u>			<u>\$307,721</u>
CPUC OIR, OII & Other Proceedings					
Travel (2 employees x \$840 x 2 trips x 5 proceedings)		\$16,800			\$16,800
Total		<u>\$324,521</u>	<u>\$689,308</u>	<u>\$682,840</u>	<u>\$1,696,669</u>
Annualized (3-Yr. GRC cycle)		<u>\$108,174</u>	<u>\$229,769</u>	<u>\$227,613</u>	<u>\$565,556</u>

SAN GABRIEL VALLEY WATER COMPANY

Test Year 2026-2027 General Rate Case

Account 797 - Regulatory Commission Expenses - Last Six Years

<u>Division</u>	<u>Proceeding No.</u>	<u>Description</u>	<u>Job No.</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
General	N/A	Intervenor Compensation	N/A	\$571	\$176	\$0	\$0	\$0	\$0
General	A.16-01-002	2016 General Rate Case	8099G	\$206,902	\$201,218	\$100,609	\$0	\$0	\$0
General	A.18-05-005	2018 Cost of Capital Proceeding	9054G	\$105,561	\$0	\$105,561	\$105,561	\$0	\$0
General	N/A	Accrue 2022 GRC (TY2023-2024)	N/A	\$0	\$0	\$9,152	\$18,304	\$18,304	\$9,152
General	A.19-01-001	2019 General Rate Case (TY 2020-2021)	9081G	\$0	\$0	\$11,154	\$22,308	\$22,308	\$11,154
General	R.17-06-024	D.20-08-007 Intervenor Compansation	N/A	\$0	\$0	\$0	\$0	\$5,903	\$0
General	R.17-06-024	D.23-02-032 Intervenor Compensation	N/A	\$0	\$0	\$0	\$0	\$0	\$1,758
General	R.17-06-024	D.23-03-044 Intervenor Compensation	N/A	\$0	\$0	\$0	\$0	\$0	\$3,868
Total General Division				\$313,034	\$201,394	\$226,477	\$146,174	\$46,516	\$25,933
Los Angeles County	A.12-05-001	2012 Cost of Capital Proceeding	8049G	\$28,797	\$0	\$0	\$0	\$0	\$0
Los Angeles County	A.16-01-002	2016 General Rate Case	8126L	\$90,506	\$90,506	\$45,253	\$0	\$0	\$0
Los Angeles County	N/A	Accrue 2022 GRC (TY2023-2024)	N/A	\$0	\$0	\$28,080	\$56,160	\$56,160	\$28,080
Los Angeles County	A.19-01-001	2019 General Rate Case (TY 2020-2021)	9081G	\$0	\$0	\$34,223	\$68,445	\$68,445	\$34,223
Total Los Angeles Division				\$119,303	\$90,506	\$107,556	\$124,606	\$124,606	\$62,303
Fontana Water Company	N/A	Miscellaneous	N/A	\$0	\$1,054	\$0	\$0	\$0	\$0
Fontana Water Company	A.16-01-002	2016 General Rate Case	5714L	\$106,709	\$106,709	\$53,354	\$0	\$0	\$0
Fontana Water Company	N/A	Accrue 2022 GRC (TY2023-2024)	N/A	\$0	\$0	\$31,797	\$63,594	\$63,594	\$31,797
Fontana Water Company	A.19-01-001	2019 General Rate Case (TY 2020-2021)	9081G	\$0	\$0	\$38,752	\$77,504	\$77,504	\$38,752
Fontana Water Company	A.12-05-001	Amort. 2012 CoC Per D.20-08-006	8049G	\$0	\$0	\$58,973	\$0	\$0	\$0
Total Fontana Water Company Division				\$106,709	\$107,763	\$182,876	\$141,098	\$141,098	\$70,549
				\$539,046	\$399,662	\$516,909	\$411,878	\$312,219	\$158,784

EXHIBIT SG-4 (Reiker)
ATTACHMENT H



El Monte, California

2023 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO WATER PLANT
AS OF DECEMBER 31, 2023

Prepared by:



GANNETT FLEMING

Excellence Delivered As Promised

SAN GABRIEL VALLEY WATER COMPANY
El Monte, California

2023 DEPRECIATION STUDY

CALCULATED ANNUAL DEPRECIATION
ACCRUALS RELATED TO WATER PLANT
AS OF DECEMBER 31, 2023

GANNETT FLEMING VALUATION AND RATE CONSULTANTS, LLC
Camp Hill, Pennsylvania



Gannett Fleming
Valuation and Rate Consultants, LLC

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Camp Hill, PA 17011
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October 23, 2024

San Gabriel Valley Water Company
11142 Garvey Avenue
El Monte, CA 91733

Attention Joel M. Reiker
 Vice President of Regulatory Affairs

Ladies and Gentlemen:

Pursuant to your request, we have conducted a depreciation study related to the water plant of San Gabriel Valley Water Company as of December 31, 2023. The attached report presents a description of the methods used in the estimation of depreciation, the summary of annual depreciation accrual rates, the statistical support for the service life and net salvage estimates and the detailed tabulations of annual and accrued depreciation.

Respectfully submitted,

GANNETT FLEMING VALUATION
AND RATE CONSULTANTS, LLC

A handwritten signature in blue ink that reads "John J. Spanos".

JOHN J. SPANOS
President

A handwritten signature in blue ink that reads "Jason A. Powery".

JASON A. POWERY
Assistant Project Manager

JJS:mle

075516.000

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EXECUTIVE SUMMARY

Pursuant to San Gabriel Valley Water Company ("San Gabriel") request, Gannett Fleming Valuation and Rate Consultants, LLC ("Gannett Fleming") has conducted a depreciation study related to water plant as of December 31, 2023. The purpose of this study was to determine the annual depreciation accrual rates and amounts for book and ratemaking purposes.

The depreciation rates are based on the straight line method using the average service life ("ASL") procedure and were applied on a remaining life basis. The calculations were based on attained ages and estimated average service life and forecasted net salvage characteristics for each depreciable group of assets.

San Gabriel's accounting policy has not changed since the current depreciation study was prepared. However, some average service life estimates and inclusion of net salvage percentages proposed in this study have changed from the currently approved estimates. The overall depreciation accrual rate has decreased as compared to the currently approved composite depreciation rate.

Gannett Fleming recommends the calculated annual depreciation accrual rates proposed herein apply specifically to San Gabriel's water plant in service as of December 31, 2023 as summarized below. Separate rates were computed for the Company's Los Angeles, Fontana and General Corporate Divisions. The study sets forth a total annual depreciation expense of \$24.5 million as applied to the depreciable original cost of \$1.03 billion as of December 31, 2023.

SUMMARY OF ORIGINAL COST, ACCRUAL RATES AND AMOUNTS

<u>FUNCTION</u>	<u>ORIGINAL COST AS OF DECEMBER 31, 2023</u>	<u>PROPOSED RATE</u>	<u>PROPOSED EXPENSE</u>
Los Angeles Division			
Supply and Pumping Plant	\$157,997,188.00	1.49	\$ 949,823
Water Treatment Plant	71,354,599.87	2.60	1,852,353
Transmission and Distribution Plant	304,046,194.59	1.99	6,053,879
General Plant	<u>12,409,099.70</u>	5.83	<u>723,373</u>
Total Los Angeles Division	\$451,397,518.18	2.12	\$9,579,428
Fontana Division			
Supply and Pumping Plant	\$ 94,409,563.98	1.50	\$ 1,419,996
Water Treatment Plant	57,865,813.92	2.48	1,434,650
Transmission and Distribution Plant	372,079,485.47	1.81	6,727,782
General Plant	<u>17,905,264.61</u>	4.37	<u>783,328</u>
Total Fontana Division	\$542,269,127.98	1.91	\$10,365,756
General Corporation Division			
Transmission and Distribution Plant	6,516,226.80	18.19	\$1,185,188
General Plant	<u>31,122,143.98</u>	10.93	<u>3,400,410</u>
Total General Corporation Division	\$37,637,369.78	12.18	\$4,585,608
Total Depreciable Plant	<u>\$1,031,304,015.94</u>		<u>\$24,530,792</u>

PART I. INTRODUCTION

**SAN GABRIEL VALLEY WATER COMPANY
DEPRECIATION STUDY**

PART I. INTRODUCTION

SCOPE

This report presents the results of the depreciation study prepared for San Gabriel Valley Water Company as applied to water plant in service as of December 31, 2023. It relates to the concepts, methods, and basic judgments which underlie recommended annual depreciation accrual rates related to current utility plant in service.

The service life and net salvage estimates resulting from the study were based on informed judgment which incorporated analyses of historical plant retirement data as recorded through 2023; a review of Company practice and outlook as they relate to plant operation and retirement; and consideration of current practice in the water industry, including knowledge of service life estimates used for other water properties.

PLAN OF REPORT

Part I, Introduction, contains statements with respect to the plan of the report, and the basis of the study. Part II, Estimation of Survivor Curves, presents descriptions of the considerations and the methods used in the service life studies. Part III, Service Life Considerations, presents the factors and judgment utilized in the average service life analysis. Part IV, Net Salvage Considerations, presents the judgment utilized of the net salvage study. Part V, Calculation of Annual and Accrued Depreciation, describes the procedures used in the calculation of group depreciation. Part VI, Results of Study, presents summaries by depreciable group of annual depreciation accrual rates and amounts, as well as composite remaining lives. Part VII, Service Life Statistics presents the statistical analysis of service life estimates. Part VIII, Net Salvage Statistics sets forth

the statistical indications of net salvage presents, and Part IX, Detailed Depreciation Calculations presents the detailed tabulations of annual depreciation.

BASIS OF THE STUDY

Depreciation

Depreciation, in public utility regulation, is the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among causes to be given consideration are wear and tear, deterioration, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand, and the requirements of public authorities.

Depreciation, as used in accounting, is a method of distributing fixed capital costs, less net salvage, over a period of time by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing water utility service. Normally, the period of time over which the fixed capital cost is allocated to the cost of service is equal to the period of time over which an item renders service, that is, the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the straight line method of depreciation.

For most accounts, the annual depreciation was calculated by the straight line method using the average service life procedure and the remaining life basis. For certain General Plant accounts, the annual depreciation is based on amortization accounting. Both types of calculations were based on original cost, attained ages, and estimates of service lives.

The straight line method, average service life procedure is a commonly used depreciation calculation procedure that has been widely accepted in jurisdictions throughout North America. Gannett Fleming recommends its continued use. Amortization accounting is used for certain General Plant accounts because of the disproportionate plant accounting effort required when compared to the minimal original cost of the large number of items in these accounts. An explanation of the calculation of annual and accrued amortization is presented beginning on page V-4 of the report.

Service Life Estimates and Net Salvage Estimates

The service life and net salvage estimates used in the depreciation and amortization calculations were based on informed judgment which incorporated a review of management's plans, policies and outlook, a general knowledge of the water utility industry, and comparisons of the service life and net salvage estimates from our studies of other water utilities. The use of survivor curves to reflect the expected dispersion of retirement provides a consistent method of estimating depreciation for water plant. Iowa type survivor curves were used to depict the estimated survivor curves for the plant accounts not subject to amortization accounting.

The procedure for estimating service lives consisted of compiling historical data for the plant accounts or depreciable groups, analyzing this history through the use of widely accepted techniques, and forecasting the survivor characteristics for each depreciable group on the basis of interpretations of the historical data analyses and the probable future. The combination of the historical experience and the estimated future yielded estimated survivor curves from which the average service lives were derived.

The estimates of net salvage by account incorporated a review of experienced costs of removal and gross salvage related to plant retirements, and consideration of trends exhibited by the historical data.

An understanding of the function of the plant and information with respect to the reasons for past retirements and the expected causes of future retirements was obtained through field trips and discussions with operating and management personnel. The supplemental information obtained in this manner was considered in the interpretation and extrapolation of the statistical analyses.

**PART II. ESTIMATION OF
SURVIVOR CURVES**

PART II. ESTIMATION OF SURVIVOR CURVES

The calculation of annual depreciation based on the straight line method requires the estimation of survivor curves and the selection of group depreciation procedures. The estimation of survivor curves is discussed below and the development of net salvage is discussed in later sections of this report.

SURVIVOR CURVES

The use of an average service life for a property group implies that the various units in the group have different lives. Thus, the average life may be obtained by determining the separate lives of each of the units or by constructing a survivor curve by plotting the number of units which survive at successive ages.

The survivor curve graphically depicts the amount of property existing at each age throughout the life of an original group. From the survivor curve, the average life of the group, the remaining life expectancy, the probable life, and the frequency curve can be calculated. In Figure 1, a typical smooth survivor curve and the derived curves are illustrated. The average life is obtained by calculating the area under the survivor curve, from age zero to the maximum age, and dividing this area by the ordinate at age zero. The remaining life expectancy at any age can be calculated by obtaining the area under the curve, from the observation age to the maximum age, and dividing this area by the percent surviving at the observation age. For example, in Figure 1, the remaining life at age 30 is equal to the crosshatched area under the survivor curve divided by 29.5 percent surviving at age 30. The probable life at any age is developed by adding the age and remaining life. If the probable life of the property is calculated for each year of age, the probable life curve shown in the chart can be developed. The frequency curve presents the number of units retired in each age interval. It is derived by obtaining the differences between the amount of property surviving at the beginning and at the end of each interval.

This study has incorporated the use of Iowa curves developed from a retirement rate analysis of historical retirement history. A discussion of the concepts of survivor curves and of the development of survivor curves using the retirement rate method is presented below.

Iowa Type Curves

The range of survivor characteristics usually experienced by utility and industrial properties is encompassed by a system of generalized survivor curves known as the Iowa type curves. There are four families in the Iowa system, labeled in accordance with the location of the modes of the retirements (or the portion of the frequency curve with the highest level of retirements) in relationship to the average life and the relative height of the modes. The left moded curves, presented in Figure 2, are those in which the greatest frequency of retirement occurs to the left of, or prior to, average service life. The symmetrical moded curves, presented in Figure 3, are those in which the greatest frequency of retirement occurs at average service life. The right moded curves, presented in Figure 4, are those in which the greatest frequency occurs to the right of, or after, average service life. The origin moded curves, presented in Figure 5, are those in which the greatest frequency of retirement occurs at the origin, or immediately after age zero. The letter designation of each family of curves (L, S, R or O) represents the location of the mode of the associated frequency curve with respect to the average service life. The numbers represent the relative heights of the modes of the frequency curves within each family. A higher number designates a higher mode curve.

The Iowa curves were developed at the Iowa State College Engineering Experiment Station through an extensive process of observation and classification of the ages at which industrial property had been retired. A report of the study which resulted in the classification of property survivor characteristics into 18 type curves, which constitute three of the four families, was published in 1935 in the form of the Experiment Station's Bulletin 125.

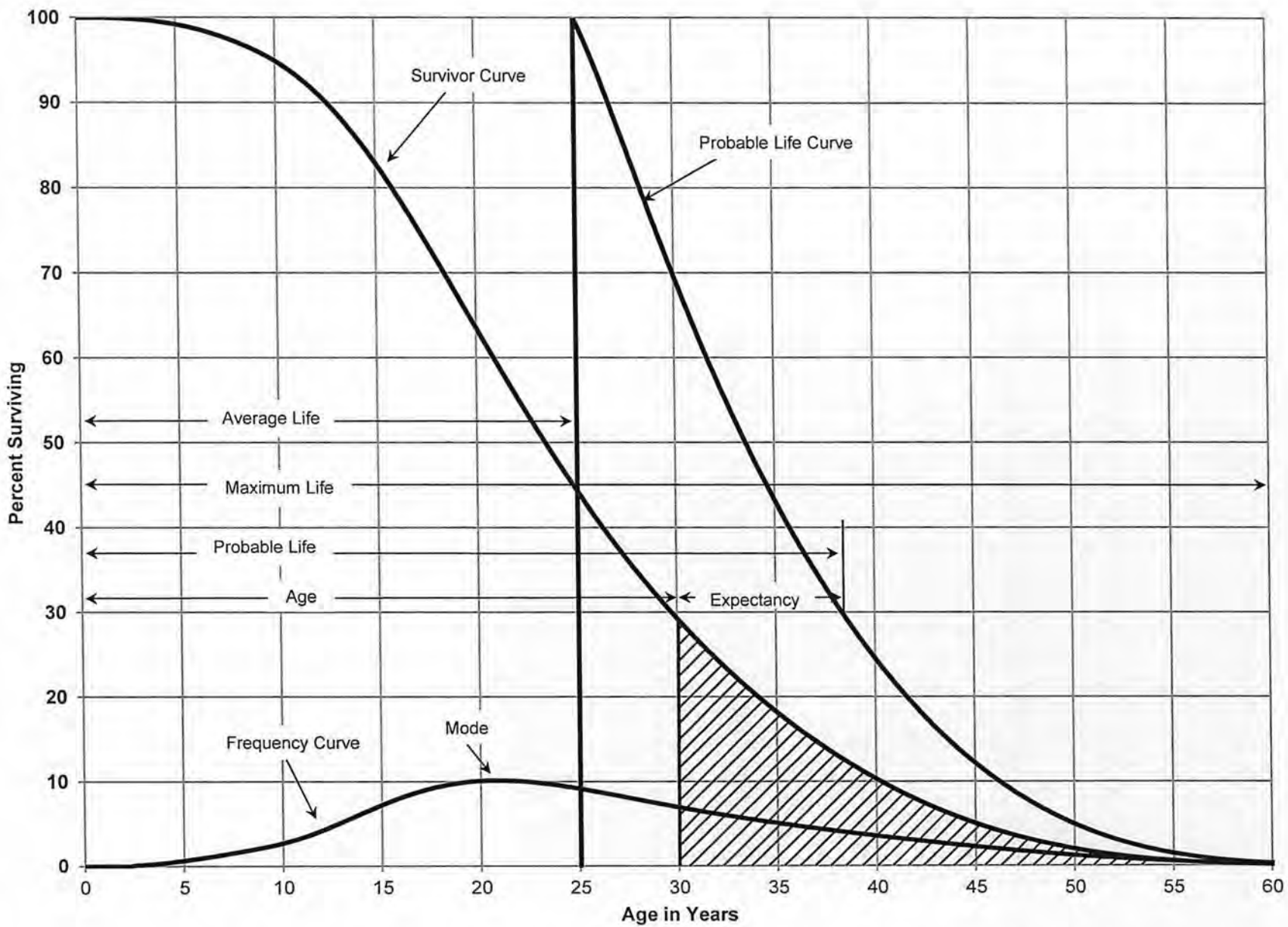


FIGURE 1. TYPICAL SURVIVOR CURVE AND DERIVED CURVES

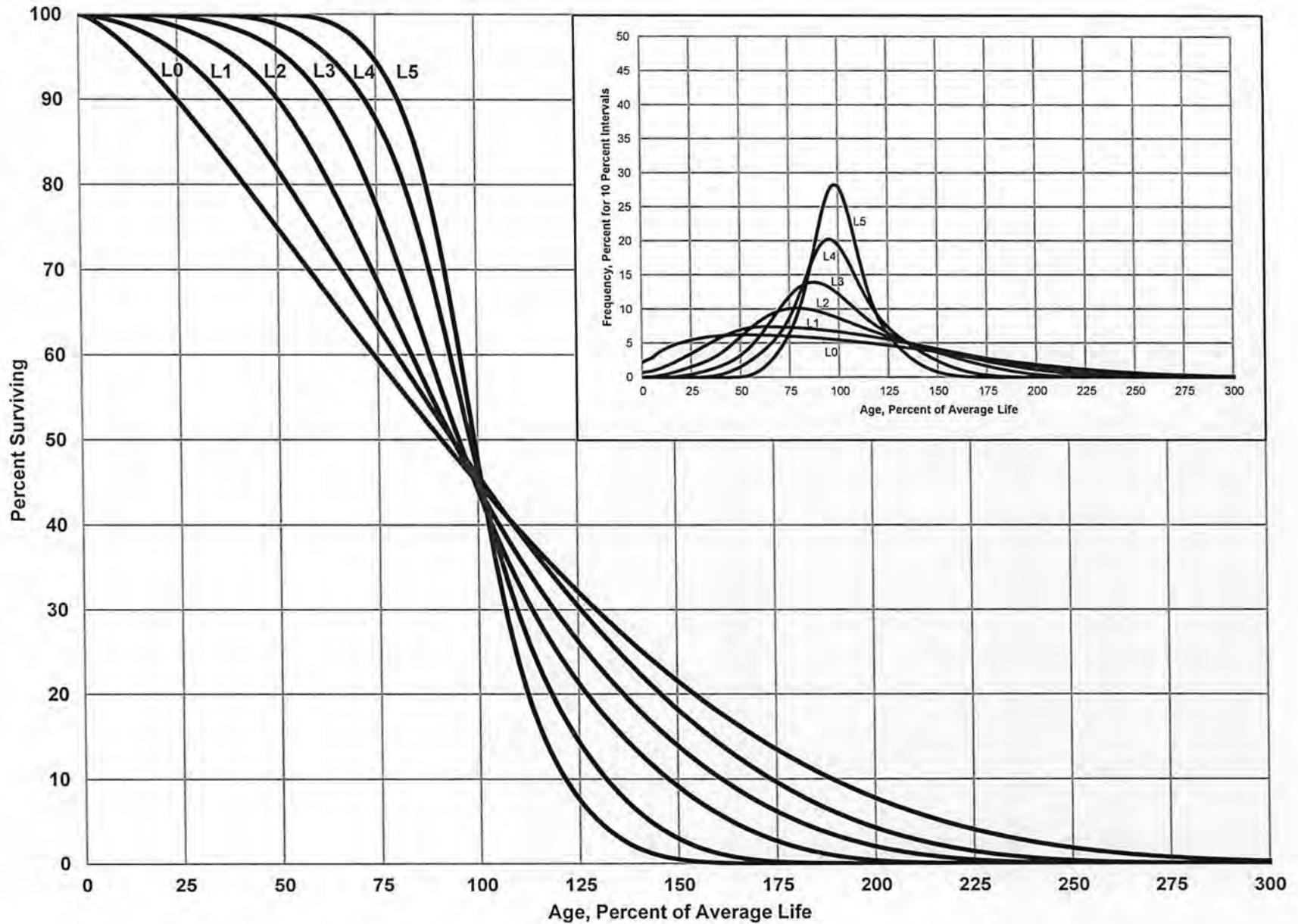


FIGURE 2. LEFT MODAL OR "L" IOWA TYPE SURVIVOR CURVES

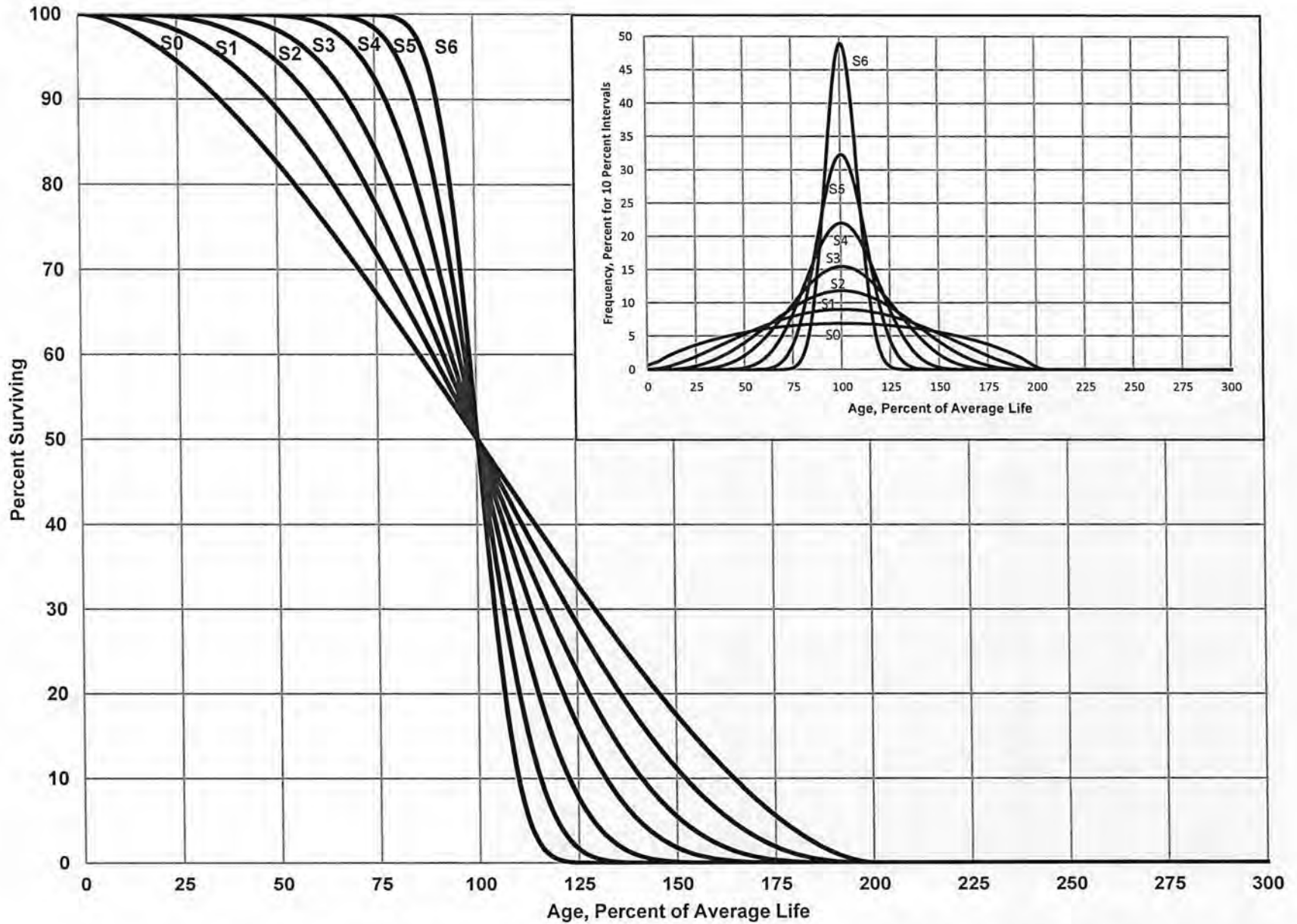


FIGURE 3. SYMMETRICAL OR "S" IOWA TYPE SURVIVOR CURVES

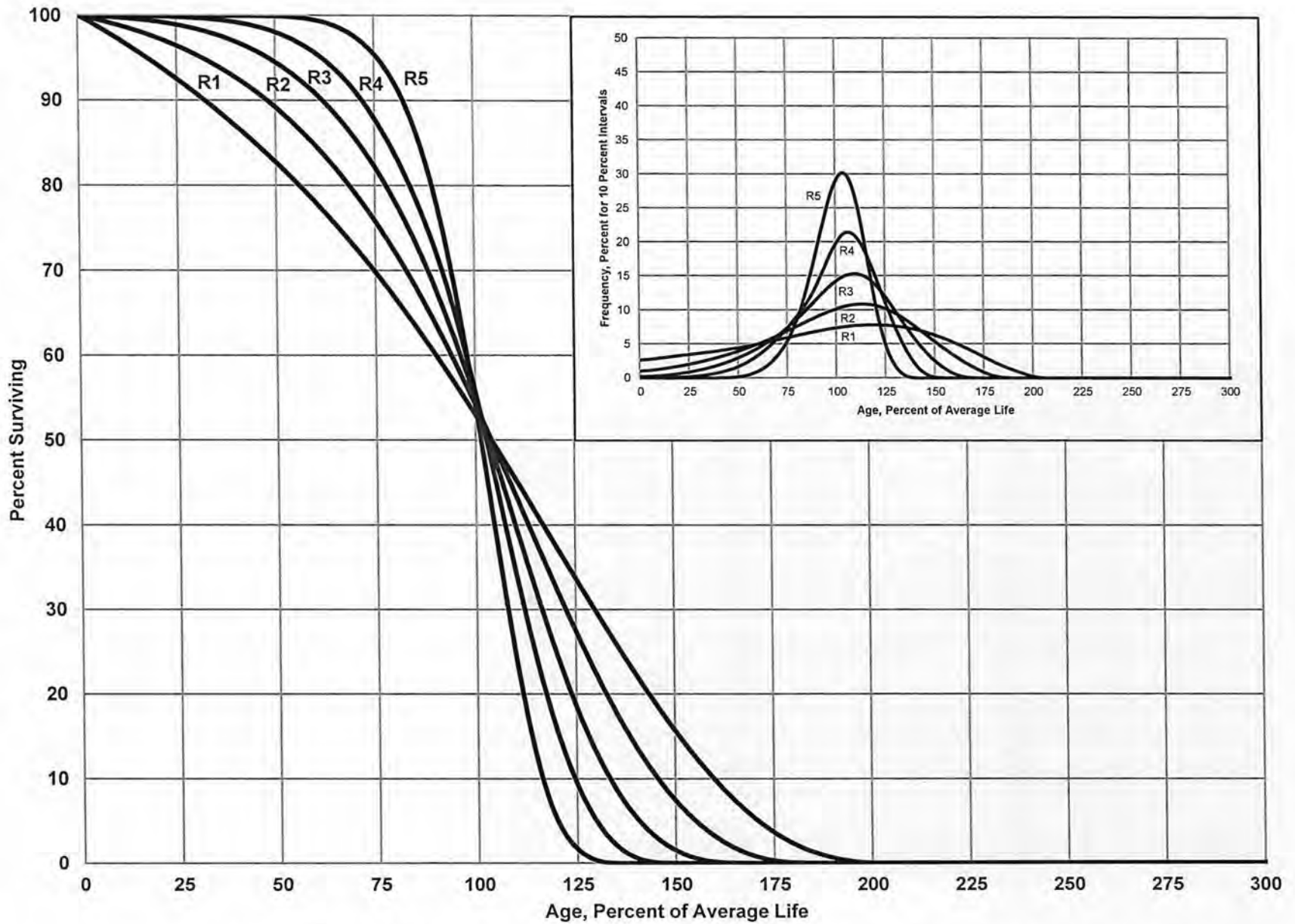


FIGURE 4. RIGHT MODAL OR "R" IOWA TYPE SURVIVOR CURVES

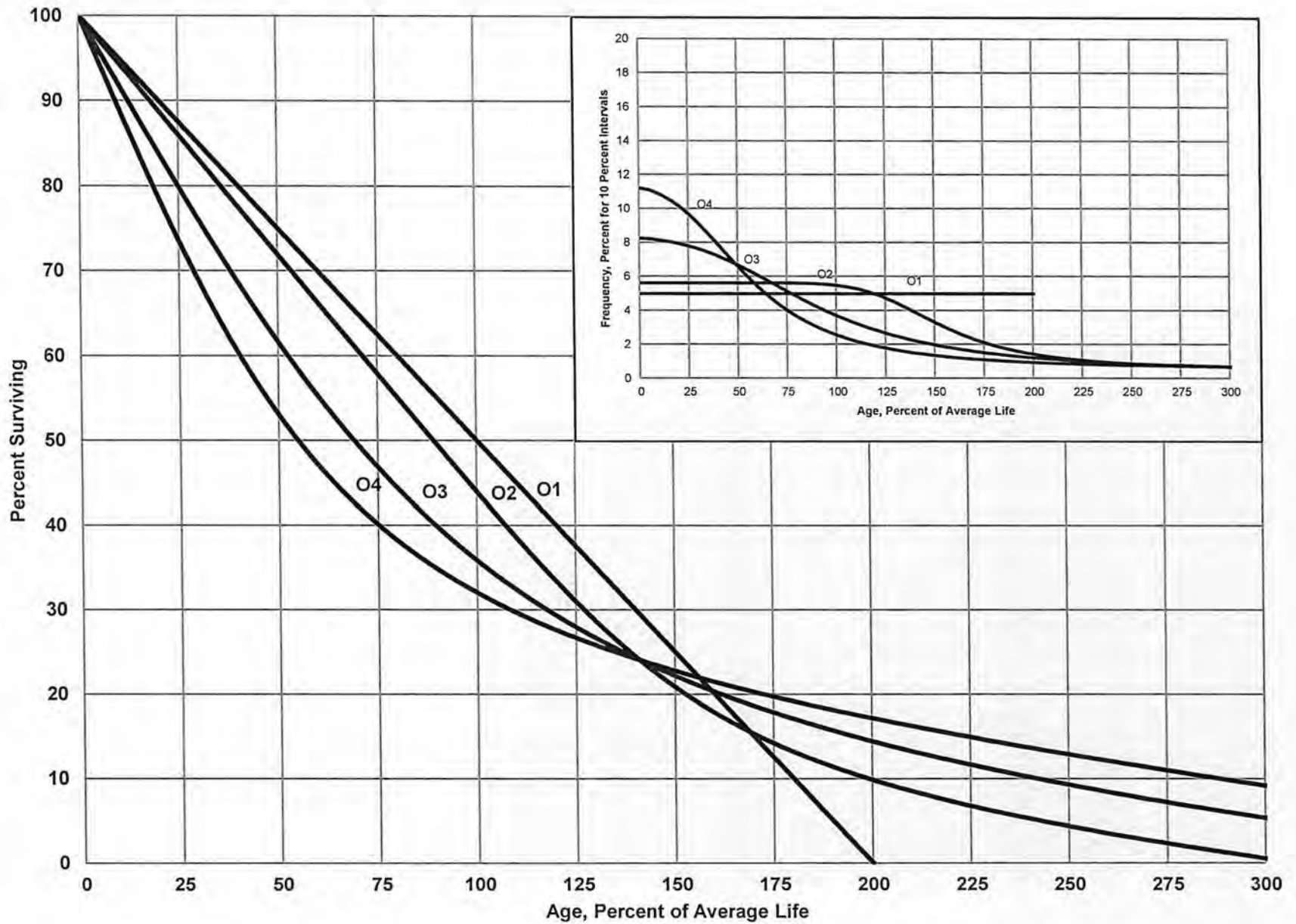


FIGURE 5. ORIGIN MODAL OR "O" IOWA TYPE SURVIVOR CURVES

These curve types have also been presented in subsequent Experiment Station bulletins and in the text, "Engineering Valuation and Depreciation."¹ In 1957, Frank V. B. Couch, Jr., an Iowa State College graduate student, submitted a thesis presenting his development of the fourth family consisting of the four O type survivor curves.

Retirement Rate Method of Analysis

The retirement rate method is an actuarial method of deriving survivor curves using the average rates at which property of each age group is retired. The method relates to property groups for which aged accounting experience is available and is the method used to develop the original stub survivor curves in this study. The method (also known as the annual rate method) is illustrated through the use of an example in the following text and is also explained in several publications including "Statistical Analyses of Industrial Property Retirements,"² "Engineering Valuation and Depreciation,"³ and "Depreciation Systems."⁴

The average rate of retirement used in the calculation of the percent surviving for the survivor curve (life table) requires two sets of data: first, the property retired during a period of observation, identified by the property's age at retirement; and second, the property exposed to retirement at the beginning of the age intervals during the same period. The period of observation is referred to as the experience band. The band of years which represent the installation dates of the property exposed to retirement during the experience band is referred to as the placement band. An example of the calculations used in the development of a life table follows. The example includes schedules of annual aged property transactions, a schedule of plant exposed to retirement, a life table and illustrations of smoothing the stub survivor curve.

¹Marston, Anson, Robley Winfrey and Jean C. Hempstead. *Engineering Valuation and Depreciation*, 2nd Edition. New York, McGraw-Hill Book Company. 1953.

²Winfrey, Robley, *Statistical Analyses of Industrial Property Retirements*. Iowa State College, Engineering Experiment Station, Bulletin 125. 1935.

³Marston, Anson, Robley Winfrey, and Jean C. Hempstead, *Supra* Note 1.

⁴Wolf, Frank K. and W. Chester Fitch. *Depreciation Systems*. Iowa State University Press. 1994.

Schedules of Annual Transactions in Plant Records

The property group used to illustrate the retirement rate method is observed for the experience band 2014-2023 for which there were placements during the years 2009-2023. In order to illustrate the summation of the aged data by age interval, the data were compiled in the manner presented in Schedules 1 and 2 on pages II-11 and II-12. In Schedule 1, the year of installation (year placed) and the year of retirement are shown. The age interval during which a retirement occurred is determined from this information. In the example which follows, \$10,000 of the dollars invested in 2009 were retired in 2014. The \$10,000 retirement occurred during the age interval between 4½ and 5½ years on the basis that approximately one-half of the amount of property was installed prior to and subsequent to July 1 of each year. That is, on the average, property installed during a year is placed in service at the midpoint of the year for the purpose of the analysis. All retirements also are stated as occurring at the midpoint of a one-year age interval of time, except the first age interval which encompasses only one-half year.

The total retirements occurring in each age interval in a band are determined by summing the amounts for each transaction year-installation year combination for that age interval. For example, the total of \$143,000 retired for age interval 4½-5½ is the sum of the retirements entered on Schedule 1 immediately above the stair step line drawn on the table beginning with the 2014 retirements of 2009 installations and ending with the 2023 retirements of the 2018 installations. Thus, the total amount of 143 for age interval 4½-5½ equals the sum of:

$$10 + 12 + 13 + 11 + 13 + 13 + 15 + 17 + 19 + 20.$$

**SCHEDULE 1. RETIREMENTS FOR EACH YEAR 2014-2023
SUMMARIZED BY AGE INTERVAL**

Experience Band 2014-2023

Placement Band 2009-2023

Year Placed	Retirements, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
(1)	2014 (2)	2015 (3)	2016 (4)	2017 (5)	2018 (6)	2019 (7)	2020 (8)	2021 (9)	2022 (10)	2023 (11)	(12)	(13)
2009	10	11	12	13	14	16	23	24	25	26	26	13½-14½
2010	11	12	13	15	16	18	20	21	22	19	44	12½-13½
2011	11	12	13	14	16	17	19	21	22	18	64	11½-12½
2012	8	9	10	11	11	13	14	15	16	17	83	10½-11½
2013	9	10	11	12	13	14	16	17	19	20	93	9½-10½
2014	4	9	10	11	12	13	14	15	16	20	105	8½-9½
2015		5	11	12	13	14	15	16	18	20	113	7½-8½
2016			6	12	13	15	16	17	19	19	124	6½-7½
2017				6	13	15	16	17	19	19	131	5½-6½
2018					7	14	16	17	19	20	143	4½-5½
2019						8	18	20	22	23	146	3½-4½
2020							9	20	22	25	150	2½-3½
2021								11	23	25	151	1½-2½
2022									11	24	153	½-1½
2023										13	80	0-½
Total	53	68	86	106	128	157	196	231	273	308	1,606	

**SCHEDULE 2. OTHER TRANSACTIONS FOR EACH YEAR 2014-2023
SUMMARIZED BY AGE INTERVAL**

Experience Band 2014-2023

Placement Band 2009-2023

Year Placed	Acquisitions, Transfers and Sales, Thousands of Dollars										Total During Age Interval	Age Interval
	During Year											
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2009	-	-	-	-	-	-	60 ^a	-	-	-	-	13½-14½
2010	-	-	-	-	-	-	-	-	-	-	-	12½-13½
2011	-	-	-	-	-	-	-	-	-	-	-	11½-12½
2012	-	-	-	-	-	-	-	(5) ^b	-	-	60	10½-11½
2013	-	-	-	-	-	-	-	6 ^a	-	-	-	9½-10½
2014	-	-	-	-	-	-	-	-	-	-	(5)	8½-9½
2015	-	-	-	-	-	-	-	-	-	-	6	7½-8½
2016	-	-	-	-	-	-	-	-	-	-	-	6½-7½
2017	-	-	-	-	-	-	-	(12) ^b	-	-	-	5½-6½
2018	-	-	-	-	-	-	-	-	22 ^a	-	-	4½-5½
2019	-	-	-	-	-	-	-	(19) ^b	-	-	10	3½-4½
2020	-	-	-	-	-	-	-	-	-	-	-	2½-3½
2021	-	-	-	-	-	-	-	-	-	(102) ^c	(121)	1½-2½
2022	-	-	-	-	-	-	-	-	-	-	-	½-1½
2023	-	-	-	-	-	-	-	-	-	-	-	0-½
Total	-	-	-	-	-	-	60	(30)	22	(102)	(50)	

^a Transfer Affecting Exposures at Beginning of Year

^b Transfer Affecting Exposures at End of Year

^c Sale with Continued Use

Parentheses Denote Credit Amount.

In Schedule 2, other transactions which affect the group are recorded in a similar manner. The entries illustrated include transfers and sales. The entries which are credits to the plant account are shown in parentheses. The items recorded on this schedule are not totaled with the retirements, but are used in developing the exposures at the beginning of each age interval.

Schedule of Plant Exposed to Retirement

The development of the amount of plant exposed to retirement at the beginning of each age interval is illustrated in Schedule 3 on page II-14. The surviving plant at the beginning of each year from 2014 through 2023 is recorded by year in the portion of the table headed "Annual Survivors at the Beginning of the Year." The last amount entered in each column is the amount of new plant added to the group during the year. The amounts entered in Schedule 3 for each successive year following the beginning balance or addition are obtained by adding or subtracting the net entries shown on Schedules 1 and 2. For the purpose of determining the plant exposed to retirement, transfers-in are considered as being exposed to retirement in this group at the beginning of the year in which they occurred, and the sales and transfers-out are considered to be removed from the plant exposed to retirement at the beginning of the following year. Thus, the amounts of plant shown at the beginning of each year are the amounts of plant from each placement year considered to be exposed to retirement at the beginning of each successive transaction year. For example, the exposures for the installation year 2019 are calculated in the following manner:

Exposures at age 0	= amount of addition	= \$750,000
Exposures at age ½	= \$750,000 - \$ 8,000	= \$742,000
Exposures at age 1½	= \$742,000 - \$18,000	= \$724,000
Exposures at age 2½	= \$724,000 - \$20,000 - \$19,000	= \$685,000
Exposures at age 3½	= \$685,000 - \$22,000	= \$663,000

SCHEDULE 3. PLANT EXPOSED TO RETIREMENT
JANUARY 1 OF EACH YEAR 2014-2023
SUMMARIZED BY AGE INTERVAL

Experience Band 2014-2023

Placement Band 2009-2023

Year Placed (1)	Exposures, Thousands of Dollars										Total at Beginning of Age Interval (12)	Age Interval (13)
	Annual Survivors at the Beginning of the Year											
	2014 (2)	2015 (3)	2016 (4)	2017 (5)	2018 (6)	2019 (7)	2020 (8)	2021 (9)	2022 (10)	2023 (11)		
2009	255	245	234	222	209	195	239	216	192	167	167	13½-14½
2010	279	268	256	243	228	212	194	174	153	131	323	12½-13½
2011	307	296	284	271	257	241	224	205	184	162	531	11½-12½
2012	338	330	321	311	300	289	276	262	242	226	823	10½-11½
2013	376	367	357	346	334	321	307	297	280	261	1,097	9½-10½
2014	420 ^a	416	407	397	386	374	361	347	332	316	1,503	8½-9½
2015		460 ^a	455	444	432	419	405	390	374	356	1,952	7½-8½
2016			510 ^a	504	492	479	464	448	431	412	2,463	6½-7½
2017				580 ^a	574	561	546	530	501	482	3,057	5½-6½
2018					660 ^a	653	639	623	628	609	3,789	4½-5½
2019						750 ^a	742	724	685	663	4,332	3½-4½
2020							850 ^a	841	821	799	4,955	2½-3½
2021								960 ^a	949	926	5,719	1½-2½
2022									1,080 ^a	1,069	6,579	½-1½
2023										1,220 ^a	7,490	0-½
Total	1,975	2,382	2,824	3,318	3,872	4,494	5,247	6,017	6,852	7,799	44,780	

^aAdditions during the year

For the entire experience band 2014-2023, the total exposures at the beginning of an age interval are obtained by summing diagonally in a manner similar to the summing of the retirements during an age interval (Schedule 1). For example, the figure of 3,789, shown as the total exposures at the beginning of age interval 4½-5½, is obtained by summing:

$$255 + 268 + 284 + 311 + 334 + 374 + 405 + 448 + 501 + 609.$$

Original Life Table

The original life table, illustrated in Schedule 4 on page II-16, is developed from the totals shown on the schedules of retirements and exposures, Schedules 1 and 3, respectively. The exposures at the beginning of the age interval are obtained from the corresponding age interval of the exposure schedule, and the retirements during the age interval are obtained from the corresponding age interval of the retirement schedule. The retirement ratio is the result of dividing the retirements during the age interval by the exposures at the beginning of the age interval. The percent surviving at the beginning of each age interval is derived from survivor ratios, each of which equals one minus the retirement ratio. The percent surviving is developed by starting with 100% at age zero and successively multiplying the percent surviving at the beginning of each interval by the survivor ratio, i.e., one minus the retirement ratio for that age interval. The calculations necessary to determine the percent surviving at age 5½ are as follows:

Percent surviving at age 4½	=	88.15
Exposures at age 4½	=	3,789,000
Retirements from age 4½ to 5½	=	143,000
Retirement Ratio	=	$143,000 \div 3,789,000 = 0.0377$
Survivor Ratio	=	$1.000 - 0.0377 = 0.9623$
Percent surviving at age 5½	=	$(88.15) \times (0.9623) = 84.83$

The totals of the exposures and retirements (columns 2 and 3) are shown for the purpose of checking with the respective totals in Schedules 1 and 3. The ratio of the total retirements to the total exposures, other than for each age interval, is meaningless.

SCHEDULE 4. ORIGINAL LIFE TABLE
CALCULATED BY THE RETIREMENT RATE METHOD

Experience Band 2014-2023

Placement Band 2009-2023

(Exposure and Retirement Amounts are in Thousands of Dollars)

Age at Beginning of Interval	Exposures at Beginning of Age Interval	Retirements During Age Interval	Retirement Ratio	Survivor Ratio	Percent Surviving at Beginning of Age Interval
(1)	(2)	(3)	(4)	(5)	(6)
0.0	7,490	80	0.0107	0.9893	100.00
0.5	6,579	153	0.0233	0.9767	98.93
1.5	5,719	151	0.0264	0.9736	96.62
2.5	4,955	150	0.0303	0.9697	94.07
3.5	4,332	146	0.0337	0.9663	91.22
4.5	3,789	143	0.0377	0.9623	88.15
5.5	3,057	131	0.0429	0.9571	84.83
6.5	2,463	124	0.0503	0.9497	81.19
7.5	1,952	113	0.0579	0.9421	77.11
8.5	1,503	105	0.0699	0.9301	72.65
9.5	1,097	93	0.0848	0.9152	67.57
10.5	823	83	0.1009	0.8991	61.84
11.5	531	64	0.1205	0.8795	55.60
12.5	323	44	0.1362	0.8638	48.90
13.5	<u>167</u>	<u>26</u>	0.1557	0.8443	42.24
					35.66
Total	<u>44,780</u>	<u>1,606</u>			

Column 2 from Schedule 3, Column 12, Plant Exposed to Retirement.

Column 3 from Schedule 1, Column 12, Retirements for Each Year.

Column 4 = Column 3 Divided by Column 2.

Column 5 = 1.0000 Minus Column 4.

Column 6 = Column 5 Multiplied by Column 6 as of the Preceding Age Interval.

The original survivor curve is plotted from the original life table (column 6, Schedule 4). When the curve terminates at a percent surviving greater than zero, it is called a stub survivor curve. Survivor curves developed from retirement rate studies generally are stub curves.

Smoothing the Original Survivor Curve

The smoothing of the original survivor curve eliminates any irregularities and serves as the basis for the preliminary extrapolation to zero percent surviving of the original stub curve. Even if the original survivor curve is complete from 100% to zero percent, it is desirable to eliminate any irregularities, as there is still an extrapolation for the vintages which have not yet lived to the age at which the curve reaches zero percent. In this study, the smoothing of the original curve with established type curves was used to eliminate irregularities in the original curve.

The lowa type curves are used in this study to smooth those original stub curves which are expressed as percents surviving at ages in years. Each original survivor curve was compared to the lowa curves using visual and mathematical matching in order to determine the better fitting smooth curves. In Figures 6, 7, and 8, the original curve developed in Schedule 4 is compared with the L, S, and R lowa type curves which most nearly fit the original survivor curve. In Figure 6, the L1 curve with an average life between 12 and 13 years appears to be the best fit. In Figure 7, the S0 type curve with a 12-year average life appears to be the best fit and appears to be better than the L1 fitting. In Figure 8, the R1 type curve with a 12-year average life appears to be the best fit and appears to be better than either the L1 or the S0.

In Figure 9, the three fittings, 12-L1, 12-S0 and 12-R1 are drawn for comparison purposes. It is probable that the 12-R1 lowa curve would be selected as the most representative of the plotted survivor characteristics of the group.



FIGURE 6. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

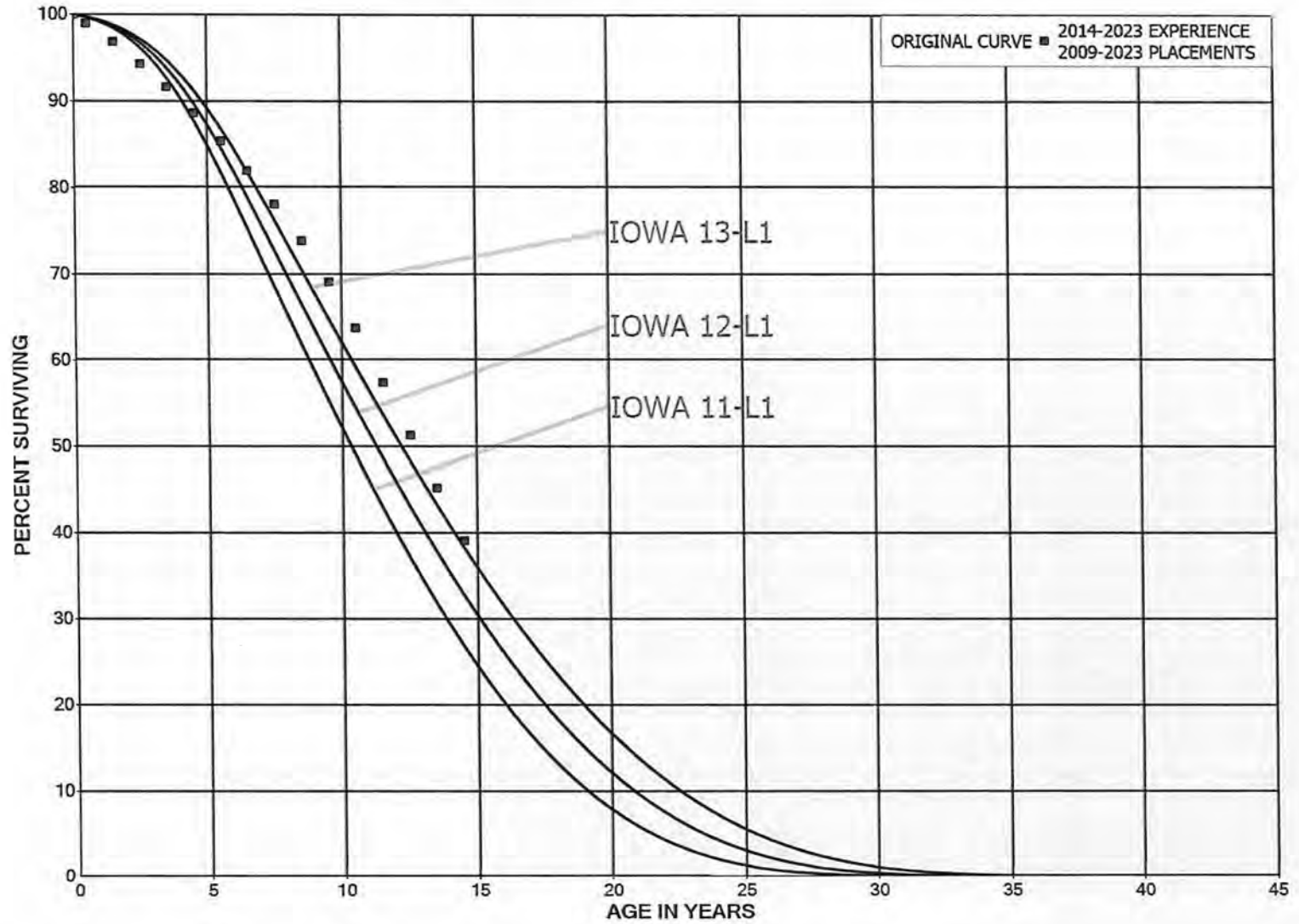




FIGURE 7. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN S0 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

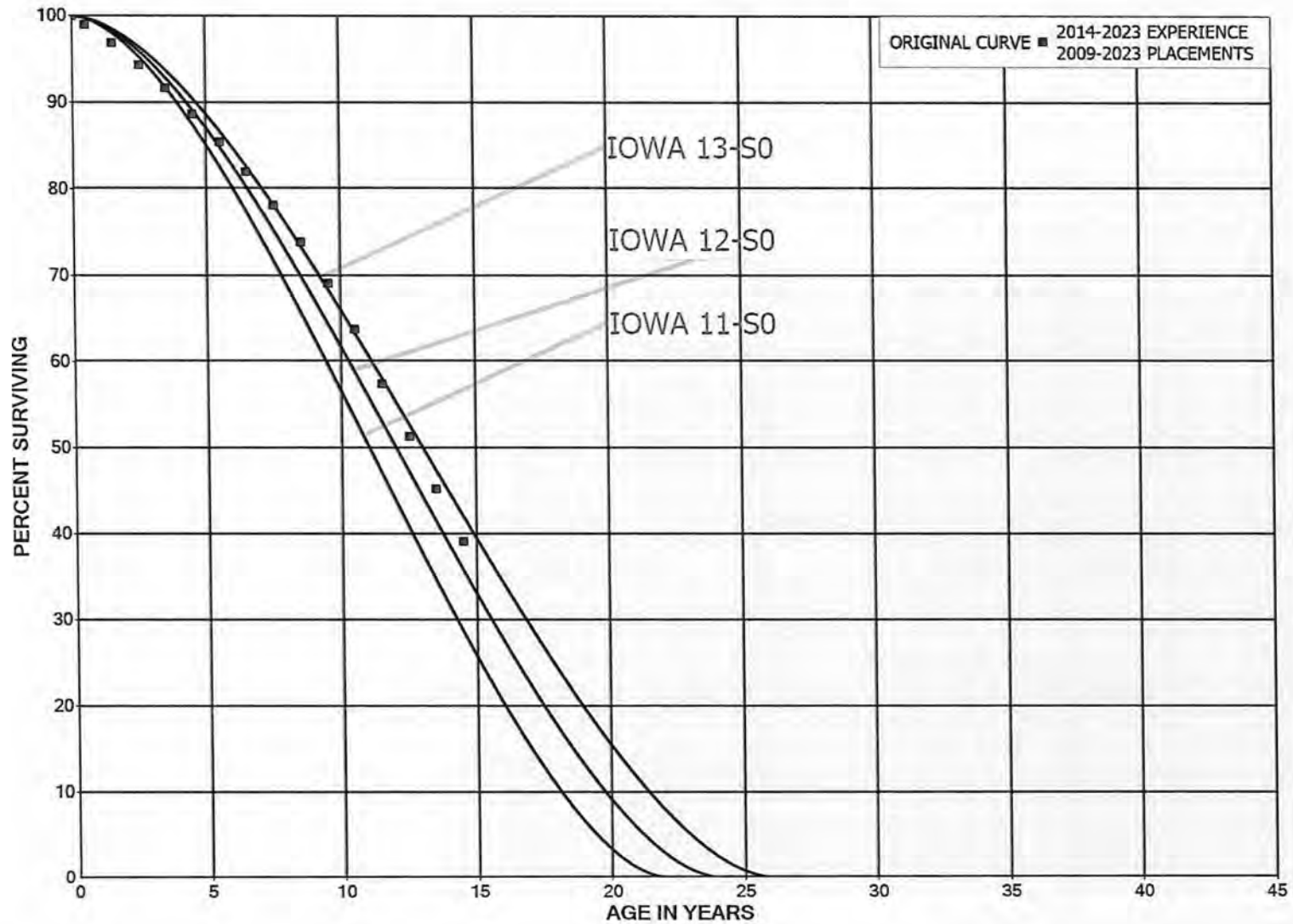




FIGURE 8. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN R1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES

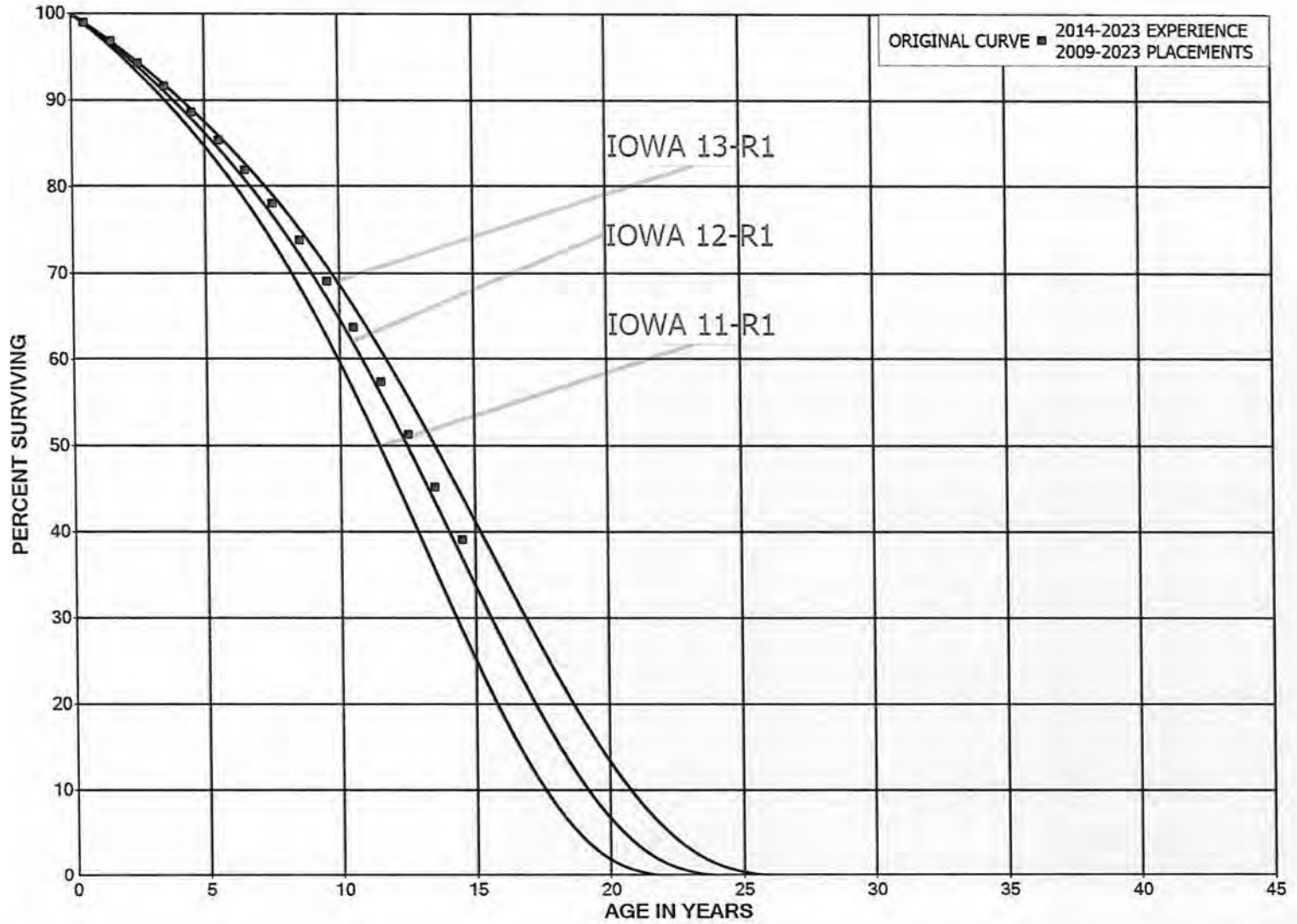
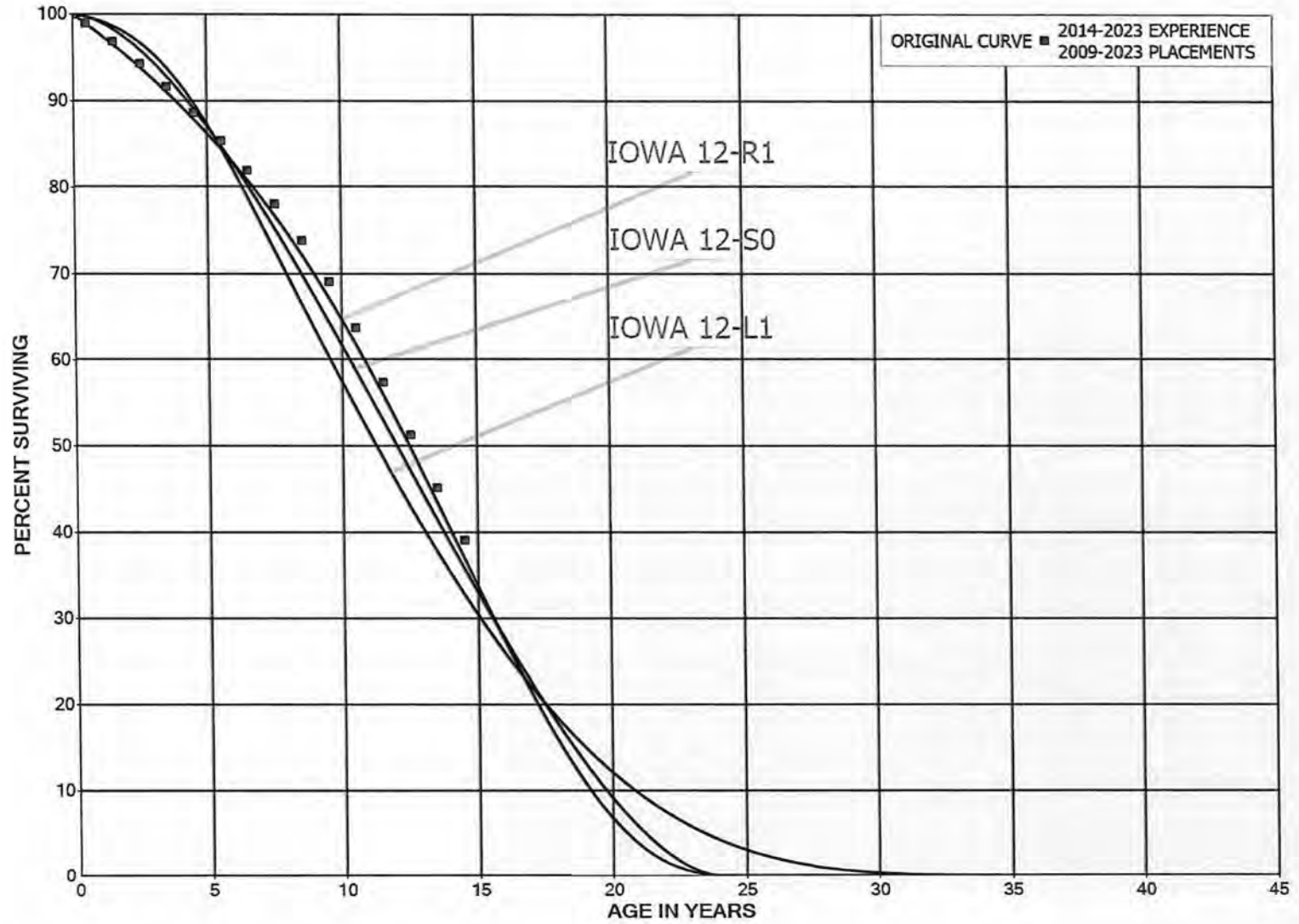




FIGURE 9. ILLUSTRATION OF THE MATCHING OF AN ORIGINAL SURVIVOR CURVE WITH AN L1, S0 AND R1 IOWA TYPE CURVE
ORIGINAL AND SMOOTH SURVIVOR CURVES



PART III. SERVICE LIFE CONSIDERATIONS

PART III. SERVICE LIFE CONSIDERATIONS

FIELD TRIPS

In order to be familiar with the operation of the Company and observe representative portions of the plant, field trips were conducted for the study. A general understanding of the function of the plant and information with respect to the reasons for past retirements and the expected future causes of retirements are obtained during field trips. This knowledge and information were incorporated in the interpretation and extrapolation of the statistical analyses.

The following is a list of the locations visited during the most recent field trip.

August 5-7, 2024

Fontana

- Main Office
- Summit Plant
- Pump Station F-40
- Booster Station F-13
- Treatment Plant F-10
- Booster Station F-31
- Booster Station F-15
- Treatment Plant F-23
- Treatment Plant F-21
- Treatment Plant F-43

Los Angeles

- Main Office
- Plant No. 2
- Plant No. 11
- Booster Station B-5
- Treatment Plant B-6
- Storage Plant and Boosting Station M-3
- Gage Booster Station
- Well #1
- Reservoir Site B-24

Service Life Analysis

The service life estimates were based on judgment which considered a number of factors. The primary factors were the statistical analyses of data; current company policies and outlook as determined during field reviews of the property and other conversations with management; and the survivor curve estimates from previously utilized by this company and other water companies.

The Account 343.00, Transmission and Distribution Mains, is used to illustrate the manner in which the study was conducted for the accounts in the preceding list. Aged plant accounting data have been compiled for the years through 2023. These data have been coded according to account or property group, type of transaction, year in which the transaction took place, and year in which the utility plant was placed in service. The retirements, other plant transactions and plant additions were analyzed by the retirement rate method.

The survivor curve estimate for this account is the 85-R3 and is based on the statistical indication for the period 2009-2023. The 85-R3 is a good fit of the significant portion of the original survivor curve as set forth on page VII-24, is consistent with management outlook for a continuation of the historical experience and is within the typical service life range of 60 to 100 years for water mains.

Generally, the estimates for the remaining accounts of the total depreciable plant in service were based on judgments which considered the nature of the plant and equipment, the previous estimate for this company and a general knowledge of service lives for similar equipment in other water companies.

The selected amortization periods for most General Plant accounts are described in the section "Calculation of Annual and Accrued Depreciation."

PART IV. NET SALVAGE CONSIDERATIONS

PART IV. NET SALVAGE CONSIDERATIONS

NET SALVAGE ANALYSIS

The estimates of net salvage by account were based in part on historical data compiled for the years 2007 through 2023 for water plant. Cost of removal and gross salvage were expressed as percents of the original cost of plant retired, both on annual and three-year moving average bases. The most recent five-year average also was calculated for consideration. The net salvage estimates by account are expressed as a percent of the original cost of plant retired.

Net Salvage Considerations

The estimates of future net salvage are expressed as percentages of surviving plant in service, i.e., all future retirements. In cases in which removal costs are expected to exceed salvage receipts, a negative net salvage percentage is estimated. The net salvage estimates were based on judgment which incorporated analyses of historical cost of removal and gross salvage data, expectations with respect to future removal requirements and markets for retired equipment and materials.

The analyses of historical cost of removal and gross salvage data are presented in the section titled "Net Salvage Statistics" for the plant accounts for which the net salvage estimate relied partially on those analyses.

The analysis for Account 345.00, Services, is used to illustrate the manner in which the study was conducted for most plant accounts. Net salvage data for the period 2007 through 2023 were analyzed for this account. The data include cost of removal, gross salvage and net salvage amounts and each of these amounts is expressed as a percent

of the original cost of regular retirements. Three-year moving averages for the 2007-2009 through 2021-2023 periods were computed to smooth the annual amounts.

Cost of removal has been consistently around 3 to 5 percent of retirements. Cost of removal for the most recent five years averaged 7 percent. There has been no gross salvage throughout the period for the account.

The net salvage percent based on the overall period 2007 through 2023 is negative 4 percent and based on the most recent five-year period is negative 7 percent. Estimates for many other water utilities for this account are in the negative 20 to negative 50 percent range. The net salvage estimate for San Gabriel for this account is negative 5, which is conservative when compared to the overall net salvage percent in the historical data, is at the lower end of the range of other water company estimates and is consistent with future expectations for this account.

The net salvage percents for the remaining accounts were based on judgment incorporating estimates of other water utilities.

**PART V. CALCULATION OF ANNUAL AND
ACCRUED DEPRECIATION**

PART V. CALCULATION OF ANNUAL AND ACCRUED DEPRECIATION

GROUP DEPRECIATION PROCEDURES

A group procedure for depreciation is appropriate when considering more than a single item of property. Normally the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group. In the average service life procedure, the rate of annual depreciation is based on the average life or average remaining life of the group, and this rate is applied to the surviving balances of the group's cost. A characteristic of this procedure is that the cost of plant retired prior to average life is not fully recouped at the time of retirement, whereas the cost of plant retired subsequent to average life is more than fully recouped. Over the entire life cycle, the portion of cost not recouped prior to average life is balanced by the cost recouped subsequent to average life.

Single Unit of Property

The calculation of straight line depreciation for a single unit of property is straightforward. For example, if a \$1,000 unit of property attains an age of four years and has a life expectancy of six years, the annual accrual over the total life is:

$$\frac{\$1,000}{(4 + 6)} = \$100 \text{ per year.}$$

The accrued depreciation is:

$$\$1,000 \left(1 - \frac{6}{10} \right) = \$400.$$

Group Depreciation Procedures

When more than a single item of property is under consideration, a group procedure for depreciation is appropriate because normally all of the items within a group do not have identical service lives, but have lives that are dispersed over a range of time. There are two primary group procedures, namely, average service life and equal life group.

Remaining Life Annual Accruals

For the purpose of calculating remaining life accruals as of December 31, 2023, the depreciation reserve for each plant account is allocated among vintages in proportion to the calculated accrued depreciation for the account. Explanations of remaining life accruals and calculated accrued depreciation follow. The detailed calculations as of December 31, 2023, are set forth in the Results of Study section of the report.

Average Service Life Procedure

In the average service life procedure, the remaining life annual accrual for each vintage is determined by dividing future book accruals (original cost less book reserve) by the average remaining life of the vintage. The average remaining life is a directly weighted average derived from the estimated future survivor curve in accordance with the average service life procedure.

The calculated accrued depreciation for each depreciable property group represents that portion of the depreciable cost of the group which would not be allocated to expense through future depreciation accruals, if current forecasts of life characteristics are used as the basis for such accruals. The accrued depreciation calculation consists of applying an appropriate ratio to the surviving original cost of each vintage of each

account, based upon the attained age and service life. The straight line accrued depreciation ratios are calculated as follows for the average service life procedure:

$$\text{Ratio} = 1 - \frac{\text{Average Remaining Life}}{\text{Average Service Life}}$$

CALCULATION OF ANNUAL AND ACCRUED AMORTIZATION

Amortization is the gradual extinguishment of an amount in an account by distributing such amount over a fixed period, over the life of the asset or liability to which it applies, or over the period during which it is anticipated the benefit will be realized. Normally, the distribution of the amount is in equal amounts to each year of the amortization period.

The calculation of annual and accrued amortization requires the selection of an amortization period. The amortization periods used in this report were based on judgment which incorporated a consideration of the period during which the assets will render most of their service, the amortization period and service lives used by other utilities, and the service life estimates previously used for the asset under depreciation accounting.

Amortization accounting is proposed for certain General Plant accounts that represent numerous units of property, but a very small portion of depreciable utility plant in service. The accounts for all three divisions and their amortization periods are as follows:

<u>Account</u>	<u>Amortization Period, Years</u>
372.00 Office Furniture and Equipment	15
372.20 Remote Reading Devices	10
376.00 Communication Equipment	15
378.00 Tools, Shop and Garage Equipment	20

The calculated accrued amortization is equal to the original cost multiplied by the ratio of the vintage's age to its amortization period. The annual amortization amount is determined by dividing the original cost by the period of amortization for the account.

PART VI. RESULTS OF STUDY

PART VI. RESULTS OF STUDY

QUALIFICATION OF RESULTS

The calculated annual and accrued depreciation are the principal results of the study. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and net salvage and for the change of the composition of property in service. The annual accrual rates were calculated in accordance with the straight line remaining life method of depreciation, using the average service life procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

The annual depreciation accrual rates are applicable specifically to the water plant in service as of December 31, 2023. For most plant accounts, the application of such rates to future balances that reflect additions subsequent to December 31, 2023, is reasonable for a period of three to five years.

DESCRIPTION OF DETAILED TABULATIONS

A summary of the results of the study, as applied to the original cost of water plant in service as of December 31, 2023, are presented on pages VI-5 through VI-9 of this report. The schedules set forth the original cost, the book depreciation reserve, future accruals, the calculated annual depreciation rate and amount, and the composite remaining life related to water plant. Each table sets forth the total annual depreciation accrual rates for water plant assets as of December 31, 2023.

The service life estimates were based on judgment that incorporated statistical analysis of retirement data, discussions with management and consideration of estimates made for other water utilities. The results of the statistical analysis of service life are presented in the section beginning on page VII-2, within the supporting documents of this report.

For each depreciable group analyzed by the retirement rate method, a chart depicting the original and estimated survivor curves is followed by a tabular presentation of the original life table(s) plotted on the chart. The survivor curves estimated for the depreciable groups are shown as dark smooth curves on the charts. Each smooth survivor curve is denoted by a numeral followed by the curve type designation. The numeral used is the average life derived from the entire curve from 100 percent to zero percent surviving. The titles of the chart indicate the group, the symbol used to plot the points of the original life table, and the experience and placement bands of the life tables which were plotted. The experience band indicates the range of years for which retirements were used to develop the stub survivor curve. The placements indicate, for the related experience band, the range of years of installations which appear in the experience.

The analyses of net salvage data are presented in the section titled, "Net Salvage Statistics." The tabulations present annual cost of removal and gross salvage data, three-year moving averages and the most recent five-year average. Data are shown in dollars and as percentages of original costs retired.

The tables of the calculated annual depreciation applicable to depreciable assets as of December 31, 2023 are presented in account sequence starting on page IX-2 of the

supporting documents. The tables indicate the estimated survivor curve and net salvage percent for the account and set forth, for each installation year, the original cost, the calculated accrued depreciation, the allocated book reserve, future accruals, the remaining life, and the calculated annual accrual amount.

SAN GABRIEL VALLEY WATER COMPANY
LOS ANGELES DIVISION

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, NET SALVAGE PERCENT, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2023

ACCOUNT (1)		SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AS OF DECEMBER 31, 2023 (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)
							AMOUNT (7)	RATE (8)	
DEPRECIABLE PLANT									
SOURCE OF SUPPLY AND PUMPING PLANT									
315.00	WELLS	50-R3	(15)	10,302,004.95	5,515,343	6,331,963	170,948	1.66	37.0
321.00	STRUCTURES AND IMPROVEMENTS - PUMPING	60-R3	(10)	17,954,721.08	8,422,554	13,327,639	269,705	1.50	49.4
324.00	PUMPING EQUIPMENT	45-S1.5	(5)	35,330,897.99	21,748,549	15,348,894	509,170	1.44	30.1
TOTAL SOURCE OF SUPPLY AND PUMPING PLANT				63,587,624.02	33,686,446	35,008,496	949,823	1.49	36.9
WATER TREATMENT PLANT									
331.00	STRUCTURES AND IMPROVEMENTS - WATER TREATMENT	60-R3	(5)	4,545,279.90	394,760	4,377,784	78,009	1.72	56.1
332.00	WATER TREATMENT EQUIPMENT	40-R2.5	(10)	66,809,319.97	23,746,582	49,743,670	1,774,344	2.66	28.0
TOTAL WATER TREATMENT PLANT				71,354,599.87	24,141,341	54,121,454	1,852,353	2.60	29.2
TRANSMISSION AND DISTRIBUTION PLANT									
342.00	RESERVOIRS AND TANKS	60-R4	(20)	33,783,632.14	7,578,237	32,962,121	788,185	2.33	41.8
343.00	TRANSMISSION AND DISTRIBUTION MAINS	85-R3	(30)	174,679,809.01	53,343,205	173,740,547	2,441,615	1.40	71.2
344.00	FIRE MAINS	65-R3	(30)	15,128.77	15,083	4,585	218	1.44	21.0
345.00	SERVICES	43-R3	(5)	64,459,669.49	16,369,374	51,313,279	1,683,466	2.61	30.5
345.10	FIRE SERVICES	40-R3	(5)	13,307,879.14	6,032,537	7,940,736	266,656	2.00	29.8
346.00	METERS	20-S1	5	7,130,970.79	312,441	8,461,981	658,209	9.23	9.8
348.00	HYDRANTS	65-R2.5	(40)	10,689,105.25	4,321,038	10,615,709	215,530	2.02	49.3
TOTAL TRANSMISSION AND DISTRIBUTION PLANT				304,046,194.59	87,971,916	283,038,958	6,053,879	1.99	46.8
GENERAL PLANT									
371.00	STRUCTURES AND IMPROVEMENTS - GENERAL	55-R3	(5)	2,257,774.22	659,980	1,710,683	52,742	2.34	32.4
372.00	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	4,100,175.97	1,639,441	2,460,735	339,758	8.29	7.2
372.20	REMOTE READING DEVICES	10-SQ	0	187,199.76	102,563	84,637	30,493	16.29	2.8
373.10	TRANSPORTATION EQUIPMENT - AUTOVANS	9-S0.5	0	191,525.58	173,168	18,358	3,106	1.62	5.9
373.20	TRANSPORTATION EQUIPMENT - TRUCKS	14-L2.5	0	3,664,132.77	1,679,921	1,984,212	208,896	5.70	9.5
373.30	TRANSPORTATION EQUIPMENT - TRAILERS	22-L1.5	0	46,802.56	45,946	857	77	0.16	11.1
373.40	TRANSPORTATION EQUIPMENT - OTHER	21-S0.5	0	352,845.75	257,802	95,044	4,703	1.33	20.2
376.00	COMMUNICATION EQUIPMENT	15-SQ	0	420,814.39	419,508	1,307	114	0.03	11.5
378.00	TOOLS, SHOP, AND GARAGE EQUIPMENT	20-SQ	0	1,187,828.70	804,129	383,700	83,484	7.03	4.6
TOTAL GENERAL PLANT				12,409,099.70	5,782,458	6,739,533	723,373	5.83	9.3
TOTAL DEPRECIABLE PLANT				451,397,518.18	151,582,160	378,908,441	9,579,428	2.12	39.6

SAN GABRIEL VALLEY WATER COMPANY
LOS ANGELES DIVISION

TABLE 1. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, NET SALVAGE PERCENT, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2023

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AS OF DECEMBER 31, 2023 (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)
						AMOUNT (7)	RATE (8)	
NONDEPRECIABLE AND ACCOUNTS NOT STUDIED								
301.00			13,810.08					
302.00			2,500.00					
303.00			10.00					
306.00			18,160,579.58					
306.10			19,861,952.40					
TOTAL NONDEPRECIABLE AND ACCOUNTS NOT STUDIED			38,038,882.06					
TOTAL WATER PLANT			489,436,400.24	151,582,160				

* ACCRUAL RATES FOR NEW ADDITIONS AS OF JANUARY 1, 2024 ARE AS FOLLOWS:

ACCOUNT	RATE
316.00 SUPPLY MAINS	1.83
372.10 DATA PROCESSING EQUIPMENT	20.00



SAN GABRIEL VALLEY WATER COMPANY
FONTANA DIVISION

TABLE 2. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, NET SALVAGE PERCENT, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2023

ACCOUNT		SURVIVOR CURVE	NET SALVAGE PERCENT	ORIGINAL COST AS OF DECEMBER 31, 2023	BOOK DEPRECIATION RESERVE	FUTURE ACCRUALS	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE
							AMOUNT	RATE	
(1)		(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
DEPRECIABLE PLANT									
SOURCE OF SUPPLY AND PUMPING PLANT									
315.00	WELLS	50-R3	(15)	11,191,317.45	6,659,861	6,210,154	167,809	1.50	37.0
316.00	SUPPLY MAINS	60-R2.5	(10)	827,743.08	24,187	886,330	15,128	1.83	58.6
321.00	STRUCTURES AND IMPROVEMENTS - PUMPING	60-R3	(10)	25,035,848.86	6,067,810	21,471,624	411,443	1.64	52.2
324.00	PUMPING EQUIPMENT	45-S1.5	(5)	57,354,654.59	30,277,871	29,944,716	825,618	1.44	36.3
TOTAL SOURCE OF SUPPLY AND PUMPING PLANT				94,409,563.98	43,029,529	58,512,624	1,419,996	1.50	41.2
WATER TREATMENT PLANT									
331.00	STRUCTURES AND IMPROVEMENTS - WATER TREATMENT	60-R3	(5)	7,162,860.12	1,872,761	5,648,032	114,732	1.60	49.2
332.00	WATER TREATMENT EQUIPMENT	40-R2.5	(10)	50,703,153.80	21,675,304	34,098,165	1,319,918	2.60	25.8
TOTAL WATER TREATMENT PLANT				57,865,813.92	23,548,065	39,746,197	1,434,650	2.48	27.7
TRANSMISSION AND DISTRIBUTION PLANT									
342.00	RESERVOIRS AND TANKS	60-R4	(20)	34,320,730.58	7,507,861	33,677,016	656,528	1.91	51.3
343.00	TRANSMISSION AND DISTRIBUTION MAINS	85-R3	(30)	224,832,931.75	65,028,211	227,254,601	3,166,905	1.41	71.8
344.00	FIRE MAINS	65-R3	(30)	808.26	831	218	13	1.81	16.8
345.00	SERVICES	43-R3	(5)	83,513,657.28	16,379,427	50,309,913	1,640,269	2.58	30.7
345.10	FIRE SERVICES	40-R3	(5)	28,014,949.03	8,345,186	21,070,510	643,049	2.30	32.8
346.00	METERS	20-S1	5	5,935,451.64	297,273	5,341,406	312,909	5.27	17.1
348.00	HYDRANTS	65-R2.5	(40)	15,460,958.93	6,366,574	15,278,789	308,109	1.99	49.6
TOTAL TRANSMISSION AND DISTRIBUTION PLANT				372,079,485.47	103,925,362	352,932,433	6,727,782	1.81	52.5
GENERAL PLANT									
371.00	STRUCTURES AND IMPROVEMENTS - GENERAL	55-R3	(5)	5,854,276.42	1,414,248	4,732,742	116,036	1.98	40.8
372.00	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	4,075,770.61	1,782,677	2,293,094	278,745	6.84	8.2
372.20	REMOTE READING DEVICES	10-SQ	0	163,408.33	99,919	63,489	22,628	13.85	2.8
373.10	TRANSPORTATION EQUIPMENT - AUTO/VANS	9-S0.5	0	373,608.72	253,209	120,400	20,566	5.50	5.9
373.20	TRANSPORTATION EQUIPMENT - TRUCKS	14-L2.5	0	4,164,864.56	2,073,385	2,091,480	221,791	5.33	9.4
373.30	TRANSPORTATION EQUIPMENT - TRAILERS	22-L1.5	0	206,975.62	96,717	110,259	7,195	3.48	15.3
373.40	TRANSPORTATION EQUIPMENT - OTHER	21-S0.5	0	381,872.09	251,140	130,732	8,550	2.24	15.3
376.00	COMMUNICATION EQUIPMENT	15-SQ	0	330,639.13	248,585	81,944	8,706	2.63	9.4
378.00	TOOLS, SHOP, AND GARAGE EQUIPMENT	20-SQ	0	2,353,949.13	1,075,000	1,278,949	99,111	4.21	12.9
TOTAL GENERAL PLANT				17,905,264.61	7,294,890	10,903,089	783,328	4.37	13.9
TOTAL DEPRECIABLE PLANT				542,260,127.98	177,797,846	462,094,543	10,365,756	1.91	44.6

SAN GABRIEL VALLEY WATER COMPANY
FONTANA DIVISION

TABLE 2. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, NET SALVAGE PERCENT, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2023

ACCOUNT (1)	SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AS OF DECEMBER 31, 2023 (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)
						AMOUNT (7)	RATE (8)	
NONDEPRECIABLE AND ACCOUNTS NOT STUDIED								
301.00	ORGANIZATION		2,287.60					
302.00	FRANCHISES AND CONSENTS		2,052.36					
306.00	LAND		10,558,418.93					
306.10	LAND RIGHTS		265,649.69					
TOTAL NONDEPRECIABLE AND ACCOUNTS NOT STUDIED			<u>10,826,408.58</u>					
TOTAL WATER PLANT			<u>553,086,536.56</u>	<u>177,797,846</u>				

SAN GABRIEL VALLEY WATER COMPANY
GENERAL CORPORATE DIVISION

TABLE 3. ESTIMATED SURVIVOR CURVES, ORIGINAL COST, NET SALVAGE PERCENT, BOOK DEPRECIATION RESERVE AND CALCULATED ANNUAL DEPRECIATION ACCRUALS RELATED TO WATER PLANT AS OF DECEMBER 31, 2023

ACCOUNT (1)		SURVIVOR CURVE (2)	NET SALVAGE PERCENT (3)	ORIGINAL COST AS OF DECEMBER 31, 2023 (4)	BOOK DEPRECIATION RESERVE (5)	FUTURE ACCRUALS (6)	CALCULATED ANNUAL ACCRUAL		COMPOSITE REMAINING LIFE (9)
							AMOUNT (7)	RATE (8)	
DEPRECIABLE PLANT									
TRANSMISSION AND DISTRIBUTION PLANT									
346.00	METERS	20-S1	5	6,515,225.80	(2,526,301)	8,715,765	1,185,188	18.19	7.4
TOTAL TRANSMISSION AND DISTRIBUTION PLANT				6,515,225.80	(2,526,301)	8,715,765	1,185,188	18.19	7.4
GENERAL PLANT									
371.00	STRUCTURES AND IMPROVEMENTS - GENERAL	55-R3	(5)	15,977,377.10	4,765,055	12,011,191	294,365	1.84	40.8
372.00	OFFICE FURNITURE AND EQUIPMENT	15-SQ	0	4,488,259.72	2,430,335	2,067,925	676,131	15.03	3.1
372.10	DATA PROCESSING EQUIPMENT	5-SQ	0	8,405,675.15	3,089,024	5,316,651	2,239,501	26.64	2.4
373.10	TRANSPORTATION EQUIPMENT - AUTOVANS	9-S0.5	0	1,565,416.11	661,024	904,392	155,052	10.10	5.7
373.20	TRANSPORTATION EQUIPMENT - TRUCKS	14-L2.5	0	166,862.34	69,195	97,467	10,059	6.04	9.7
373.40	TRANSPORTATION EQUIPMENT - OTHER	21-S0.5	0	-	2,260	(2,260)	-	0.00	-
376.00	COMMUNICATION EQUIPMENT	15-SQ	0	452,045.07	365,245	86,800	21,277	4.71	4.1
378.00	TOOLS, SHOP, AND GARAGE EQUIPMENT	20-SQ	0	56,708.49	52,882	3,826	1,035	1.83	3.7
TOTAL GENERAL PLANT				31,122,143.98	11,435,021	20,485,992	3,400,420	10.93	6.0
TOTAL DEPRECIABLE PLANT				37,637,369.78	8,908,720	29,201,757	4,585,608	12.18	6.4
NONDEPRECIABLE AND ACCOUNTS NOT STUDIED									
306.00	LAND			1,041,965.80					
TOTAL NONDEPRECIABLE AND ACCOUNTS NOT STUDIED				1,041,965.80					
TOTAL WATER PLANT				38,679,335.58	8,908,720				

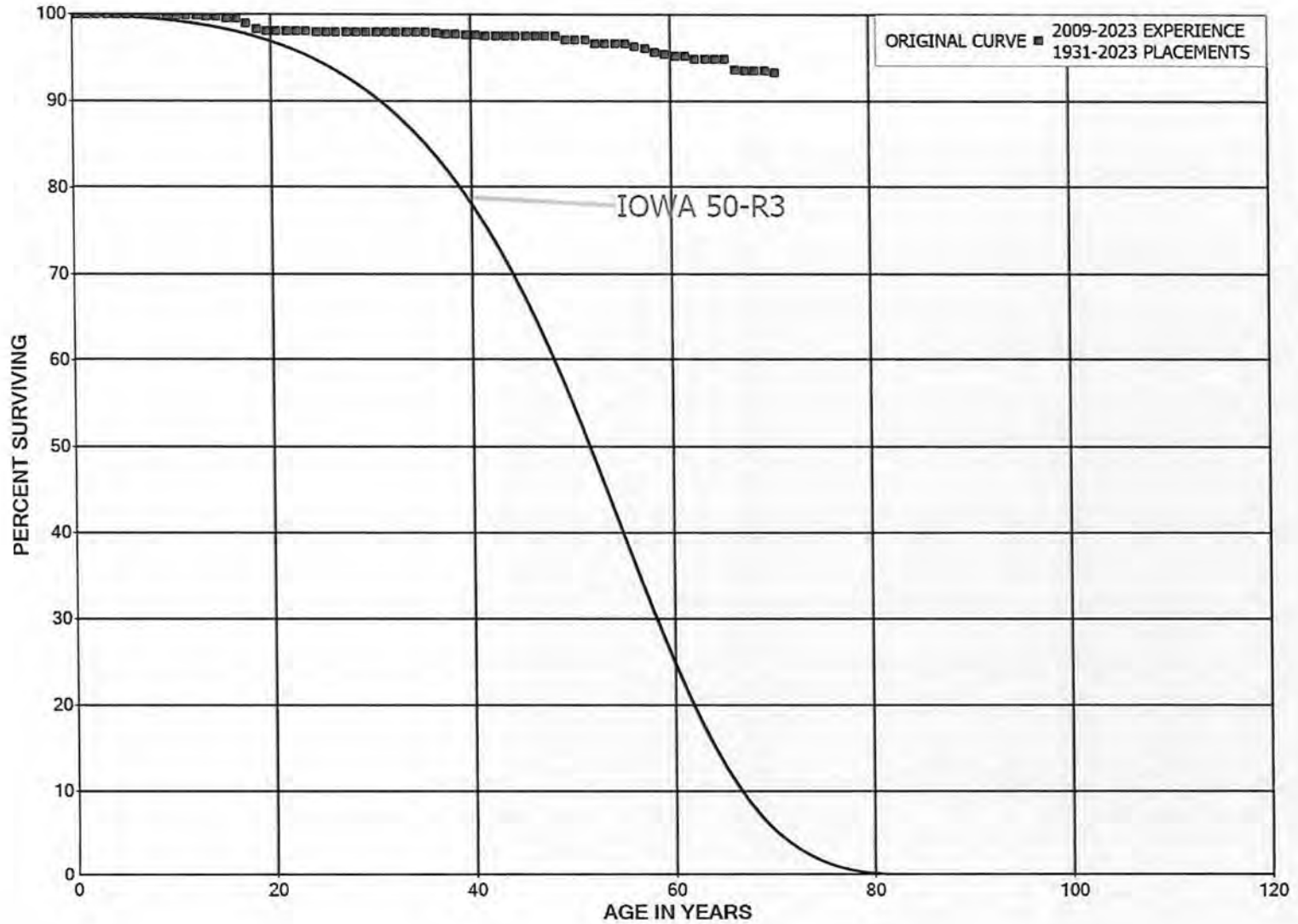
* ACCRUAL RATES FOR NEW ADDITIONS AS OF JANUARY 1, 2024 ARE AS FOLLOWS:

ACCOUNT	RATE
372.20 REMOTE READING DEVICES	10.00

PART VII. SERVICE LIFE STATISTICS



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 315.00 WELLS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1931-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	9,270,674		0.0000	1.0000	100.00
0.5	8,703,213	45	0.0000	1.0000	100.00
1.5	8,497,488	43	0.0000	1.0000	100.00
2.5	9,561,970	57	0.0000	1.0000	100.00
3.5	11,076,562	988	0.0001	0.9999	100.00
4.5	10,037,959	68	0.0000	1.0000	99.99
5.5	9,060,322	1,364	0.0002	0.9998	99.99
6.5	8,265,565	5,164	0.0006	0.9994	99.97
7.5	8,420,856	1,735	0.0002	0.9998	99.91
8.5	9,184,290	7,888	0.0009	0.9991	99.89
9.5	8,130,133	52	0.0000	1.0000	99.80
10.5	7,719,857	787	0.0001	0.9999	99.80
11.5	6,716,253	691	0.0001	0.9999	99.79
12.5	6,751,106	333	0.0000	1.0000	99.78
13.5	7,016,987	6,200	0.0009	0.9991	99.78
14.5	7,513,633	13,645	0.0018	0.9982	99.69
15.5	7,457,037	66	0.0000	1.0000	99.51
16.5	8,822,679	53,125	0.0060	0.9940	99.51
17.5	8,010,998	46,599	0.0058	0.9942	98.91
18.5	7,056,714	19,772	0.0028	0.9972	98.33
19.5	7,555,358	50	0.0000	1.0000	98.06
20.5	7,620,735	135	0.0000	1.0000	98.06
21.5	7,116,669	609	0.0001	0.9999	98.06
22.5	7,027,335	1,497	0.0002	0.9998	98.05
23.5	6,097,150	2,539	0.0004	0.9996	98.03
24.5	5,871,815	1,061	0.0002	0.9998	97.99
25.5	5,528,028	554	0.0001	0.9999	97.97
26.5	5,028,442		0.0000	1.0000	97.96
27.5	4,978,045		0.0000	1.0000	97.96
28.5	4,737,631		0.0000	1.0000	97.96
29.5	4,252,338	98	0.0000	1.0000	97.96
30.5	4,361,233		0.0000	1.0000	97.96
31.5	3,014,849	105	0.0000	1.0000	97.96
32.5	2,050,332	26	0.0000	1.0000	97.95
33.5	1,551,492	657	0.0004	0.9996	97.95
34.5	1,002,867	65	0.0001	0.9999	97.91
35.5	862,080	428	0.0005	0.9995	97.90
36.5	525,990	638	0.0012	0.9988	97.86
37.5	408,879	63	0.0002	0.9998	97.74
38.5	395,965	260	0.0007	0.9993	97.72

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1931-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	395,705		0.0000	1.0000	97.66
40.5	395,705	445	0.0011	0.9989	97.66
41.5	373,869		0.0000	1.0000	97.55
42.5	373,869		0.0000	1.0000	97.55
43.5	371,179		0.0000	1.0000	97.55
44.5	366,691		0.0000	1.0000	97.55
45.5	301,907		0.0000	1.0000	97.55
46.5	291,899	246	0.0008	0.9992	97.55
47.5	230,877		0.0000	1.0000	97.47
48.5	171,540	712	0.0041	0.9959	97.47
49.5	162,912		0.0000	1.0000	97.06
50.5	132,366	13	0.0001	0.9999	97.06
51.5	132,353	525	0.0040	0.9960	97.05
52.5	108,358		0.0000	1.0000	96.67
53.5	121,070		0.0000	1.0000	96.67
54.5	147,625		0.0000	1.0000	96.67
55.5	160,439	585	0.0036	0.9964	96.67
56.5	169,652	358	0.0021	0.9979	96.31
57.5	171,936	799	0.0046	0.9954	96.11
58.5	163,276	412	0.0025	0.9975	95.66
59.5	162,864	337	0.0021	0.9979	95.42
60.5	119,687	97	0.0008	0.9992	95.23
61.5	119,591	354	0.0030	0.9970	95.15
62.5	153,725		0.0000	1.0000	94.87
63.5	129,778		0.0000	1.0000	94.87
64.5	129,778		0.0000	1.0000	94.87
65.5	129,778	1,776	0.0137	0.9863	94.87
66.5	130,253	91	0.0007	0.9993	93.57
67.5	108,464		0.0000	1.0000	93.50
68.5	96,110		0.0000	1.0000	93.50
69.5	70,354	144	0.0020	0.9980	93.50
70.5	57,808		0.0000	1.0000	93.31
71.5	48,347		0.0000	1.0000	93.31
72.5	45,803		0.0000	1.0000	93.31
73.5	37,128		0.0000	1.0000	93.31
74.5	37,128		0.0000	1.0000	93.31
75.5	37,128		0.0000	1.0000	93.31
76.5	37,128		0.0000	1.0000	93.31
77.5	6,084		0.0000	1.0000	93.31
78.5	4,472		0.0000	1.0000	93.31

SAN GABRIEL VALLEY WATER COMPANY

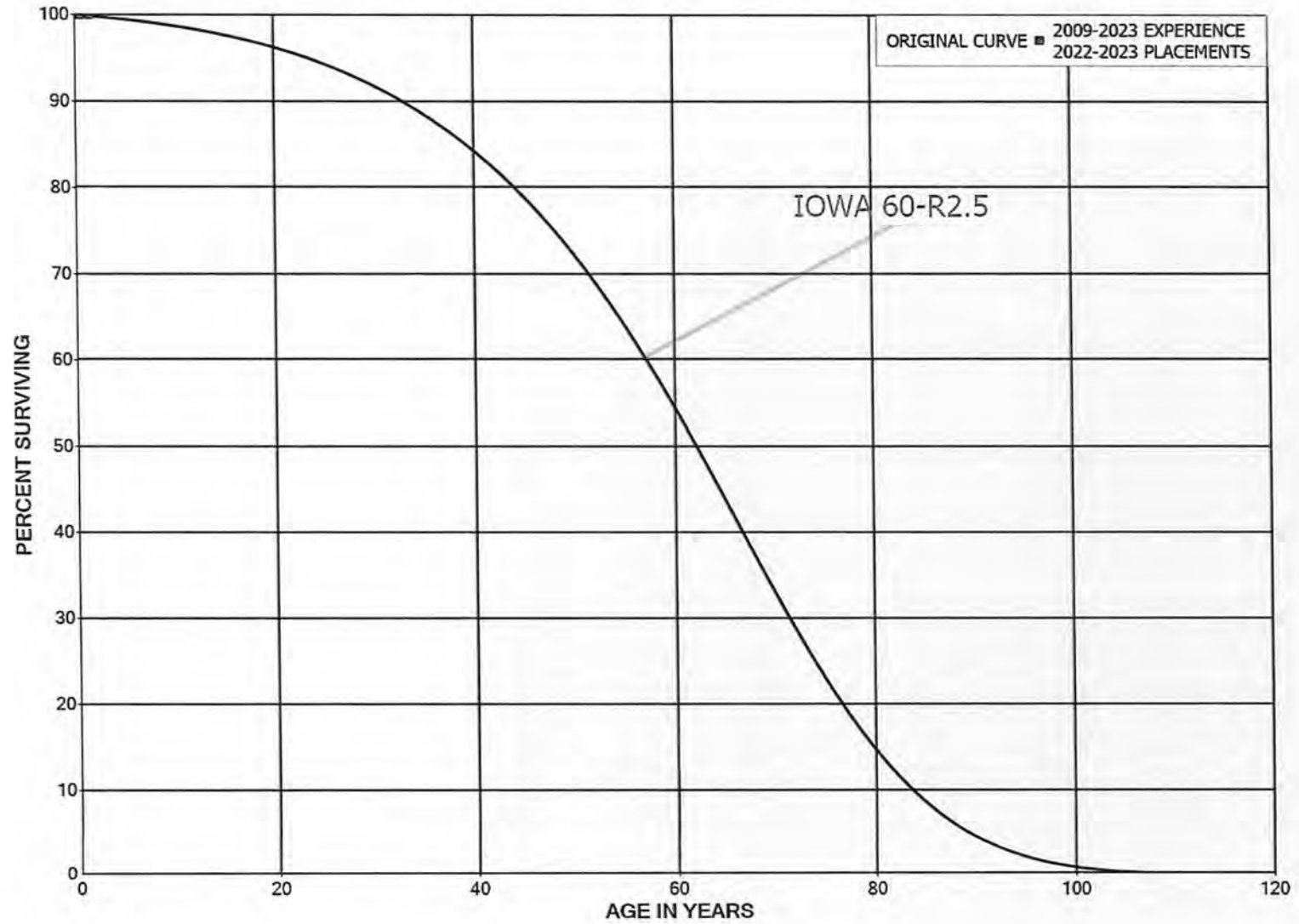
ACCOUNT 315.00 WELLS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1931-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	4,472		0.0000	1.0000	93.31
80.5	4,472	268	0.0598	0.9402	93.31
81.5	2,097		0.0000	1.0000	87.73
82.5	2,097		0.0000	1.0000	87.73
83.5	2,097		0.0000	1.0000	87.73
84.5	2,097		0.0000	1.0000	87.73
85.5	2,097		0.0000	1.0000	87.73
86.5	2,097		0.0000	1.0000	87.73
87.5	2,097		0.0000	1.0000	87.73
88.5	2,097		0.0000	1.0000	87.73
89.5	2,097		0.0000	1.0000	87.73
90.5	2,097		0.0000	1.0000	87.73
91.5	2,097		0.0000	1.0000	87.73
92.5					87.73



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 316.00 SUPPLY MAINS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

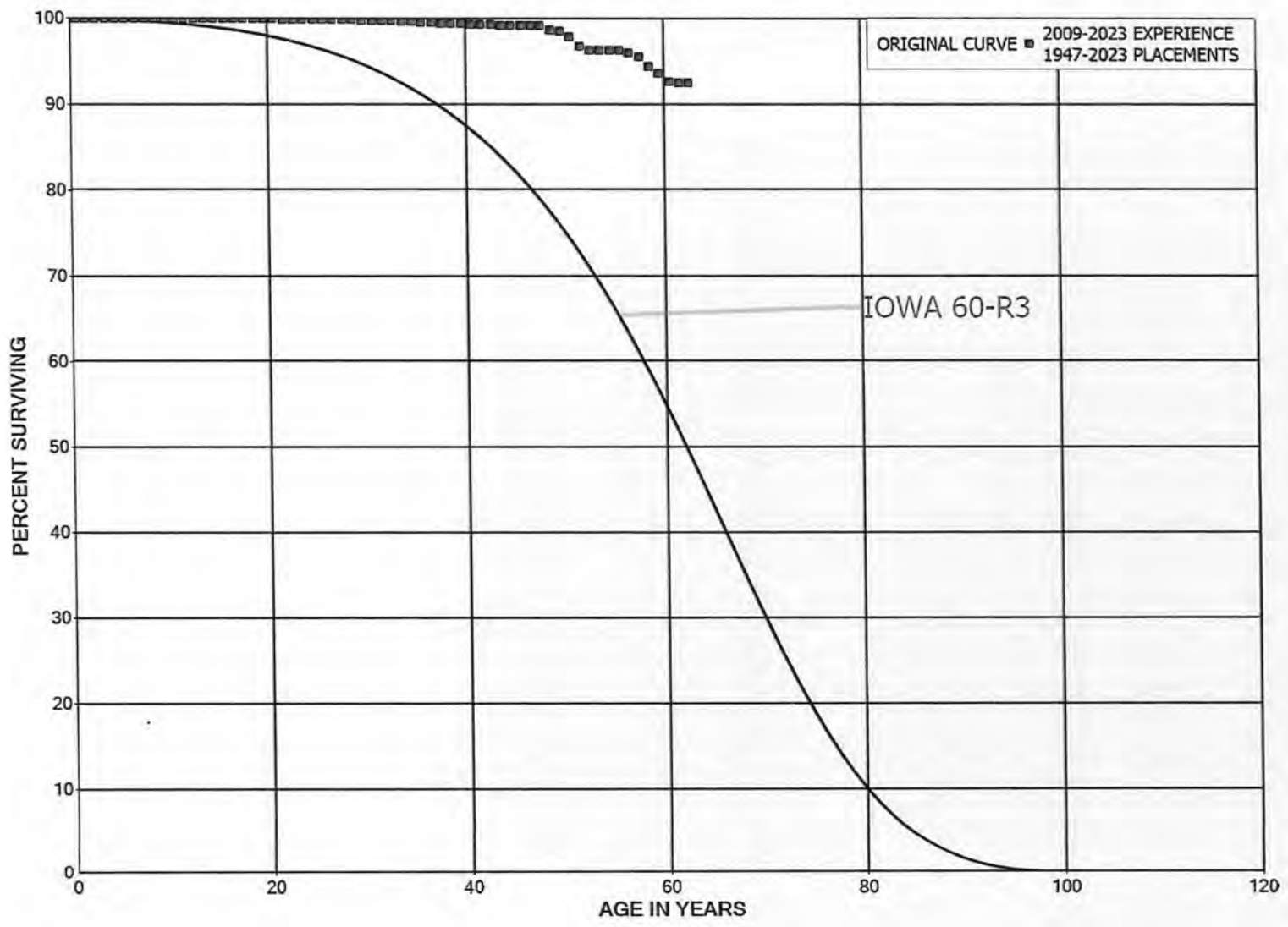
ACCOUNT 316.00 SUPPLY MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 2022-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	827,743		0.0000	1.0000	100.00
0.5	813,919		0.0000	1.0000	100.00
1.5					100.00



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

ORIGINAL LIFE TABLE

PLACEMENT BAND 1947-2023			EXPERIENCE BAND 2009-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
0.0	29,446,194	74	0.0000	1.0000	100.00	
0.5	27,234,774	160	0.0000	1.0000	100.00	
1.5	27,955,138	142	0.0000	1.0000	100.00	
2.5	27,711,313	196	0.0000	1.0000	100.00	
3.5	27,898,823	133	0.0000	1.0000	100.00	
4.5	24,303,729	537	0.0000	1.0000	100.00	
5.5	21,883,644	2,772	0.0001	0.9999	100.00	
6.5	20,447,670	2,696	0.0001	0.9999	99.98	
7.5	18,137,928	736	0.0000	1.0000	99.97	
8.5	17,805,108	74	0.0000	1.0000	99.97	
9.5	15,160,084	81	0.0000	1.0000	99.96	
10.5	14,716,719	248	0.0000	1.0000	99.96	
11.5	14,150,732	237	0.0000	1.0000	99.96	
12.5	12,486,995	649	0.0001	0.9999	99.96	
13.5	12,218,981	754	0.0001	0.9999	99.96	
14.5	12,138,507	323	0.0000	1.0000	99.95	
15.5	12,207,126	495	0.0000	1.0000	99.95	
16.5	10,535,632	494	0.0000	1.0000	99.94	
17.5	6,283,204	765	0.0001	0.9999	99.94	
18.5	3,643,524	779	0.0002	0.9998	99.93	
19.5	3,614,665	341	0.0001	0.9999	99.90	
20.5	3,747,230	309	0.0001	0.9999	99.90	
21.5	3,535,542	261	0.0001	0.9999	99.89	
22.5	3,020,625	127	0.0000	1.0000	99.88	
23.5	2,727,672	1,174	0.0004	0.9996	99.88	
24.5	2,267,515	707	0.0003	0.9997	99.83	
25.5	1,984,056	95	0.0000	1.0000	99.80	
26.5	1,934,759	96	0.0000	1.0000	99.80	
27.5	1,756,317	186	0.0001	0.9999	99.79	
28.5	1,644,152	330	0.0002	0.9998	99.78	
29.5	1,377,194	205	0.0001	0.9999	99.76	
30.5	1,146,029	153	0.0001	0.9999	99.75	
31.5	682,644	376	0.0006	0.9994	99.73	
32.5	601,957	355	0.0006	0.9994	99.68	
33.5	554,534	145	0.0003	0.9997	99.62	
34.5	542,543	246	0.0005	0.9995	99.59	
35.5	301,203	101	0.0003	0.9997	99.55	
36.5	259,491	201	0.0008	0.9992	99.51	
37.5	258,749	100	0.0004	0.9996	99.44	
38.5	244,212	130	0.0005	0.9995	99.40	

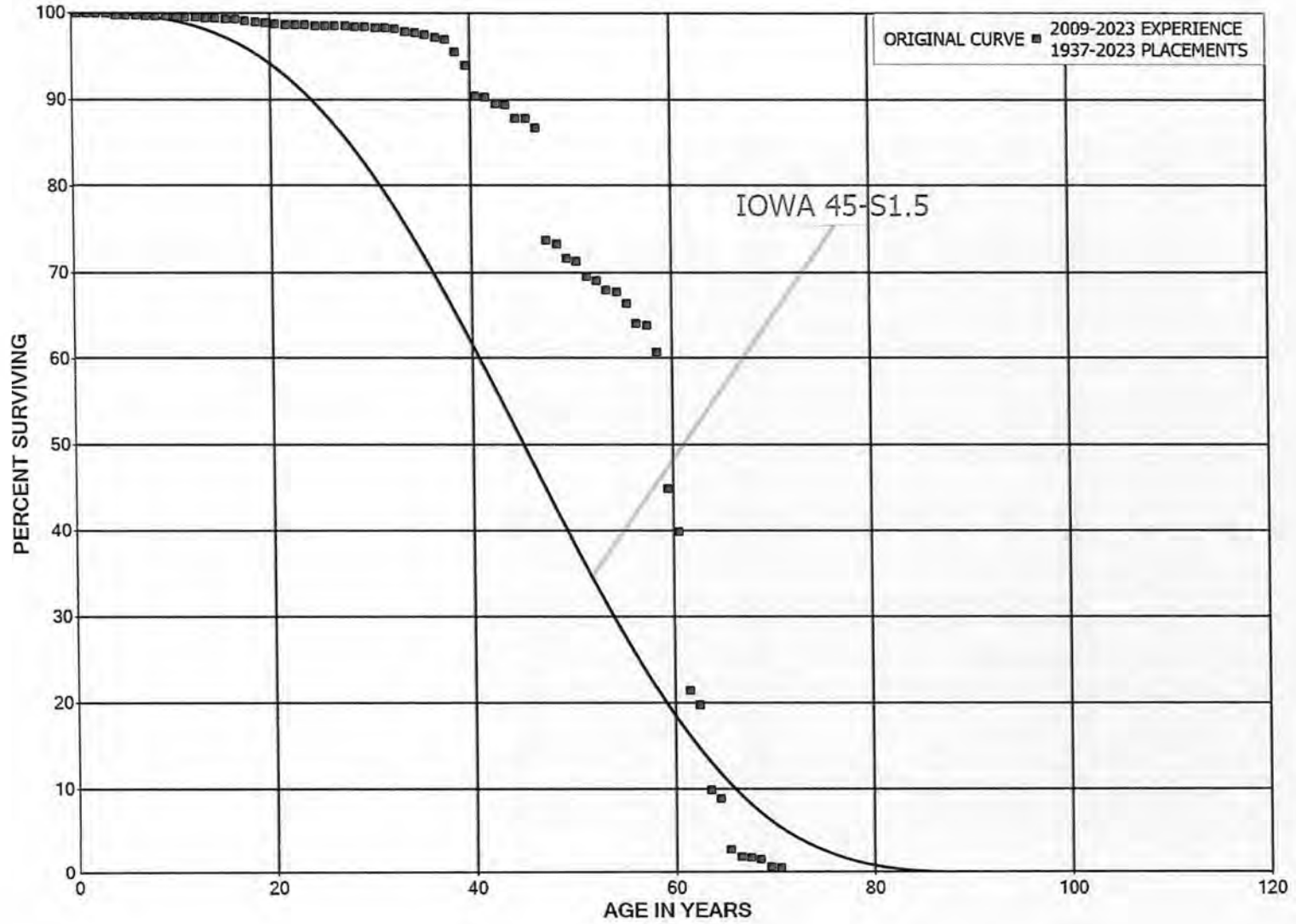
SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1947-2023			EXPERIENCE BAND 2009-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	236,580	58	0.0002	0.9998	99.35	
40.5	169,032	16	0.0001	0.9999	99.32	
41.5	147,437	12	0.0001	0.9999	99.31	
42.5	127,194	132	0.0010	0.9990	99.30	
43.5	88,697	40	0.0005	0.9995	99.20	
44.5	77,015		0.0000	1.0000	99.16	
45.5	72,603		0.0000	1.0000	99.16	
46.5	62,278	9	0.0002	0.9998	99.16	
47.5	73,763	353	0.0048	0.9952	99.14	
48.5	60,337	129	0.0021	0.9979	98.67	
49.5	58,122	335	0.0058	0.9942	98.46	
50.5	50,540	623	0.0123	0.9877	97.89	
51.5	48,913	174	0.0036	0.9964	96.68	
52.5	52,205	9	0.0002	0.9998	96.34	
53.5	55,548		0.0000	1.0000	96.32	
54.5	52,196		0.0000	1.0000	96.32	
55.5	59,375	241	0.0041	0.9959	96.32	
56.5	65,610	302	0.0046	0.9954	95.93	
57.5	67,426	760	0.0113	0.9887	95.49	
58.5	66,368	530	0.0080	0.9920	94.41	
59.5	55,618	598	0.0108	0.9892	93.66	
60.5	54,146	111	0.0021	0.9979	92.65	
61.5	49,517		0.0000	1.0000	92.46	
62.5	37,281		0.0000	1.0000	92.46	
63.5	36,484		0.0000	1.0000	92.46	
64.5	36,484	91	0.0025	0.9975	92.46	
65.5	36,394	20	0.0005	0.9995	92.23	
66.5	36,374		0.0000	1.0000	92.18	
67.5	32,695		0.0000	1.0000	92.18	
68.5	29,207		0.0000	1.0000	92.18	
69.5	18,129		0.0000	1.0000	92.18	
70.5	11,406		0.0000	1.0000	92.18	
71.5	5,557		0.0000	1.0000	92.18	
72.5	3,439		0.0000	1.0000	92.18	
73.5	3,439		0.0000	1.0000	92.18	
74.5	3,439		0.0000	1.0000	92.18	
75.5	3,439		0.0000	1.0000	92.18	
76.5					92.18	

SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 324.00 PUMPING EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1937-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	41,956,732	882	0.0000	1.0000	100.00
0.5	40,065,404	23,362	0.0006	0.9994	100.00
1.5	38,216,710	4,257	0.0001	0.9999	99.94
2.5	41,503,984	8,159	0.0002	0.9998	99.93
3.5	42,519,983	73,291	0.0017	0.9983	99.91
4.5	40,181,161	10,204	0.0003	0.9997	99.74
5.5	41,401,818	15,489	0.0004	0.9996	99.71
6.5	43,014,017	12,237	0.0003	0.9997	99.67
7.5	41,257,269	11,334	0.0003	0.9997	99.65
8.5	41,833,505	14,425	0.0003	0.9997	99.62
9.5	40,267,530	9,391	0.0002	0.9998	99.58
10.5	38,758,127	17,301	0.0004	0.9996	99.56
11.5	40,666,284	15,346	0.0004	0.9996	99.52
12.5	40,453,950	18,522	0.0005	0.9995	99.48
13.5	42,369,700	29,032	0.0007	0.9993	99.43
14.5	41,493,470	28,056	0.0007	0.9993	99.36
15.5	39,219,636	26,309	0.0007	0.9993	99.30
16.5	38,968,210	75,117	0.0019	0.9981	99.23
17.5	33,592,732	36,153	0.0011	0.9989	99.04
18.5	30,543,448	40,261	0.0013	0.9987	98.93
19.5	29,587,470	27,465	0.0009	0.9991	98.80
20.5	28,027,683	12,549	0.0004	0.9996	98.71
21.5	25,132,964	12,445	0.0005	0.9995	98.67
22.5	23,847,593	9,777	0.0004	0.9996	98.62
23.5	21,644,991	7,983	0.0004	0.9996	98.58
24.5	19,659,763	4,322	0.0002	0.9998	98.54
25.5	16,753,878	3,984	0.0002	0.9998	98.52
26.5	14,085,802	5,205	0.0004	0.9996	98.50
27.5	12,946,341	9,232	0.0007	0.9993	98.46
28.5	9,970,365	2,476	0.0002	0.9998	98.39
29.5	8,550,472	8,609	0.0010	0.9990	98.37
30.5	7,353,619	2,483	0.0003	0.9997	98.27
31.5	3,512,663	2,059	0.0006	0.9994	98.23
32.5	2,206,289	6,417	0.0029	0.9971	98.18
33.5	1,617,339	1,839	0.0011	0.9989	97.89
34.5	1,234,668	3,619	0.0029	0.9971	97.78
35.5	1,013,118	3,485	0.0034	0.9966	97.49
36.5	934,423	2,231	0.0024	0.9976	97.16
37.5	779,026	11,482	0.0147	0.9853	96.92
38.5	662,001	10,950	0.0165	0.9835	95.50

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

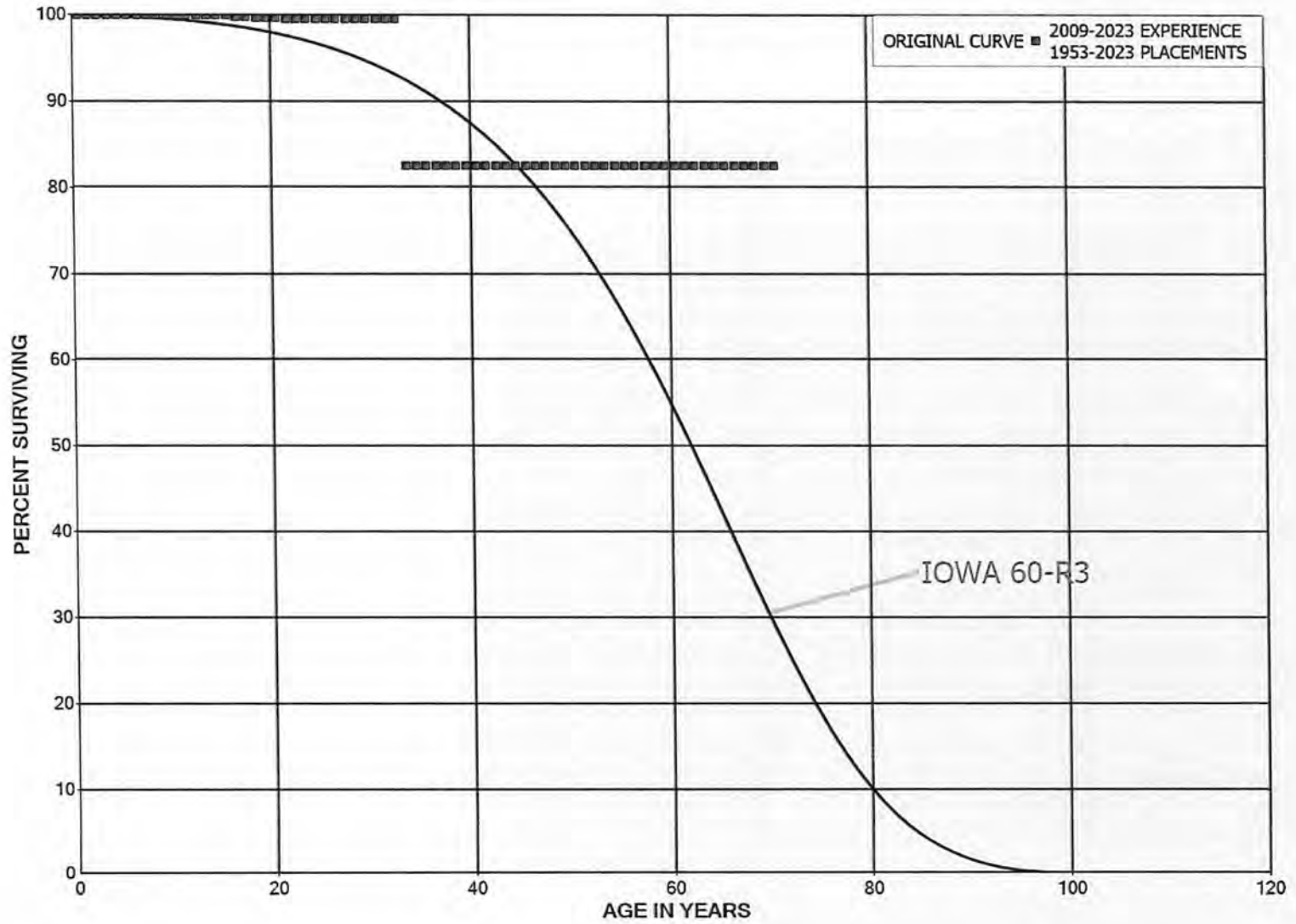
PLACEMENT BAND 1937-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	640,240	23,740	0.0371	0.9629	93.92
40.5	586,989	1,220	0.0021	0.9979	90.43
41.5	468,338	3,594	0.0077	0.9923	90.25
42.5	604,856	1,275	0.0021	0.9979	89.55
43.5	778,269	13,658	0.0175	0.9825	89.36
44.5	682,498	125	0.0002	0.9998	87.80
45.5	680,871	7,819	0.0115	0.9885	87.78
46.5	670,371	100,956	0.1506	0.8494	86.77
47.5	748,747	4,029	0.0054	0.9946	73.70
48.5	572,972	13,641	0.0238	0.9762	73.31
49.5	480,718	1,733	0.0036	0.9964	71.56
50.5	417,346	10,425	0.0250	0.9750	71.30
51.5	403,476	2,758	0.0068	0.9932	69.52
52.5	410,895	6,652	0.0162	0.9838	69.05
53.5	399,627	1,424	0.0036	0.9964	67.93
54.5	348,882	6,771	0.0194	0.9806	67.69
55.5	376,229	13,344	0.0355	0.9645	66.37
56.5	370,173	1,327	0.0036	0.9964	64.02
57.5	409,842	19,629	0.0479	0.9521	63.79
58.5	106,189	27,768	0.2615	0.7385	60.74
59.5	96,368	10,884	0.1129	0.8871	44.85
60.5	76,551	35,444	0.4630	0.5370	39.79
61.5	45,942	3,486	0.0759	0.9241	21.37
62.5	30,465	15,211	0.4993	0.5007	19.74
63.5	12,061	1,278	0.1060	0.8940	9.89
64.5	11,080	7,640	0.6896	0.3104	8.84
65.5	6,543	2,177	0.3327	0.6673	2.74
66.5	4,957	171	0.0345	0.9655	1.83
67.5	5,037	667	0.1325	0.8675	1.77
68.5	5,989	3,432	0.5731	0.4269	1.53
69.5	3,325	673	0.2025	0.7975	0.65
70.5	4,168	1,183	0.2837	0.7163	0.52
71.5	6,621	4,893	0.7390	0.2610	0.37
72.5	1,728	684	0.3957	0.6043	0.10
73.5	1,044	1,044	1.0000		0.06
74.5					



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1953-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	8,075,522		0.0000	1.0000	100.00
0.5	10,809,941		0.0000	1.0000	100.00
1.5	9,000,956		0.0000	1.0000	100.00
2.5	8,485,969		0.0000	1.0000	100.00
3.5	7,732,100		0.0000	1.0000	100.00
4.5	7,188,905		0.0000	1.0000	100.00
5.5	4,999,168		0.0000	1.0000	100.00
6.5	4,528,656		0.0000	1.0000	100.00
7.5	4,442,470		0.0000	1.0000	100.00
8.5	3,961,480		0.0000	1.0000	100.00
9.5	4,023,980		0.0000	1.0000	100.00
10.5	4,018,547		0.0000	1.0000	100.00
11.5	4,138,999	284	0.0001	0.9999	100.00
12.5	3,559,160		0.0000	1.0000	99.99
13.5	3,030,663		0.0000	1.0000	99.99
14.5	2,985,718		0.0000	1.0000	99.99
15.5	634,859	1,980	0.0031	0.9969	99.99
16.5	627,244		0.0000	1.0000	99.68
17.5	629,675	730	0.0012	0.9988	99.68
18.5	550,685		0.0000	1.0000	99.57
19.5	556,324		0.0000	1.0000	99.57
20.5	556,324	264	0.0005	0.9995	99.57
21.5	519,230		0.0000	1.0000	99.52
22.5	519,230		0.0000	1.0000	99.52
23.5	352,692		0.0000	1.0000	99.52
24.5	290,192		0.0000	1.0000	99.52
25.5	240,833		0.0000	1.0000	99.52
26.5	75,130		0.0000	1.0000	99.52
27.5	29,453		0.0000	1.0000	99.52
28.5	25,674		0.0000	1.0000	99.52
29.5	25,104		0.0000	1.0000	99.52
30.5	25,104		0.0000	1.0000	99.52
31.5	25,104		0.0000	1.0000	99.52
32.5	22,938	3,932	0.1714	0.8286	99.52
33.5	21,924		0.0000	1.0000	82.46
34.5	16,285		0.0000	1.0000	82.46
35.5	16,285		0.0000	1.0000	82.46
36.5	16,285		0.0000	1.0000	82.46
37.5	16,285		0.0000	1.0000	82.46
38.5	9,604		0.0000	1.0000	82.46

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

ORIGINAL LIFE TABLE, CONT.

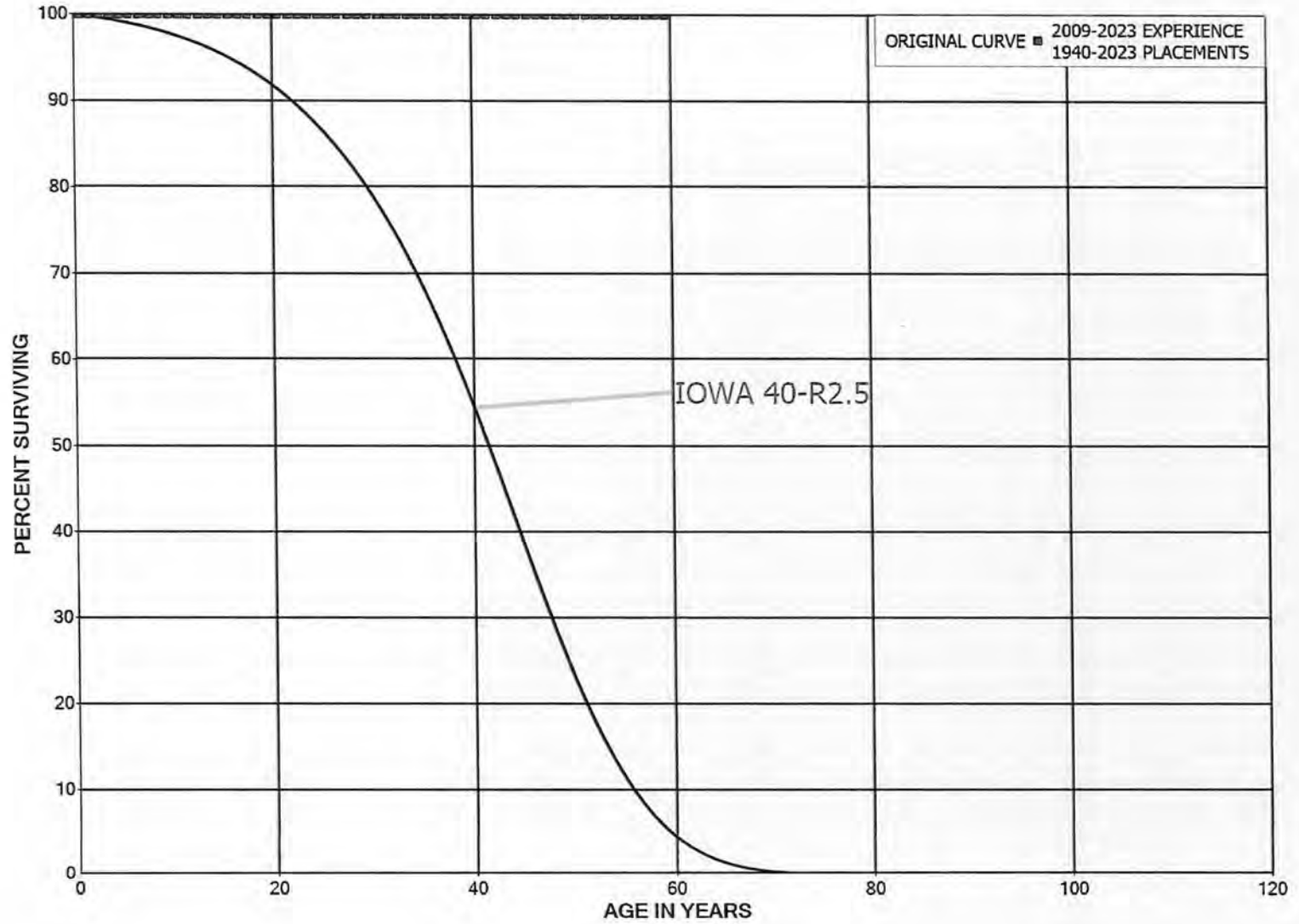
PLACEMENT BAND 1953-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	10,018		0.0000	1.0000	82.46
40.5	10,018		0.0000	1.0000	82.46
41.5	10,306		0.0000	1.0000	82.46
42.5	14,511		0.0000	1.0000	82.46
43.5	37,414		0.0000	1.0000	82.46
44.5	30,729		0.0000	1.0000	82.46
45.5	30,729		0.0000	1.0000	82.46
46.5	30,729		0.0000	1.0000	82.46
47.5	32,265		0.0000	1.0000	82.46
48.5	39,921		0.0000	1.0000	82.46
49.5	39,921		0.0000	1.0000	82.46
50.5	39,921		0.0000	1.0000	82.46
51.5	43,984		0.0000	1.0000	82.46
52.5	43,984		0.0000	1.0000	82.46
53.5	43,984		0.0000	1.0000	82.46
54.5	43,570		0.0000	1.0000	82.46
55.5	46,531		0.0000	1.0000	82.46
56.5	46,242		0.0000	1.0000	82.46
57.5	42,037		0.0000	1.0000	82.46
58.5	19,134		0.0000	1.0000	82.46
59.5	19,134		0.0000	1.0000	82.46
60.5	19,134		0.0000	1.0000	82.46
61.5	19,134		0.0000	1.0000	82.46
62.5	17,598		0.0000	1.0000	82.46
63.5	7,023		0.0000	1.0000	82.46
64.5	7,023		0.0000	1.0000	82.46
65.5	7,023		0.0000	1.0000	82.46
66.5	2,961		0.0000	1.0000	82.46
67.5	2,961		0.0000	1.0000	82.46
68.5	2,961		0.0000	1.0000	82.46
69.5	2,961		0.0000	1.0000	82.46
70.5					82.46



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 332.00 WATER TREATMENT EQUIPMENT
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	34,433,966	105	0.0000	1.0000	100.00
0.5	71,630,884	577	0.0000	1.0000	100.00
1.5	72,158,000	66	0.0000	1.0000	100.00
2.5	81,869,754	102	0.0000	1.0000	100.00
3.5	81,272,032	353	0.0000	1.0000	100.00
4.5	81,463,078	2,179	0.0000	1.0000	100.00
5.5	100,335,576	4,361	0.0000	1.0000	100.00
6.5	99,353,563	223	0.0000	1.0000	99.99
7.5	99,352,452	2,175	0.0000	1.0000	99.99
8.5	95,342,381	5,418	0.0001	0.9999	99.99
9.5	94,513,992	29	0.0000	1.0000	99.98
10.5	95,569,473	148	0.0000	1.0000	99.98
11.5	94,155,088	479	0.0000	1.0000	99.98
12.5	90,743,972	96	0.0000	1.0000	99.98
13.5	90,512,167	511	0.0000	1.0000	99.98
14.5	78,544,025	28	0.0000	1.0000	99.98
15.5	42,952,092	110	0.0000	1.0000	99.98
16.5	39,727,484	2	0.0000	1.0000	99.98
17.5	22,184,679	190	0.0000	1.0000	99.98
18.5	22,093,250	1,353	0.0001	0.9999	99.98
19.5	18,950,930	852	0.0000	1.0000	99.97
20.5	9,648,892	247	0.0000	1.0000	99.97
21.5	9,600,871		0.0000	1.0000	99.97
22.5	9,459,977		0.0000	1.0000	99.97
23.5	7,841,311		0.0000	1.0000	99.97
24.5	6,183,469	1	0.0000	1.0000	99.97
25.5	4,914,351	10	0.0000	1.0000	99.97
26.5	4,834,384	43	0.0000	1.0000	99.97
27.5	4,354,845		0.0000	1.0000	99.97
28.5	4,267,035		0.0000	1.0000	99.97
29.5	4,112,180		0.0000	1.0000	99.97
30.5	2,077,960		0.0000	1.0000	99.97
31.5	474,849		0.0000	1.0000	99.97
32.5	126,562		0.0000	1.0000	99.97
33.5	133,332		0.0000	1.0000	99.97
34.5	110,734		0.0000	1.0000	99.97
35.5	106,996		0.0000	1.0000	99.97
36.5	130,886		0.0000	1.0000	99.97
37.5	100,597		0.0000	1.0000	99.97
38.5	62,690		0.0000	1.0000	99.97

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	269,366		0.0000	1.0000	99.97
40.5	271,140		0.0000	1.0000	99.97
41.5	272,494		0.0000	1.0000	99.97
42.5	262,182		0.0000	1.0000	99.97
43.5	440,863		0.0000	1.0000	99.97
44.5	437,154		0.0000	1.0000	99.97
45.5	435,399		0.0000	1.0000	99.97
46.5	440,097		0.0000	1.0000	99.97
47.5	440,491		0.0000	1.0000	99.97
48.5	433,098		0.0000	1.0000	99.97
49.5	430,238		0.0000	1.0000	99.97
50.5	428,800		0.0000	1.0000	99.97
51.5	422,113		0.0000	1.0000	99.97
52.5	420,299		0.0000	1.0000	99.97
53.5	417,854		0.0000	1.0000	99.97
54.5	210,864		0.0000	1.0000	99.97
55.5	207,963		0.0000	1.0000	99.97
56.5	206,390		0.0000	1.0000	99.97
57.5	203,589		0.0000	1.0000	99.97
58.5	24,398		0.0000	1.0000	99.97
59.5	23,596		0.0000	1.0000	99.97
60.5	23,596		0.0000	1.0000	99.97
61.5	20,718		0.0000	1.0000	99.97
62.5	19,986		0.0000	1.0000	99.97
63.5	10,596		0.0000	1.0000	99.97
64.5	10,596		0.0000	1.0000	99.97
65.5	5,771		0.0000	1.0000	99.97
66.5	5,771		0.0000	1.0000	99.97
67.5	5,696		0.0000	1.0000	99.97
68.5	7,956		0.0000	1.0000	99.97
69.5	7,956		0.0000	1.0000	99.97
70.5	7,956		0.0000	1.0000	99.97
71.5	7,956		0.0000	1.0000	99.97
72.5	7,579		0.0000	1.0000	99.97
73.5	7,579		0.0000	1.0000	99.97
74.5	7,579		0.0000	1.0000	99.97
75.5	7,579		0.0000	1.0000	99.97
76.5	2,581		0.0000	1.0000	99.97
77.5	2,581		0.0000	1.0000	99.97
78.5	2,581		0.0000	1.0000	99.97

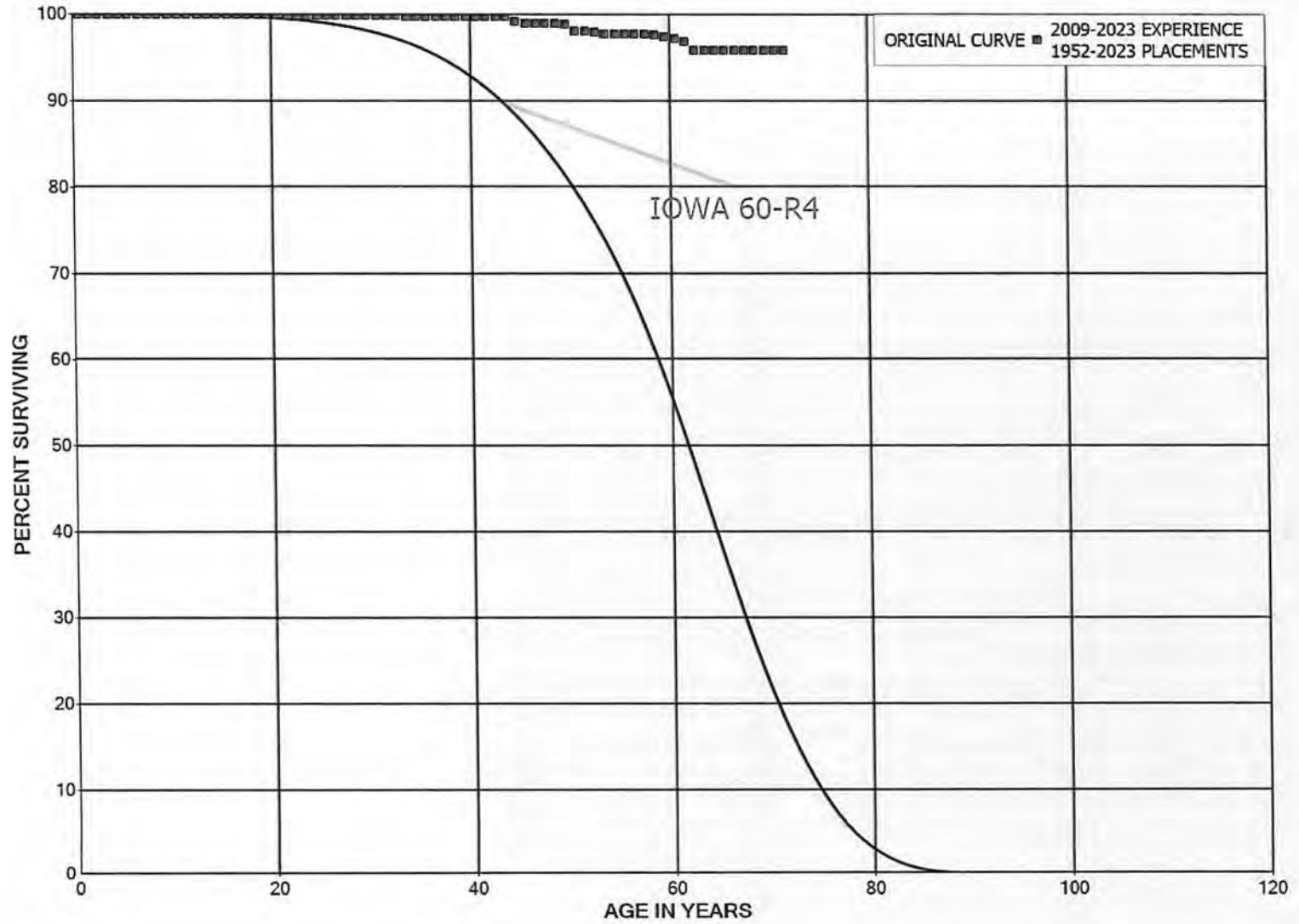
SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	2,581		0.0000	1.0000	99.97
80.5	2,581		0.0000	1.0000	99.97
81.5	2,581		0.0000	1.0000	99.97
82.5	2,581		0.0000	1.0000	99.97
83.5					99.97



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 342.00 RESERVOIRS AND TANKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 342.00 RESERVOIRS AND TANKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1952-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	43,762,499		0.0000	1.0000	100.00
0.5	30,894,143	458	0.0000	1.0000	100.00
1.5	32,548,081	3	0.0000	1.0000	100.00
2.5	32,983,460	45	0.0000	1.0000	100.00
3.5	28,825,204	516	0.0000	1.0000	100.00
4.5	26,163,411		0.0000	1.0000	100.00
5.5	22,820,460		0.0000	1.0000	100.00
6.5	21,336,321	373	0.0000	1.0000	100.00
7.5	20,944,326	2,175	0.0001	0.9999	99.99
8.5	19,074,828	1,614	0.0001	0.9999	99.98
9.5	18,603,263		0.0000	1.0000	99.98
10.5	17,379,057	171	0.0000	1.0000	99.98
11.5	17,970,419		0.0000	1.0000	99.98
12.5	17,004,710		0.0000	1.0000	99.98
13.5	15,209,411		0.0000	1.0000	99.98
14.5	14,647,811	1,006	0.0001	0.9999	99.98
15.5	15,901,658	641	0.0000	1.0000	99.97
16.5	13,524,595	992	0.0001	0.9999	99.96
17.5	9,573,806	686	0.0001	0.9999	99.96
18.5	7,114,743	614	0.0001	0.9999	99.95
19.5	7,007,943	250	0.0000	1.0000	99.94
20.5	6,679,420	4,011	0.0006	0.9994	99.94
21.5	7,522,288	7	0.0000	1.0000	99.88
22.5	7,089,117	23	0.0000	1.0000	99.88
23.5	6,697,846	170	0.0000	1.0000	99.88
24.5	5,967,757	14	0.0000	1.0000	99.87
25.5	5,581,422		0.0000	1.0000	99.87
26.5	5,675,327	3,254	0.0006	0.9994	99.87
27.5	5,497,514	79	0.0000	1.0000	99.82
28.5	5,128,930		0.0000	1.0000	99.82
29.5	5,009,088		0.0000	1.0000	99.82
30.5	3,313,342	63	0.0000	1.0000	99.82
31.5	2,668,143		0.0000	1.0000	99.81
32.5	2,660,162	1,027	0.0004	0.9996	99.81
33.5	2,559,404	0	0.0000	1.0000	99.78
34.5	2,566,633	222	0.0001	0.9999	99.78
35.5	2,561,225	74	0.0000	1.0000	99.77
36.5	1,723,817		0.0000	1.0000	99.76
37.5	1,704,860		0.0000	1.0000	99.76
38.5	3,276,516		0.0000	1.0000	99.76

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 342.00 RESERVOIRS AND TANKS

ORIGINAL LIFE TABLE, CONT.

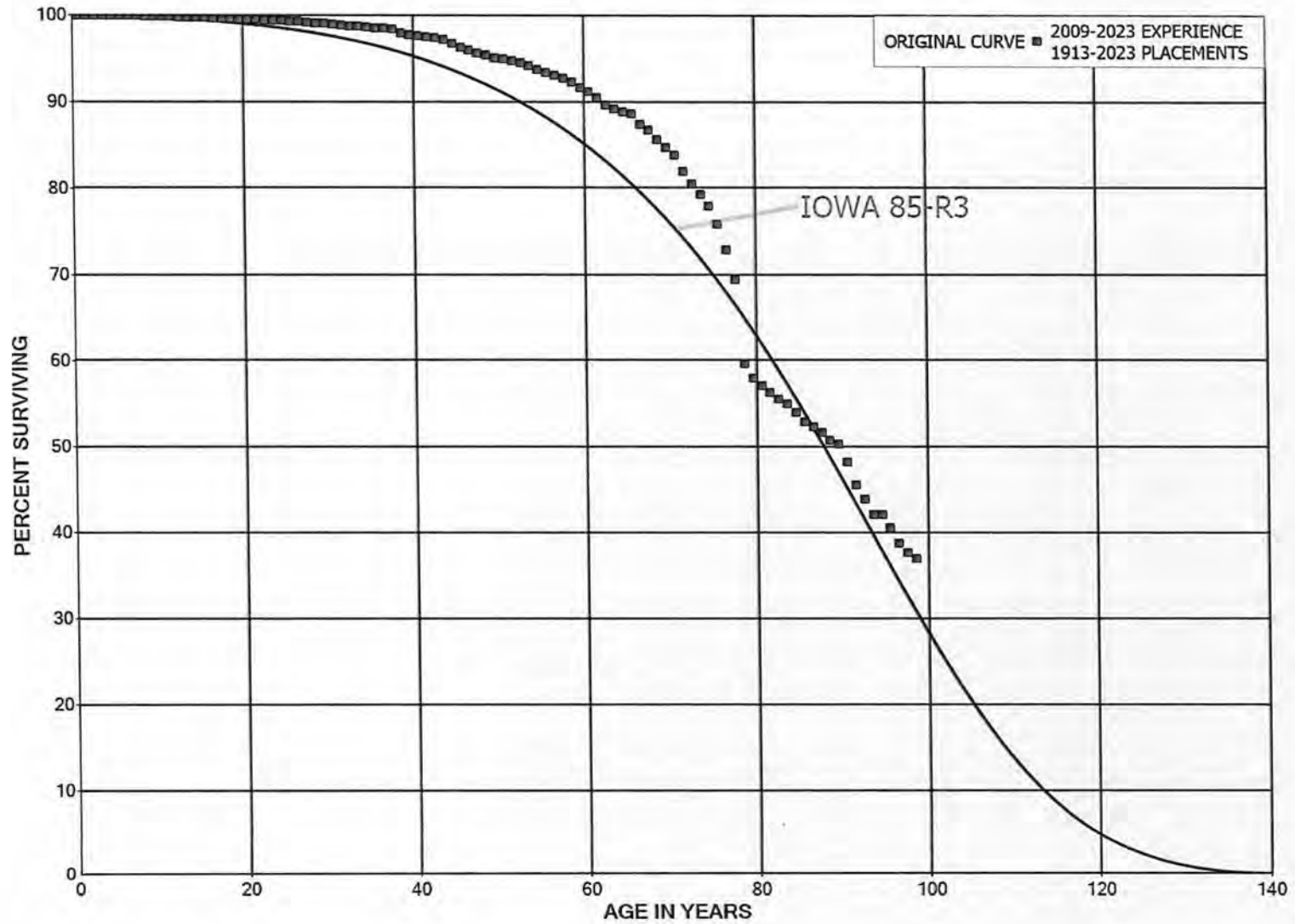
PLACEMENT BAND 1952-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,288,791	109	0.0001	0.9999	99.76
40.5	1,247,965		0.0000	1.0000	99.76
41.5	554,753	69	0.0001	0.9999	99.76
42.5	305,160	113	0.0004	0.9996	99.74
43.5	358,996	2,094	0.0058	0.9942	99.71
44.5	637,463	934	0.0015	0.9985	99.12
45.5	660,475		0.0000	1.0000	98.98
46.5	699,835		0.0000	1.0000	98.98
47.5	1,733,428		0.0000	1.0000	98.98
48.5	768,564	954	0.0012	0.9988	98.98
49.5	758,276	5,901	0.0078	0.9922	98.86
50.5	992,376	690	0.0007	0.9993	98.09
51.5	745,465	854	0.0011	0.9989	98.02
52.5	760,011	1,572	0.0021	0.9979	97.91
53.5	619,572	28	0.0000	1.0000	97.70
54.5	570,301	50	0.0001	0.9999	97.70
55.5	588,278		0.0000	1.0000	97.69
56.5	640,917		0.0000	1.0000	97.69
57.5	640,917	815	0.0013	0.9987	97.69
58.5	587,036	900	0.0015	0.9985	97.57
59.5	279,473	721	0.0026	0.9974	97.42
60.5	245,463	723	0.0029	0.9971	97.17
61.5	206,234	2,265	0.0110	0.9890	96.88
62.5	137,948		0.0000	1.0000	95.82
63.5	136,840		0.0000	1.0000	95.82
64.5	135,013		0.0000	1.0000	95.82
65.5	135,013		0.0000	1.0000	95.82
66.5	135,013		0.0000	1.0000	95.82
67.5	110,928		0.0000	1.0000	95.82
68.5	86,199		0.0000	1.0000	95.82
69.5	67,679		0.0000	1.0000	95.82
70.5	50,375		0.0000	1.0000	95.82
71.5					95.82



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1913-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	215,463,228	6,050	0.0000	1.0000	100.00
0.5	192,539,687	11,111	0.0001	0.9999	100.00
1.5	183,140,009	18,100	0.0001	0.9999	99.99
2.5	170,816,300	26,302	0.0002	0.9998	99.98
3.5	163,873,946	15,030	0.0001	0.9999	99.97
4.5	154,770,807	26,327	0.0002	0.9998	99.96
5.5	147,891,749	26,671	0.0002	0.9998	99.94
6.5	147,546,972	41,108	0.0003	0.9997	99.92
7.5	142,823,708	24,968	0.0002	0.9998	99.89
8.5	139,312,093	37,960	0.0003	0.9997	99.88
9.5	133,441,252	26,486	0.0002	0.9998	99.85
10.5	126,520,471	52,137	0.0004	0.9996	99.83
11.5	130,661,390	32,839	0.0003	0.9997	99.79
12.5	129,400,779	53,120	0.0004	0.9996	99.76
13.5	124,451,449	29,910	0.0002	0.9998	99.72
14.5	120,294,533	29,202	0.0002	0.9998	99.70
15.5	114,506,255	21,137	0.0002	0.9998	99.67
16.5	102,229,064	27,902	0.0003	0.9997	99.66
17.5	97,940,704	56,576	0.0006	0.9994	99.63
18.5	93,000,304	29,603	0.0003	0.9997	99.57
19.5	84,310,894	26,862	0.0003	0.9997	99.54
20.5	77,890,206	28,009	0.0004	0.9996	99.51
21.5	73,905,568	27,274	0.0004	0.9996	99.47
22.5	69,664,921	31,102	0.0004	0.9996	99.44
23.5	63,922,023	30,069	0.0005	0.9995	99.39
24.5	60,055,598	37,460	0.0006	0.9994	99.34
25.5	55,023,360	28,096	0.0005	0.9995	99.28
26.5	49,077,294	27,895	0.0006	0.9994	99.23
27.5	43,806,044	37,525	0.0009	0.9991	99.18
28.5	43,306,271	27,680	0.0006	0.9994	99.09
29.5	42,689,070	54,373	0.0013	0.9987	99.03
30.5	41,989,554	26,932	0.0006	0.9994	98.90
31.5	38,839,587	22,465	0.0006	0.9994	98.84
32.5	37,282,259	39,956	0.0011	0.9989	98.78
33.5	34,551,160	24,701	0.0007	0.9993	98.67
34.5	31,397,659	20,171	0.0006	0.9994	98.60
35.5	29,544,505	15,705	0.0005	0.9995	98.54
36.5	25,377,038	16,508	0.0007	0.9993	98.49
37.5	23,523,538	104,463	0.0044	0.9956	98.42
38.5	17,906,695	47,721	0.0027	0.9973	97.99

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1913-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	14,988,433	15,348	0.0010	0.9990	97.73
40.5	13,808,372	15,170	0.0011	0.9989	97.63
41.5	13,071,480	21,773	0.0017	0.9983	97.52
42.5	12,023,039	17,083	0.0014	0.9986	97.36
43.5	13,166,998	73,816	0.0056	0.9944	97.22
44.5	11,948,469	51,884	0.0043	0.9957	96.67
45.5	11,361,855	39,300	0.0035	0.9965	96.25
46.5	11,429,429	31,097	0.0027	0.9973	95.92
47.5	12,237,030	32,562	0.0027	0.9973	95.66
48.5	10,083,497	30,340	0.0030	0.9970	95.40
49.5	9,805,821	18,750	0.0019	0.9981	95.12
50.5	9,361,129	22,903	0.0024	0.9976	94.94
51.5	9,207,424	23,222	0.0025	0.9975	94.70
52.5	9,151,098	31,851	0.0035	0.9965	94.46
53.5	8,973,422	34,682	0.0039	0.9961	94.14
54.5	8,768,979	30,269	0.0035	0.9965	93.77
55.5	8,627,102	35,450	0.0041	0.9959	93.45
56.5	8,640,841	36,508	0.0042	0.9958	93.06
57.5	8,245,455	32,869	0.0040	0.9960	92.67
58.5	5,228,154	36,982	0.0071	0.9929	92.30
59.5	4,644,322	24,646	0.0053	0.9947	91.65
60.5	4,098,140	28,358	0.0069	0.9931	91.16
61.5	3,670,959	35,313	0.0096	0.9904	90.53
62.5	3,350,430	20,143	0.0060	0.9940	89.66
63.5	3,132,262	9,286	0.0030	0.9970	89.12
64.5	2,995,193	6,453	0.0022	0.9978	88.86
65.5	2,798,424	39,028	0.0139	0.9861	88.67
66.5	2,584,971	20,046	0.0078	0.9922	87.43
67.5	2,230,719	28,815	0.0129	0.9871	86.75
68.5	1,810,151	18,347	0.0101	0.9899	85.63
69.5	1,485,595	16,434	0.0111	0.9889	84.76
70.5	1,187,959	26,521	0.0223	0.9777	83.82
71.5	856,726	15,045	0.0176	0.9824	81.95
72.5	616,770	9,567	0.0155	0.9845	80.51
73.5	411,753	6,827	0.0166	0.9834	79.27
74.5	286,300	7,836	0.0274	0.9726	77.95
75.5	186,807	7,241	0.0388	0.9612	75.82
76.5	114,097	5,392	0.0473	0.9527	72.88
77.5	98,061	13,792	0.1407	0.8593	69.43
78.5	80,939	2,280	0.0282	0.9718	59.67

SAN GABRIEL VALLEY WATER COMPANY

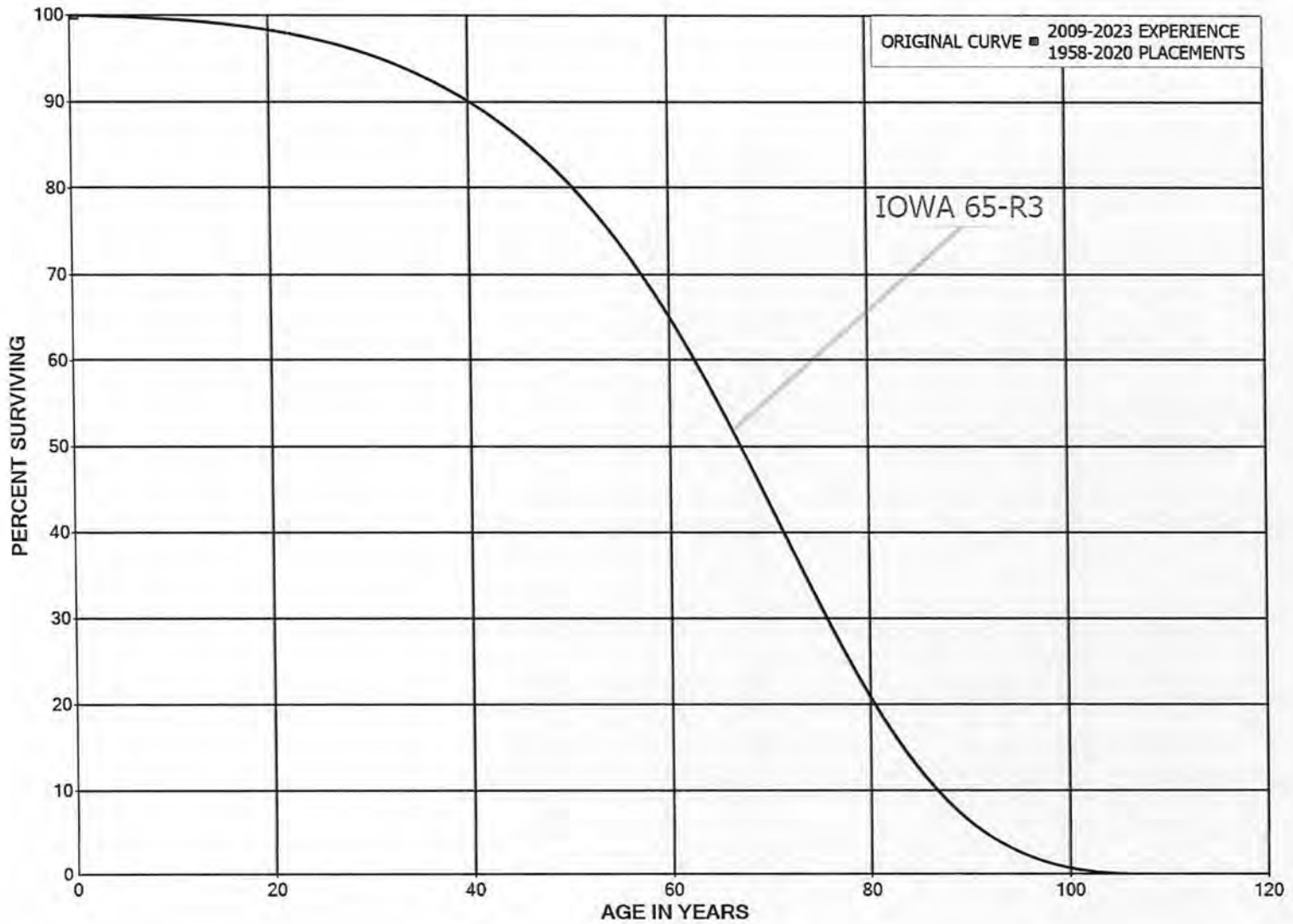
ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1913-2023			EXPERIENCE BAND 2009-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	59,022	973	0.0165	0.9835	57.99	
80.5	45,972	616	0.0134	0.9866	57.03	
81.5	63,258	815	0.0129	0.9871	56.27	
82.5	84,849	973	0.0115	0.9885	55.54	
83.5	73,318	1,250	0.0170	0.9830	54.91	
84.5	72,173	1,448	0.0201	0.9799	53.97	
85.5	76,878	846	0.0110	0.9890	52.89	
86.5	76,979	954	0.0124	0.9876	52.31	
87.5	75,486	1,295	0.0172	0.9828	51.66	
88.5	73,819	710	0.0096	0.9904	50.77	
89.5	72,670	2,975	0.0409	0.9591	50.28	
90.5	69,683	3,884	0.0557	0.9443	48.22	
91.5	62,910	2,290	0.0364	0.9636	45.54	
92.5	53,073	2,144	0.0404	0.9596	43.88	
93.5	47,626	1	0.0000	1.0000	42.11	
94.5	45,441	1,737	0.0382	0.9618	42.10	
95.5	44,556	1,933	0.0434	0.9566	40.50	
96.5	24,083	681	0.0283	0.9717	38.74	
97.5	5,692	96	0.0169	0.9831	37.64	
98.5	5,595	540	0.0965	0.9035	37.01	
99.5	4,928	18	0.0036	0.9964	33.44	
100.5	1,805	53	0.0293	0.9707	33.32	
101.5	914	19	0.0206	0.9794	32.34	
102.5	895	2	0.0024	0.9976	31.67	
103.5	893		0.0000	1.0000	31.60	
104.5	893	221	0.2472	0.7528	31.60	
105.5	672		0.0000	1.0000	23.78	
106.5	672		0.0000	1.0000	23.78	
107.5	672		0.0000	1.0000	23.78	
108.5	672		0.0000	1.0000	23.78	
109.5	672		0.0000	1.0000	23.78	
110.5					23.78	



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 344.00 FIRE MAINS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 344.00 FIRE MAINS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1958-2020

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	10		0.0000	1.0000	100.00
0.5					100.00
1.5					
2.5					
3.5					
4.5					
5.5					
6.5					
7.5					
8.5					
9.5					
10.5					
11.5					
12.5					
13.5					
14.5					
15.5					
16.5					
17.5					
18.5					
19.5					
20.5					
21.5					
22.5					
23.5					
24.5					
25.5					
26.5					
27.5					
28.5					
29.5					
30.5					
31.5					
32.5					
33.5	9,239		0.0000		
34.5	9,239		0.0000		
35.5	9,239		0.0000		
36.5	9,239		0.0000		
37.5	12,701		0.0000		
38.5	12,701		0.0000		

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 344.00 FIRE MAINS

ORIGINAL LIFE TABLE, CONT.

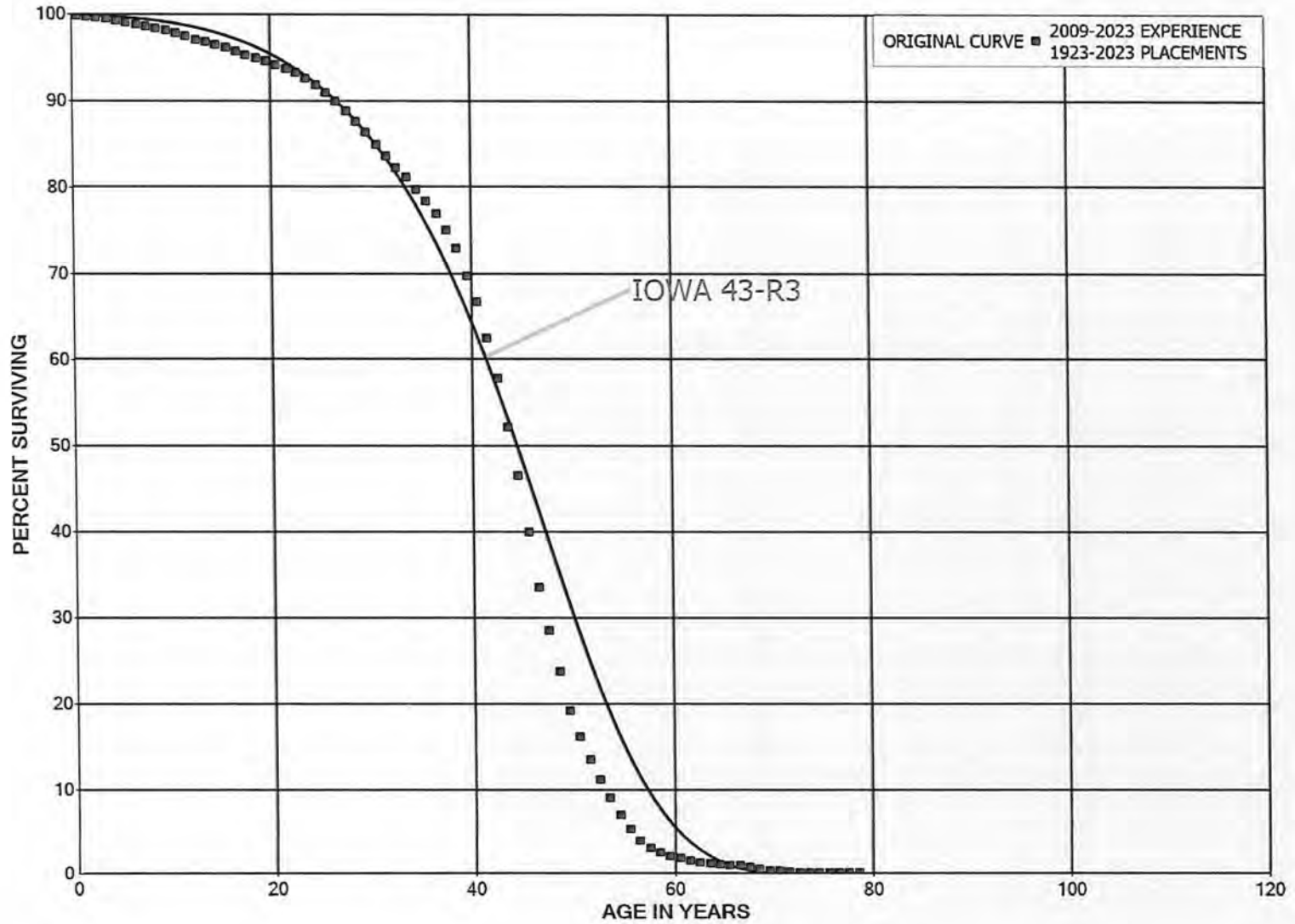
PLACEMENT BAND 1958-2020

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	12,701		0.0000		
40.5	12,701		0.0000		
41.5	12,701		0.0000		
42.5	12,701		0.0000		
43.5	13,507		0.0000		
44.5	13,507		0.0000		
45.5	13,507		0.0000		
46.5	13,507		0.0000		
47.5	13,507		0.0000		
48.5	4,268		0.0000		
49.5	4,268		0.0000		
50.5	6,696		0.0000		
51.5	6,696		0.0000		
52.5	3,234		0.0000		
53.5	3,234		0.0000		
54.5	3,234		0.0000		
55.5	3,234		0.0000		
56.5	3,234		0.0000		
57.5	3,234		0.0000		
58.5	2,428		0.0000		
59.5	2,428		0.0000		
60.5	2,428		0.0000		
61.5	2,428		0.0000		
62.5	2,428		0.0000		
63.5	2,428		0.0000		
64.5	2,428		0.0000		
65.5					



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 345.00 SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1923-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	76,797,574	119,313	0.0016	0.9984	100.00
0.5	75,185,354	109,677	0.0015	0.9985	99.84
1.5	73,581,005	82,799	0.0011	0.9989	99.70
2.5	73,160,065	95,547	0.0013	0.9987	99.59
3.5	71,546,494	96,250	0.0013	0.9987	99.46
4.5	65,023,213	143,440	0.0022	0.9978	99.32
5.5	59,994,543	134,166	0.0022	0.9978	99.10
6.5	59,962,519	131,072	0.0022	0.9978	98.88
7.5	59,751,395	163,375	0.0027	0.9973	98.67
8.5	60,560,007	145,776	0.0024	0.9976	98.40
9.5	59,250,579	180,965	0.0031	0.9969	98.16
10.5	56,439,217	195,762	0.0035	0.9965	97.86
11.5	54,538,349	231,301	0.0042	0.9958	97.52
12.5	52,429,705	166,480	0.0032	0.9968	97.11
13.5	48,490,377	157,868	0.0033	0.9967	96.80
14.5	46,038,313	159,684	0.0035	0.9965	96.48
15.5	37,112,444	154,562	0.0042	0.9958	96.15
16.5	31,372,592	135,505	0.0043	0.9957	95.75
17.5	28,218,031	107,782	0.0038	0.9962	95.33
18.5	26,645,523	102,828	0.0039	0.9961	94.97
19.5	24,676,397	118,640	0.0048	0.9952	94.60
20.5	22,884,833	95,490	0.0042	0.9958	94.15
21.5	21,185,543	116,731	0.0055	0.9945	93.76
22.5	19,582,288	129,686	0.0066	0.9934	93.24
23.5	15,834,226	131,220	0.0083	0.9917	92.62
24.5	14,111,344	145,471	0.0103	0.9897	91.85
25.5	12,636,737	137,390	0.0109	0.9891	90.91
26.5	11,203,459	139,353	0.0124	0.9876	89.92
27.5	9,365,249	123,734	0.0132	0.9868	88.80
28.5	8,544,367	121,299	0.0142	0.9858	87.63
29.5	7,312,144	116,267	0.0159	0.9841	86.38
30.5	6,521,191	102,876	0.0158	0.9842	85.01
31.5	6,144,731	104,256	0.0170	0.9830	83.67
32.5	5,707,905	77,898	0.0136	0.9864	82.25
33.5	4,898,222	83,201	0.0170	0.9830	81.13
34.5	3,994,821	65,144	0.0163	0.9837	79.75
35.5	3,450,562	66,615	0.0193	0.9807	78.45
36.5	2,752,875	68,799	0.0250	0.9750	76.93
37.5	2,217,806	62,448	0.0282	0.9718	75.01
38.5	1,775,869	78,263	0.0441	0.9559	72.90

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,518,422	64,637	0.0426	0.9574	69.69
40.5	1,603,138	102,300	0.0638	0.9362	66.72
41.5	1,447,315	108,004	0.0746	0.9254	62.46
42.5	1,318,766	128,543	0.0975	0.9025	57.80
43.5	1,074,274	115,662	0.1077	0.8923	52.17
44.5	919,222	130,655	0.1421	0.8579	46.55
45.5	721,630	115,452	0.1600	0.8400	39.93
46.5	636,832	96,189	0.1510	0.8490	33.55
47.5	571,196	95,826	0.1678	0.8322	28.48
48.5	502,944	97,156	0.1932	0.8068	23.70
49.5	441,017	67,977	0.1541	0.8459	19.12
50.5	364,294	59,586	0.1636	0.8364	16.17
51.5	315,714	55,877	0.1770	0.8230	13.53
52.5	367,176	68,950	0.1878	0.8122	11.13
53.5	382,837	84,643	0.2211	0.7789	9.04
54.5	371,257	89,580	0.2413	0.7587	7.04
55.5	324,270	82,662	0.2549	0.7451	5.34
56.5	283,938	67,623	0.2382	0.7618	3.98
57.5	231,075	38,789	0.1679	0.8321	3.03
58.5	225,690	36,289	0.1608	0.8392	2.52
59.5	196,988	24,176	0.1227	0.8773	2.12
60.5	193,622	39,260	0.2028	0.7972	1.86
61.5	163,727	23,272	0.1421	0.8579	1.48
62.5	146,396	14,366	0.0981	0.9019	1.27
63.5	135,517	9,225	0.0681	0.9319	1.15
64.5	128,913	9,339	0.0724	0.9276	1.07
65.5	120,262	8,100	0.0673	0.9327	0.99
66.5	113,883	26,538	0.2330	0.7670	0.92
67.5	89,842	26,623	0.2963	0.7037	0.71
68.5	64,581	21,246	0.3290	0.6710	0.50
69.5	44,289	13,424	0.3031	0.6969	0.33
70.5	31,699	15,364	0.4847	0.5153	0.23
71.5	18,871	4,736	0.2509	0.7491	0.12
72.5	14,335	5,689	0.3969	0.6031	0.09
73.5	8,673	2,216	0.2556	0.7444	0.05
74.5	6,464	1,245	0.1925	0.8075	0.04
75.5	5,285	1,272	0.2407	0.7593	0.03
76.5	4,074	1,231	0.3022	0.6978	0.02
77.5	2,988	177	0.0593	0.9407	0.02
78.5	3,103	294	0.0948	0.9052	0.02

SAN GABRIEL VALLEY WATER COMPANY

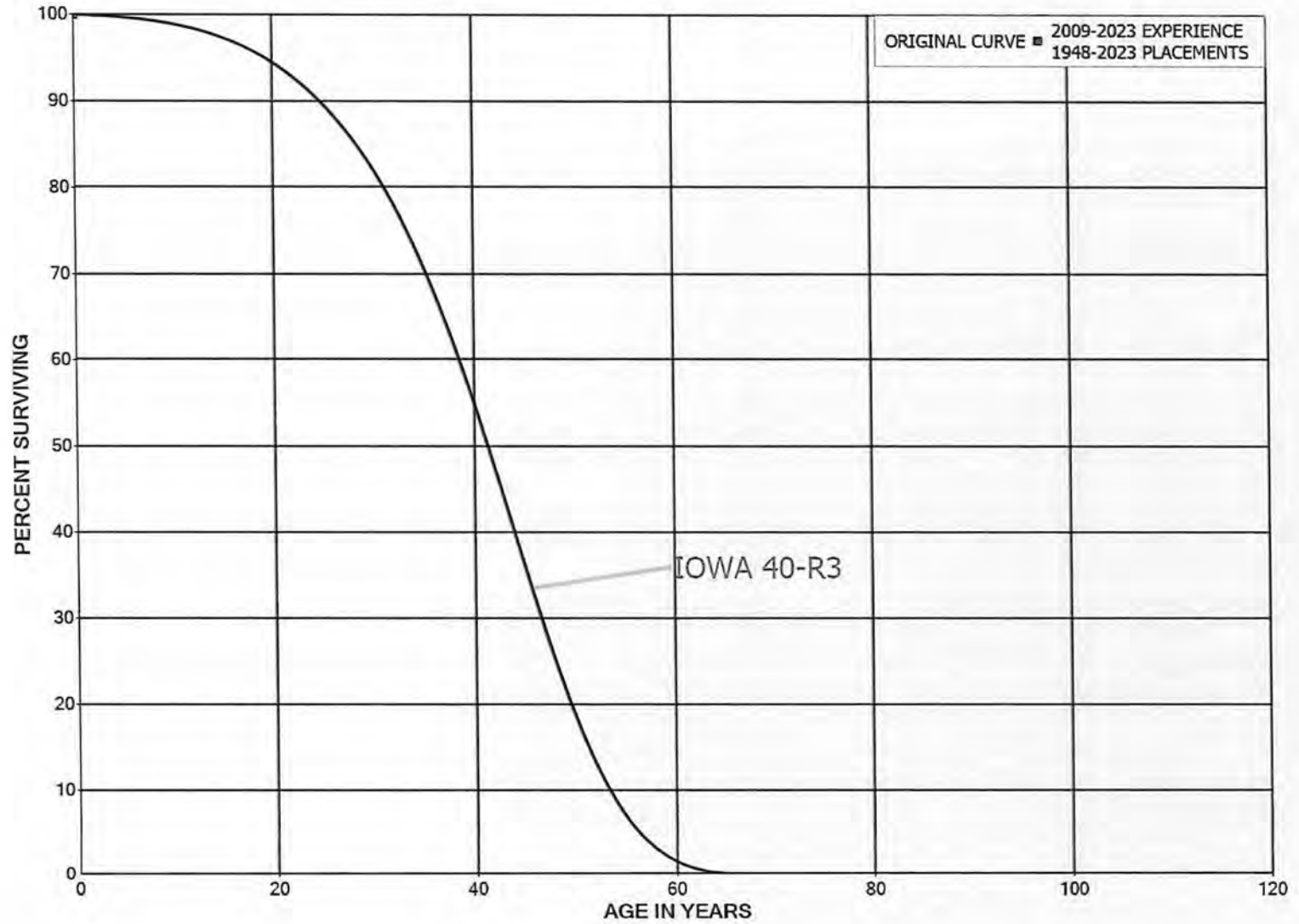
ACCOUNT 345.00 SERVICES

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1923-2023			EXPERIENCE BAND 2009-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
79.5	2,929	173	0.0592	0.9408	0.01	
80.5	2,943	290	0.0987	0.9013	0.01	
81.5	3,217	534	0.1662	0.8338	0.01	
82.5	3,499	740	0.2115	0.7885	0.01	
83.5	3,215	467	0.1452	0.8548	0.01	
84.5	3,321	496	0.1493	0.8507	0.01	
85.5	2,944	190	0.0644	0.9356	0.01	
86.5	605	21	0.0348	0.9652	0.01	
87.5	584	19	0.0331	0.9669	0.01	
88.5	565	18	0.0314	0.9686	0.01	
89.5	547	61	0.1124	0.8876	0.01	
90.5	485	51	0.1045	0.8955	0.00	
91.5	435	62	0.1434	0.8566	0.00	
92.5	372	71	0.1908	0.8092	0.00	
93.5	301	93	0.3094	0.6906	0.00	
94.5	208	54	0.2587	0.7413	0.00	
95.5	154	46	0.2954	0.7046	0.00	
96.5	109	36	0.3280	0.6720	0.00	
97.5	73	51	0.6936	0.3064	0.00	
98.5	22	22	1.0000		0.00	
99.5						



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 345.10 FIRE SERVICES
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

ORIGINAL LIFE TABLE

PLACEMENT BAND 1948-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	26,277,458		0.0000	1.0000	100.00
0.5	20,817,098		0.0000	1.0000	100.00
1.5	17,952,295		0.0000	1.0000	100.00
2.5	16,090,443		0.0000	1.0000	100.00
3.5	15,512,141		0.0000	1.0000	100.00
4.5	13,692,266		0.0000	1.0000	100.00
5.5	12,328,384		0.0000	1.0000	100.00
6.5	12,301,582		0.0000	1.0000	100.00
7.5	10,827,404		0.0000	1.0000	100.00
8.5	10,879,770		0.0000	1.0000	100.00
9.5	10,546,770		0.0000	1.0000	100.00
10.5	10,424,341		0.0000	1.0000	100.00
11.5	10,392,012		0.0000	1.0000	100.00
12.5	10,308,688		0.0000	1.0000	100.00
13.5	9,915,083		0.0000	1.0000	100.00
14.5	9,562,939		0.0000	1.0000	100.00
15.5	8,955,030		0.0000	1.0000	100.00
16.5	7,163,980		0.0000	1.0000	100.00
17.5	6,932,684		0.0000	1.0000	100.00
18.5	6,835,377		0.0000	1.0000	100.00
19.5	6,590,096		0.0000	1.0000	100.00
20.5	6,400,907		0.0000	1.0000	100.00
21.5	6,124,468		0.0000	1.0000	100.00
22.5	5,757,621		0.0000	1.0000	100.00
23.5	5,286,170		0.0000	1.0000	100.00
24.5	5,012,040		0.0000	1.0000	100.00
25.5	4,844,531		0.0000	1.0000	100.00
26.5	4,620,300		0.0000	1.0000	100.00
27.5	4,422,377		0.0000	1.0000	100.00
28.5	4,363,592		0.0000	1.0000	100.00
29.5	4,335,906		0.0000	1.0000	100.00
30.5	4,233,243		0.0000	1.0000	100.00
31.5	4,084,427		0.0000	1.0000	100.00
32.5	3,597,673	4,447	0.0012	0.9988	100.00
33.5	3,058,183		0.0000	1.0000	99.88
34.5	2,432,207		0.0000	1.0000	99.88
35.5	2,081,039		0.0000	1.0000	99.88
36.5	1,670,808		0.0000	1.0000	99.88
37.5	1,487,311		0.0000	1.0000	99.88
38.5	1,281,621		0.0000	1.0000	99.88

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

ORIGINAL LIFE TABLE, CONT.

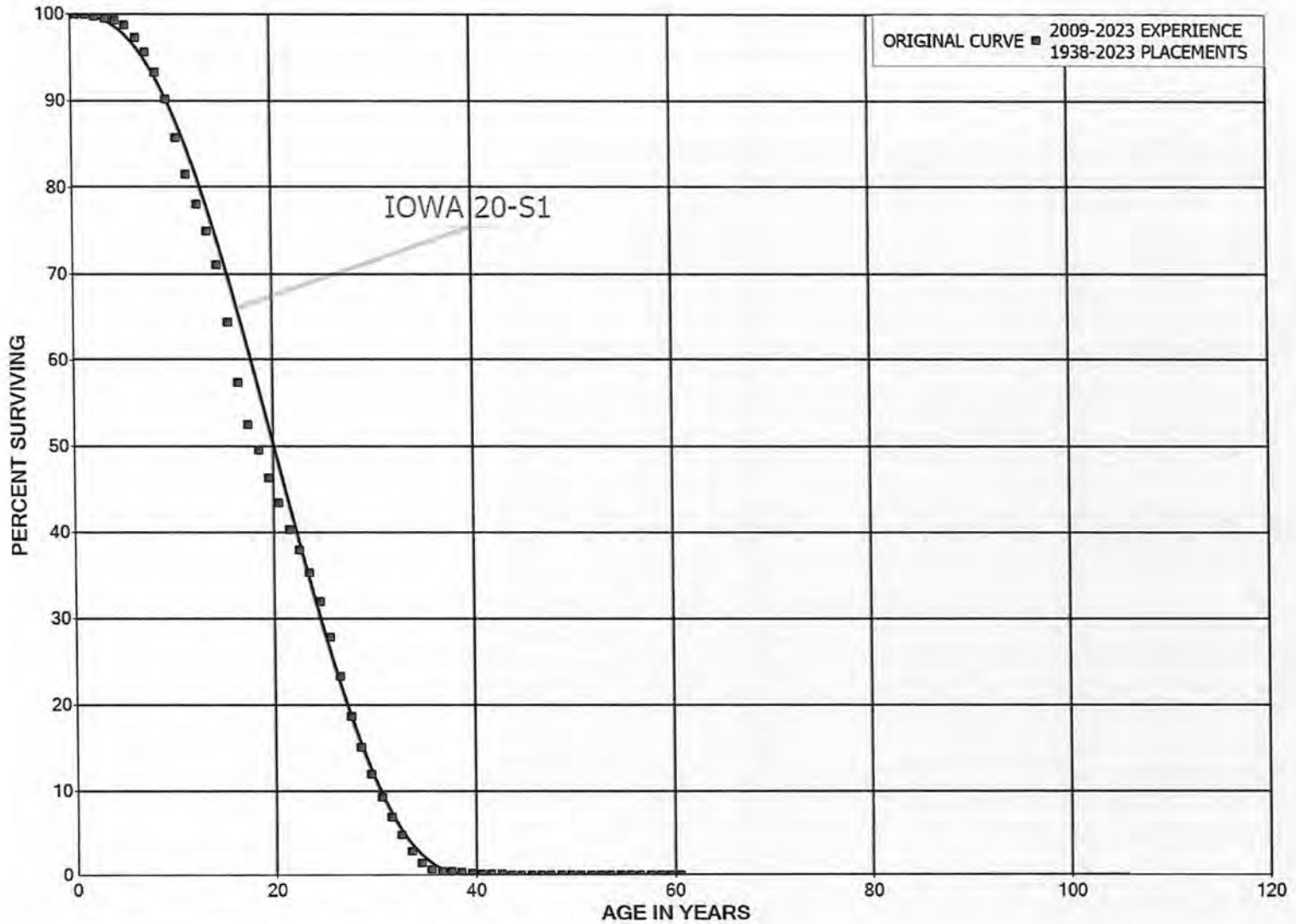
PLACEMENT BAND 1948-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	1,175,531		0.0000	1.0000	99.88
40.5	1,222,439		0.0000	1.0000	99.88
41.5	1,185,877		0.0000	1.0000	99.88
42.5	1,108,373		0.0000	1.0000	99.88
43.5	973,233		0.0000	1.0000	99.88
44.5	847,713		0.0000	1.0000	99.88
45.5	786,889		0.0000	1.0000	99.88
46.5	763,044		0.0000	1.0000	99.88
47.5	842,607		0.0000	1.0000	99.88
48.5	708,958		0.0000	1.0000	99.88
49.5	645,371		0.0000	1.0000	99.88
50.5	565,115		0.0000	1.0000	99.88
51.5	527,639		0.0000	1.0000	99.88
52.5	558,156		0.0000	1.0000	99.88
53.5	436,184		0.0000	1.0000	99.88
54.5	376,242		0.0000	1.0000	99.88
55.5	249,156		0.0000	1.0000	99.88
56.5	209,650		0.0000	1.0000	99.88
57.5	172,992		0.0000	1.0000	99.88
58.5	157,779		0.0000	1.0000	99.88
59.5	138,118		0.0000	1.0000	99.88
60.5	119,456		0.0000	1.0000	99.88
61.5	102,747		0.0000	1.0000	99.88
62.5	85,765		0.0000	1.0000	99.88
63.5	74,680		0.0000	1.0000	99.88
64.5	63,713		0.0000	1.0000	99.88
65.5	48,736		0.0000	1.0000	99.88
66.5	38,312		0.0000	1.0000	99.88
67.5	28,371		0.0000	1.0000	99.88
68.5	19,011		0.0000	1.0000	99.88
69.5	15,941		0.0000	1.0000	99.88
70.5	9,166		0.0000	1.0000	99.88
71.5	4,441		0.0000	1.0000	99.88
72.5	2,580		0.0000	1.0000	99.88
73.5	1,034		0.0000	1.0000	99.88
74.5	1,034		0.0000	1.0000	99.88
75.5					99.88



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 346.00 METERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 346.00 METERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1938-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	17,965,230	2,472	0.0001	0.9999	100.00
0.5	15,301,309	6,885	0.0004	0.9996	99.99
1.5	13,433,894	25,526	0.0019	0.9981	99.94
2.5	11,325,689	24,315	0.0021	0.9979	99.75
3.5	9,545,805	23,327	0.0024	0.9976	99.54
4.5	8,677,044	45,080	0.0052	0.9948	99.29
5.5	8,098,105	120,746	0.0149	0.9851	98.78
6.5	7,476,478	130,377	0.0174	0.9826	97.31
7.5	7,245,885	172,825	0.0239	0.9761	95.61
8.5	6,659,398	226,758	0.0341	0.9659	93.33
9.5	6,037,238	293,246	0.0486	0.9514	90.15
10.5	5,461,967	272,411	0.0499	0.9501	85.77
11.5	5,197,972	219,512	0.0422	0.9578	81.49
12.5	4,748,623	189,641	0.0399	0.9601	78.05
13.5	4,254,696	217,096	0.0510	0.9490	74.93
14.5	3,896,071	370,704	0.0951	0.9049	71.11
15.5	3,555,459	381,961	0.1074	0.8926	64.35
16.5	3,180,506	271,764	0.0854	0.9146	57.43
17.5	2,923,396	167,514	0.0573	0.9427	52.53
18.5	2,747,924	178,361	0.0649	0.9351	49.52
19.5	2,551,602	160,330	0.0628	0.9372	46.30
20.5	2,446,412	175,273	0.0716	0.9284	43.39
21.5	2,477,635	145,000	0.0585	0.9415	40.28
22.5	2,179,287	149,362	0.0685	0.9315	37.93
23.5	1,887,449	182,710	0.0968	0.9032	35.33
24.5	1,560,095	198,830	0.1274	0.8726	31.91
25.5	1,223,265	201,228	0.1645	0.8355	27.84
26.5	906,682	181,365	0.2000	0.8000	23.26
27.5	734,570	141,297	0.1924	0.8076	18.61
28.5	553,947	115,374	0.2083	0.7917	15.03
29.5	431,146	96,096	0.2229	0.7771	11.90
30.5	328,740	83,221	0.2532	0.7468	9.25
31.5	247,469	73,664	0.2977	0.7023	6.91
32.5	170,639	69,096	0.4049	0.5951	4.85
33.5	95,462	50,113	0.5249	0.4751	2.89
34.5	45,349	23,960	0.5283	0.4717	1.37
35.5	26,733	8,919	0.3336	0.6664	0.65
36.5	32,640	4,829	0.1479	0.8521	0.43
37.5	69,350	21,109	0.3044	0.6956	0.37
38.5	64,577	33,724	0.5222	0.4778	0.26

SAN GABRIEL VALLEY WATER COMPANY

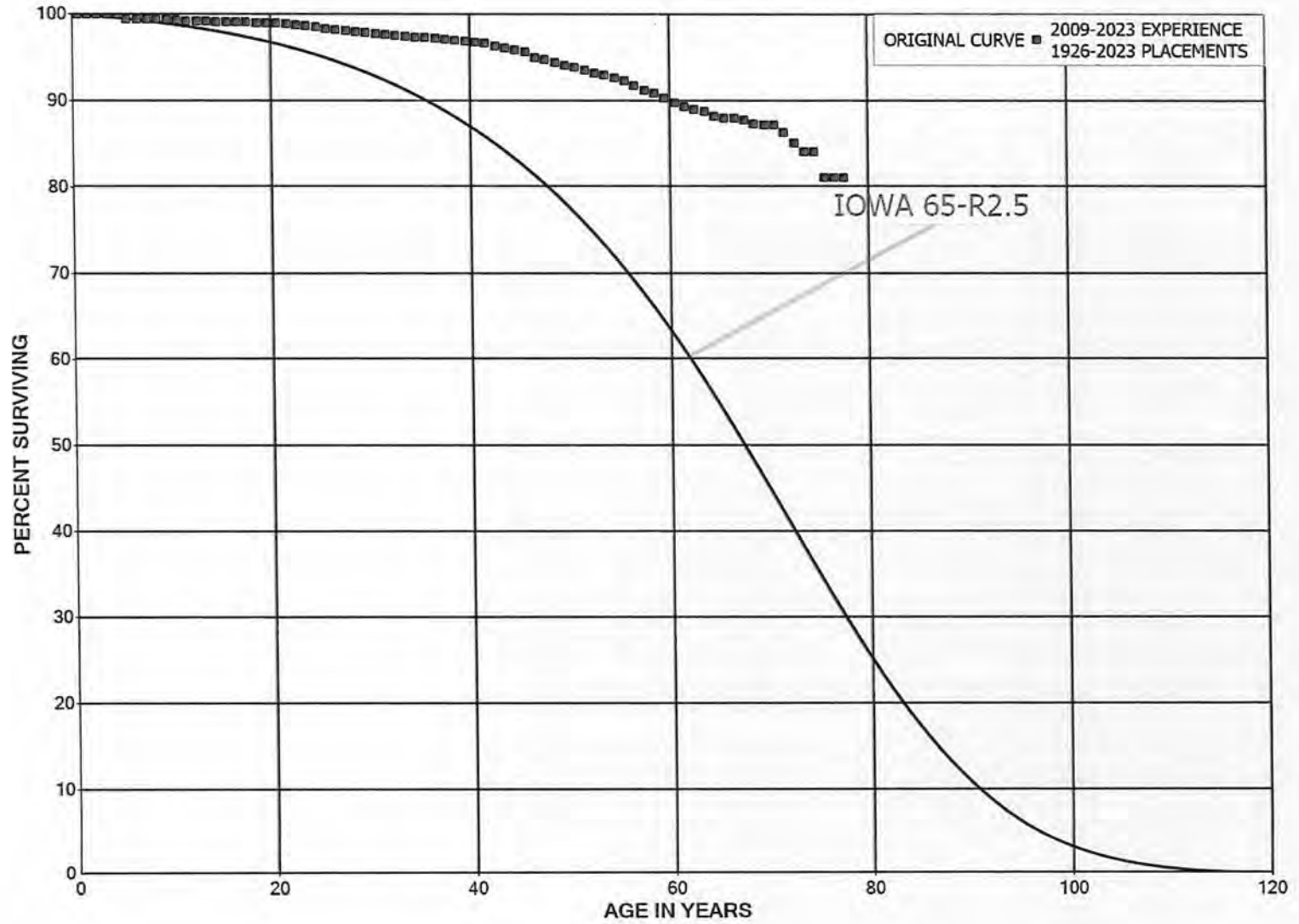
ACCOUNT 346.00 METERS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1938-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	45,248	27,968	0.6181	0.3819	0.12
40.5	37,562	17,729	0.4720	0.5280	0.05
41.5	315,695	74,678	0.2366	0.7634	0.02
42.5	267,925	245,340	0.9157	0.0843	0.02
43.5	35,313	24,141	0.6836	0.3164	0.00
44.5	35,338	15,516	0.4391	0.5609	0.00
45.5	74,482	32,715	0.4392	0.5608	0.00
46.5	427,710	54,282	0.1269	0.8731	0.00
47.5	71,398	45,822	0.6418	0.3582	0.00
48.5	57,799	36,642	0.6339	0.3661	0.00
49.5	59,131	36,329	0.6144	0.3856	0.00
50.5	103,894	36,416	0.3505	0.6495	0.00
51.5	44,128	31,746	0.7194	0.2806	0.00
52.5	84,065	37,456	0.4456	0.5544	0.00
53.5	58,830	51,225	0.8707	0.1293	0.00
54.5	37,624	37,442	0.9952	0.0048	0.00
55.5	36,307	36,221	0.9976	0.0024	0.00
56.5	52,524	52,504	0.9996	0.0004	0.00
57.5	53,369	53,349	0.9996	0.0004	0.00
58.5	42,619	42,599	0.9995	0.0005	0.00
59.5	15,481	15,461	0.9987	0.0013	0.00
60.5	11,230	11,210	0.9982	0.0018	0.00
61.5	11,478	11,458	0.9983	0.0017	
62.5	3,327	3,307	0.9940		
63.5	20,955	20,935	0.9990		
64.5	3,094	3,094	1.0000		
65.5	3,676	3,676	1.0000		
66.5	2,918	2,918	1.0000		
67.5	4,077	4,077	1.0000		
68.5	2,815	2,815	1.0000		
69.5	7,345	7,345	1.0000		
70.5	410	410	1.0000		
71.5					



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 348.00 HYDRANTS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1926-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	12,396,977	299	0.0000	1.0000	100.00
0.5	9,869,003	566	0.0001	0.9999	100.00
1.5	10,203,436	732	0.0001	0.9999	99.99
2.5	9,337,237	1,040	0.0001	0.9999	99.98
3.5	9,176,343	1,283	0.0001	0.9999	99.97
4.5	8,680,176	45,563	0.0052	0.9948	99.96
5.5	8,114,454	1,163	0.0001	0.9999	99.43
6.5	8,124,991	1,751	0.0002	0.9998	99.42
7.5	7,509,986	1,850	0.0002	0.9998	99.40
8.5	7,517,323	1,931	0.0003	0.9997	99.37
9.5	7,306,683	8,152	0.0011	0.9989	99.35
10.5	7,172,745	1,594	0.0002	0.9998	99.24
11.5	7,342,424	3,069	0.0004	0.9996	99.22
12.5	7,258,699	3,079	0.0004	0.9996	99.17
13.5	6,990,939	1,932	0.0003	0.9997	99.13
14.5	6,663,649	1,592	0.0002	0.9998	99.11
15.5	6,520,341	1,183	0.0002	0.9998	99.08
16.5	5,338,521	1,369	0.0003	0.9997	99.06
17.5	5,235,051	1,680	0.0003	0.9997	99.04
18.5	5,375,894	2,376	0.0004	0.9996	99.01
19.5	5,312,096	3,803	0.0007	0.9993	98.96
20.5	5,273,491	5,119	0.0010	0.9990	98.89
21.5	5,124,360	5,084	0.0010	0.9990	98.80
22.5	5,323,567	5,803	0.0011	0.9989	98.70
23.5	5,430,443	7,723	0.0014	0.9986	98.59
24.5	5,416,411	7,683	0.0014	0.9986	98.45
25.5	5,309,816	7,243	0.0014	0.9986	98.31
26.5	5,021,388	5,428	0.0011	0.9989	98.18
27.5	4,984,452	4,493	0.0009	0.9991	98.07
28.5	5,109,138	5,182	0.0010	0.9990	97.98
29.5	5,346,950	6,974	0.0013	0.9987	97.88
30.5	5,436,018	6,974	0.0013	0.9987	97.75
31.5	5,320,744	7,256	0.0014	0.9986	97.63
32.5	5,108,693	4,316	0.0008	0.9992	97.50
33.5	4,624,483	4,172	0.0009	0.9991	97.41
34.5	4,119,029	3,771	0.0009	0.9991	97.33
35.5	3,818,022	3,370	0.0009	0.9991	97.24
36.5	3,290,900	3,249	0.0010	0.9990	97.15
37.5	2,749,473	2,911	0.0011	0.9989	97.06
38.5	2,417,509	2,817	0.0012	0.9988	96.95

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	2,098,278	2,851	0.0014	0.9986	96.84
40.5	2,114,094	3,146	0.0015	0.9985	96.71
41.5	2,063,189	5,421	0.0026	0.9974	96.56
42.5	1,830,031	4,514	0.0025	0.9975	96.31
43.5	1,558,088	3,550	0.0023	0.9977	96.07
44.5	1,260,857	3,182	0.0025	0.9975	95.85
45.5	1,050,136	7,759	0.0074	0.9926	95.61
46.5	1,284,668	2,528	0.0020	0.9980	94.91
47.5	969,104	3,625	0.0037	0.9963	94.72
48.5	913,385	2,385	0.0026	0.9974	94.36
49.5	862,093	3,052	0.0035	0.9965	94.12
50.5	789,707	2,252	0.0029	0.9971	93.78
51.5	740,125	2,381	0.0032	0.9968	93.52
52.5	719,734	2,027	0.0028	0.9972	93.22
53.5	637,901	2,395	0.0038	0.9962	92.95
54.5	628,015	2,434	0.0039	0.9961	92.60
55.5	420,806	2,534	0.0060	0.9940	92.25
56.5	390,537	2,042	0.0052	0.9948	91.69
57.5	349,335	1,568	0.0045	0.9955	91.21
58.5	310,914	1,726	0.0056	0.9944	90.80
59.5	274,795	1,772	0.0064	0.9936	90.30
60.5	241,264	1,016	0.0042	0.9958	89.72
61.5	191,374	797	0.0042	0.9958	89.34
62.5	167,670	553	0.0033	0.9967	88.97
63.5	133,068	714	0.0054	0.9946	88.67
64.5	123,262	354	0.0029	0.9971	88.20
65.5	113,823	63	0.0006	0.9994	87.94
66.5	98,098	205	0.0021	0.9979	87.89
67.5	74,518	357	0.0048	0.9952	87.71
68.5	50,815	37	0.0007	0.9993	87.29
69.5	26,239	1	0.0001	0.9999	87.23
70.5	19,235	196	0.0102	0.9898	87.22
71.5	13,563	203	0.0150	0.9850	86.33
72.5	9,187	101	0.0110	0.9890	85.04
73.5	5,072		0.0000	1.0000	84.10
74.5	3,677	131	0.0355	0.9645	84.10
75.5	2,351		0.0000	1.0000	81.11
76.5	1,601		0.0000	1.0000	81.11
77.5					81.11
78.5	174	2	0.0125		

SAN GABRIEL VALLEY WATER COMPANY

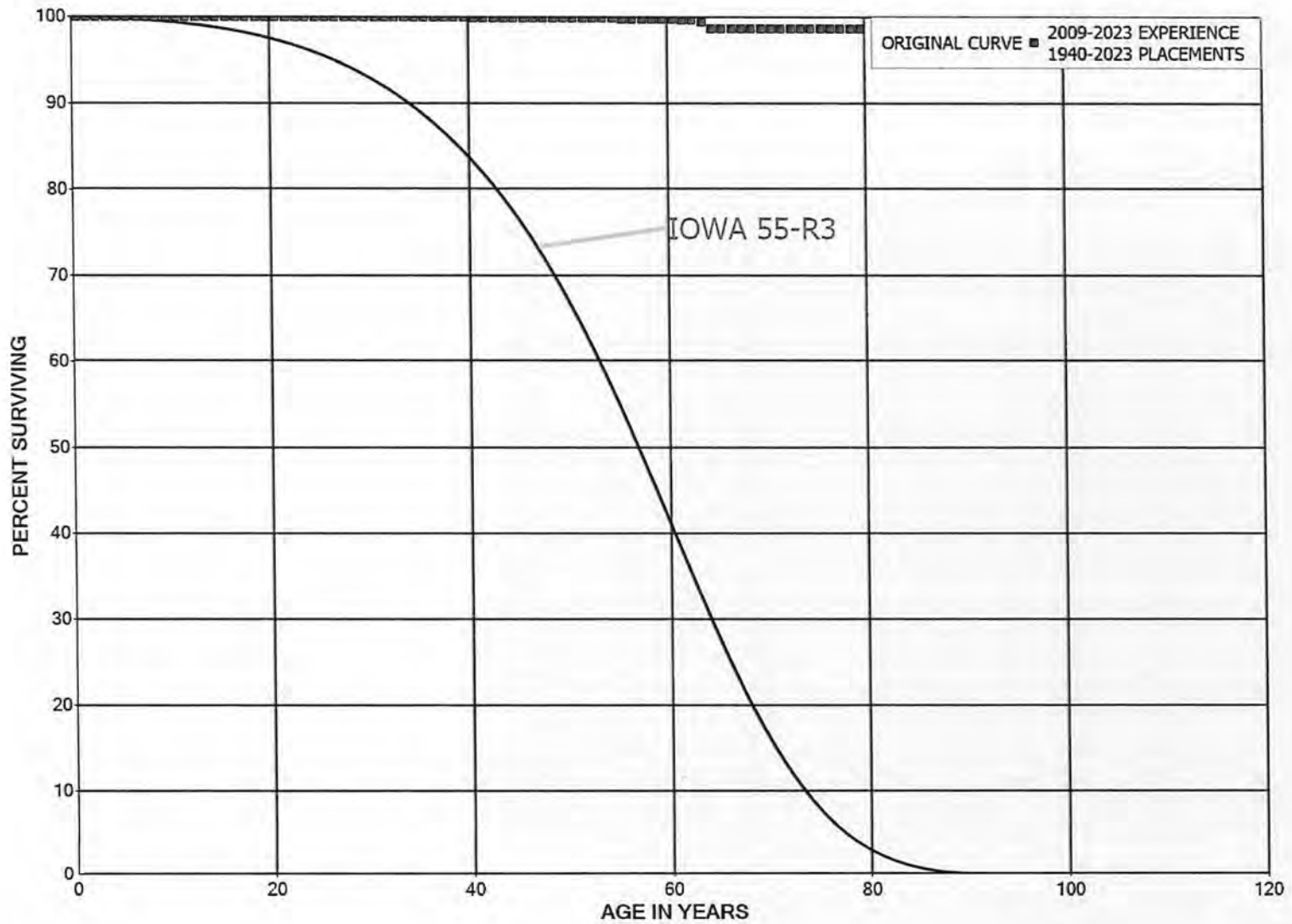
ACCOUNT 348.00 HYDRANTS

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1926-2023			EXPERIENCE BAND 2009-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	397	100	0.2515		
80.5	297	216	0.7274		
81.5	81	75	0.9225		
82.5	31		0.0000		
83.5	31	5	0.1519		
84.5	27	1	0.0551		
85.5	25	0	0.0024		
86.5	25		0.0000		
87.5	25		0.0000		
88.5	25		0.0000		
89.5	25		0.0000		
90.5	25		0.0000		
91.5	25		0.0000		
92.5	25		0.0000		
93.5	25		0.0000		
94.5	25		0.0000		
95.5	25		0.0000		
96.5	25	25	1.0000		
97.5					



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE

PLACEMENT BAND 1940-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	22,066,044	635	0.0000	1.0000	100.00
0.5	21,384,353		0.0000	1.0000	100.00
1.5	21,765,213	9	0.0000	1.0000	100.00
2.5	21,187,700	7	0.0000	1.0000	100.00
3.5	20,740,586	29	0.0000	1.0000	100.00
4.5	19,816,777		0.0000	1.0000	100.00
5.5	19,600,974		0.0000	1.0000	100.00
6.5	19,378,553		0.0000	1.0000	100.00
7.5	19,004,669		0.0000	1.0000	100.00
8.5	18,999,723	2	0.0000	1.0000	100.00
9.5	18,897,427	4	0.0000	1.0000	100.00
10.5	18,326,395		0.0000	1.0000	100.00
11.5	17,873,634	32	0.0000	1.0000	100.00
12.5	17,930,933	141	0.0000	1.0000	100.00
13.5	17,301,882	3	0.0000	1.0000	100.00
14.5	1,170,313		0.0000	1.0000	100.00
15.5	1,760,176	128	0.0001	0.9999	100.00
16.5	1,315,214	46	0.0000	1.0000	99.99
17.5	1,183,906		0.0000	1.0000	99.99
18.5	1,085,497	17	0.0000	1.0000	99.99
19.5	1,102,383	5	0.0000	1.0000	99.98
20.5	1,140,693	123	0.0001	0.9999	99.98
21.5	1,268,270	17	0.0000	1.0000	99.97
22.5	1,280,213	4	0.0000	1.0000	99.97
23.5	1,229,847	3	0.0000	1.0000	99.97
24.5	1,218,343	9	0.0000	1.0000	99.97
25.5	1,219,953	30	0.0000	1.0000	99.97
26.5	1,198,628	12	0.0000	1.0000	99.97
27.5	1,094,506	1	0.0000	1.0000	99.97
28.5	1,039,293		0.0000	1.0000	99.97
29.5	1,011,301		0.0000	1.0000	99.97
30.5	461,363		0.0000	1.0000	99.97
31.5	431,672		0.0000	1.0000	99.97
32.5	396,007		0.0000	1.0000	99.97
33.5	427,096	5	0.0000	1.0000	99.97
34.5	469,018	17	0.0000	1.0000	99.96
35.5	501,749		0.0000	1.0000	99.96
36.5	374,405	4	0.0000	1.0000	99.96
37.5	554,973		0.0000	1.0000	99.96
38.5	558,423		0.0000	1.0000	99.96

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1940-2023			EXPERIENCE BAND 2009-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL	
39.5	508,405	677	0.0013	0.9987	99.96	
40.5	498,732		0.0000	1.0000	99.83	
41.5	495,202	6	0.0000	1.0000	99.83	
42.5	508,969		0.0000	1.0000	99.83	
43.5	715,085		0.0000	1.0000	99.83	
44.5	735,615	5	0.0000	1.0000	99.83	
45.5	712,094		0.0000	1.0000	99.83	
46.5	712,483		0.0000	1.0000	99.83	
47.5	712,483		0.0000	1.0000	99.83	
48.5	666,314	15	0.0000	1.0000	99.83	
49.5	630,461	106	0.0002	0.9998	99.82	
50.5	564,733	26	0.0000	1.0000	99.81	
51.5	570,970		0.0000	1.0000	99.80	
52.5	373,651		0.0000	1.0000	99.80	
53.5	353,887		0.0000	1.0000	99.80	
54.5	310,686	256	0.0008	0.9992	99.80	
55.5	310,167		0.0000	1.0000	99.72	
56.5	394,053		0.0000	1.0000	99.72	
57.5	379,245		0.0000	1.0000	99.72	
58.5	182,975		0.0000	1.0000	99.72	
59.5	160,438		0.0000	1.0000	99.72	
60.5	151,892	106	0.0007	0.9993	99.72	
61.5	151,397		0.0000	1.0000	99.65	
62.5	156,933	395	0.0025	0.9975	99.65	
63.5	174,549	1,410	0.0081	0.9919	99.40	
64.5	150,276		0.0000	1.0000	98.60	
65.5	138,330		0.0000	1.0000	98.60	
66.5	131,731		0.0000	1.0000	98.60	
67.5	131,731		0.0000	1.0000	98.60	
68.5	132,377		0.0000	1.0000	98.60	
69.5	126,447		0.0000	1.0000	98.60	
70.5	126,447		0.0000	1.0000	98.60	
71.5	41,548		0.0000	1.0000	98.60	
72.5	41,472		0.0000	1.0000	98.60	
73.5	30,931		0.0000	1.0000	98.60	
74.5	30,865		0.0000	1.0000	98.60	
75.5	23,234		0.0000	1.0000	98.60	
76.5	23,234		0.0000	1.0000	98.60	
77.5	18,093		0.0000	1.0000	98.60	
78.5	931		0.0000	1.0000	98.60	

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

ORIGINAL LIFE TABLE, CONT.

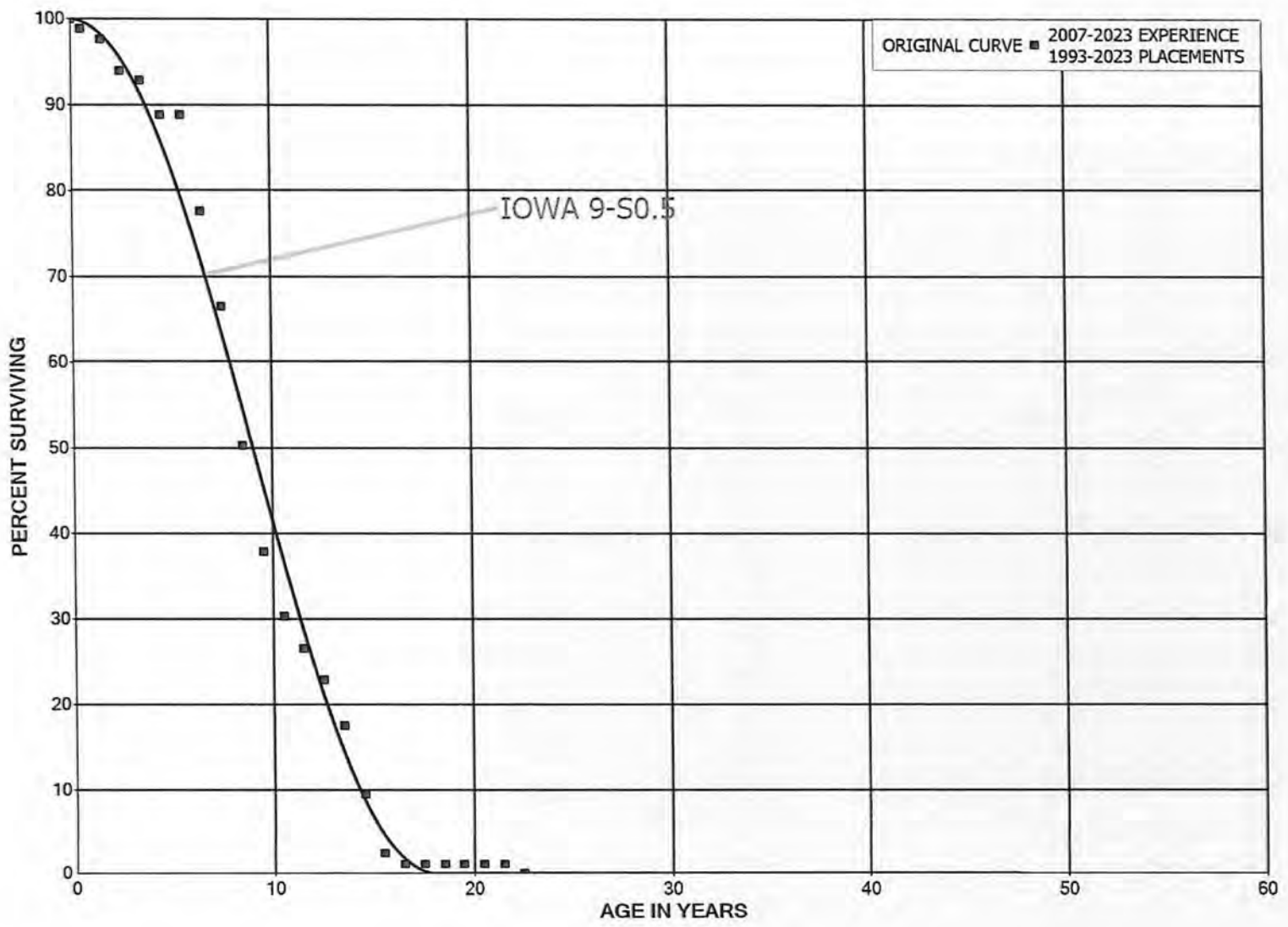
PLACEMENT BAND 1940-2023

EXPERIENCE BAND 2009-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
79.5	931		0.0000	1.0000	98.60
80.5	931		0.0000	1.0000	98.60
81.5	931		0.0000	1.0000	98.60
82.5	931		0.0000	1.0000	98.60
83.5					98.60



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 373.10 TRANSPORTATION EQUIPMENT - AUTO/VANS
ORIGINAL AND SMOOTH SURVIVOR CURVES



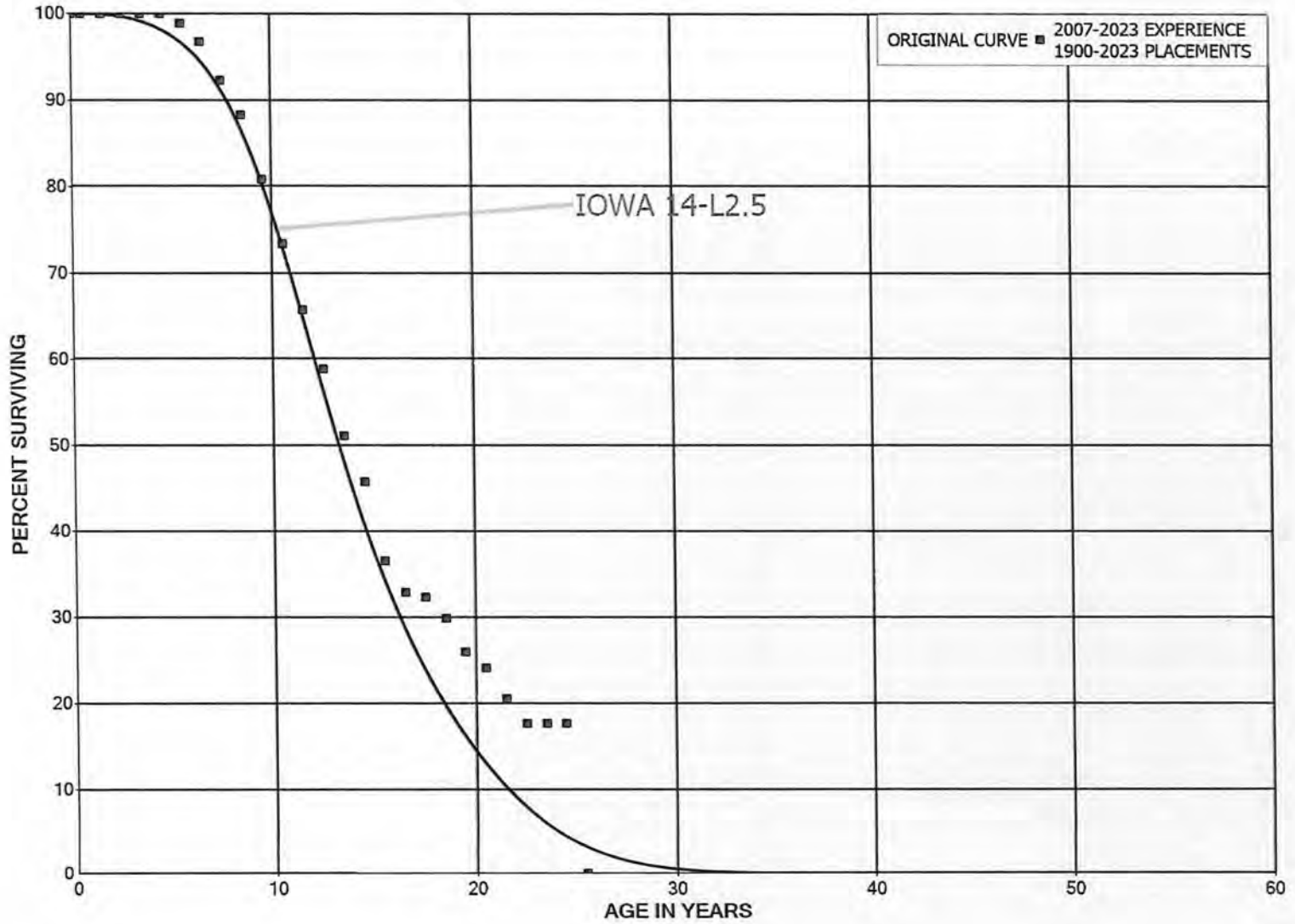
SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.10 TRANSPORTATION EQUIPMENT - AUTO/VANS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1993-2023			EXPERIENCE BAND 2007-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	2,855,432	33,903	0.0119	0.9881	100.00
0.5	2,775,523	33,361	0.0120	0.9880	98.81
1.5	2,492,336	92,754	0.0372	0.9628	97.62
2.5	2,241,993	26,598	0.0119	0.9881	93.99
3.5	2,065,384	90,772	0.0439	0.9561	92.88
4.5	1,976,675		0.0000	1.0000	88.79
5.5	1,887,155	238,703	0.1265	0.8735	88.79
6.5	1,286,492	183,116	0.1423	0.8577	77.56
7.5	980,543	239,939	0.2447	0.7553	66.52
8.5	695,659	171,797	0.2470	0.7530	50.24
9.5	497,796	99,672	0.2002	0.7998	37.84
10.5	353,848	43,736	0.1236	0.8764	30.26
11.5	310,112	43,310	0.1397	0.8603	26.52
12.5	286,135	66,805	0.2335	0.7665	22.82
13.5	160,901	73,135	0.4545	0.5455	17.49
14.5	87,766	65,953	0.7515	0.2485	9.54
15.5	40,547	21,812	0.5379	0.4621	2.37
16.5	18,735		0.0000	1.0000	1.10
17.5	18,735		0.0000	1.0000	1.10
18.5	18,735		0.0000	1.0000	1.10
19.5	18,735		0.0000	1.0000	1.10
20.5	18,735		0.0000	1.0000	1.10
21.5	18,735	18,735	1.0000		1.10
22.5					

SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 373.20 TRANSPORTATION EQUIPMENT - TRUCKS
ORIGINAL AND SMOOTH SURVIVOR CURVES



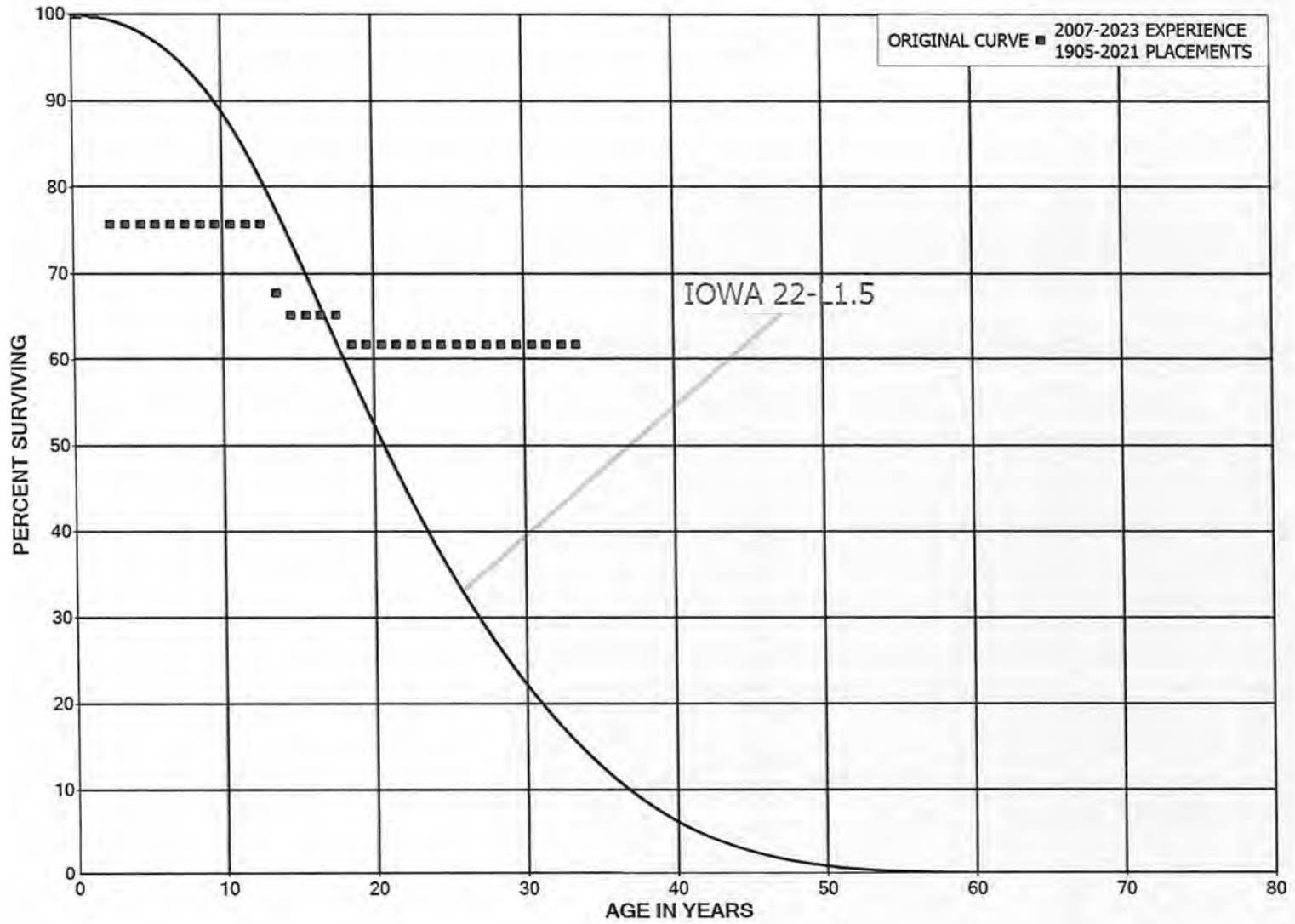
SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.20 TRANSPORTATION EQUIPMENT - TRUCKS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1900-2023			EXPERIENCE BAND 2007-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	7,660,862		0.0000	1.0000	100.00
0.5	6,485,834		0.0000	1.0000	100.00
1.5	6,015,040		0.0000	1.0000	100.00
2.5	5,526,612		0.0000	1.0000	100.00
3.5	5,756,198		0.0000	1.0000	100.00
4.5	5,734,248	68,295	0.0119	0.9881	100.00
5.5	5,230,958	111,185	0.0213	0.9787	98.81
6.5	4,950,829	228,745	0.0462	0.9538	96.71
7.5	5,315,368	228,387	0.0430	0.9570	92.24
8.5	4,654,383	390,631	0.0839	0.9161	88.28
9.5	4,312,244	400,122	0.0928	0.9072	80.87
10.5	4,204,231	436,528	0.1038	0.8962	73.36
11.5	3,558,347	375,037	0.1054	0.8946	65.75
12.5	2,801,182	368,321	0.1315	0.8685	58.82
13.5	2,369,323	247,464	0.1044	0.8956	51.08
14.5	1,313,682	266,082	0.2025	0.7975	45.75
15.5	927,801	91,702	0.0988	0.9012	36.48
16.5	836,099	15,052	0.0180	0.9820	32.88
17.5	801,172	61,792	0.0771	0.9229	32.28
18.5	548,383	70,193	0.1280	0.8720	29.79
19.5	360,486	25,976	0.0721	0.9279	25.98
20.5	334,510	49,897	0.1492	0.8508	24.11
21.5	284,613	39,664	0.1394	0.8606	20.51
22.5	81,356		0.0000	1.0000	17.65
23.5	81,356		0.0000	1.0000	17.65
24.5	32,751	32,751	1.0000		17.65
25.5					

SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 373.30 TRANSPORTATION EQUIPMENT - TRAILERS
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

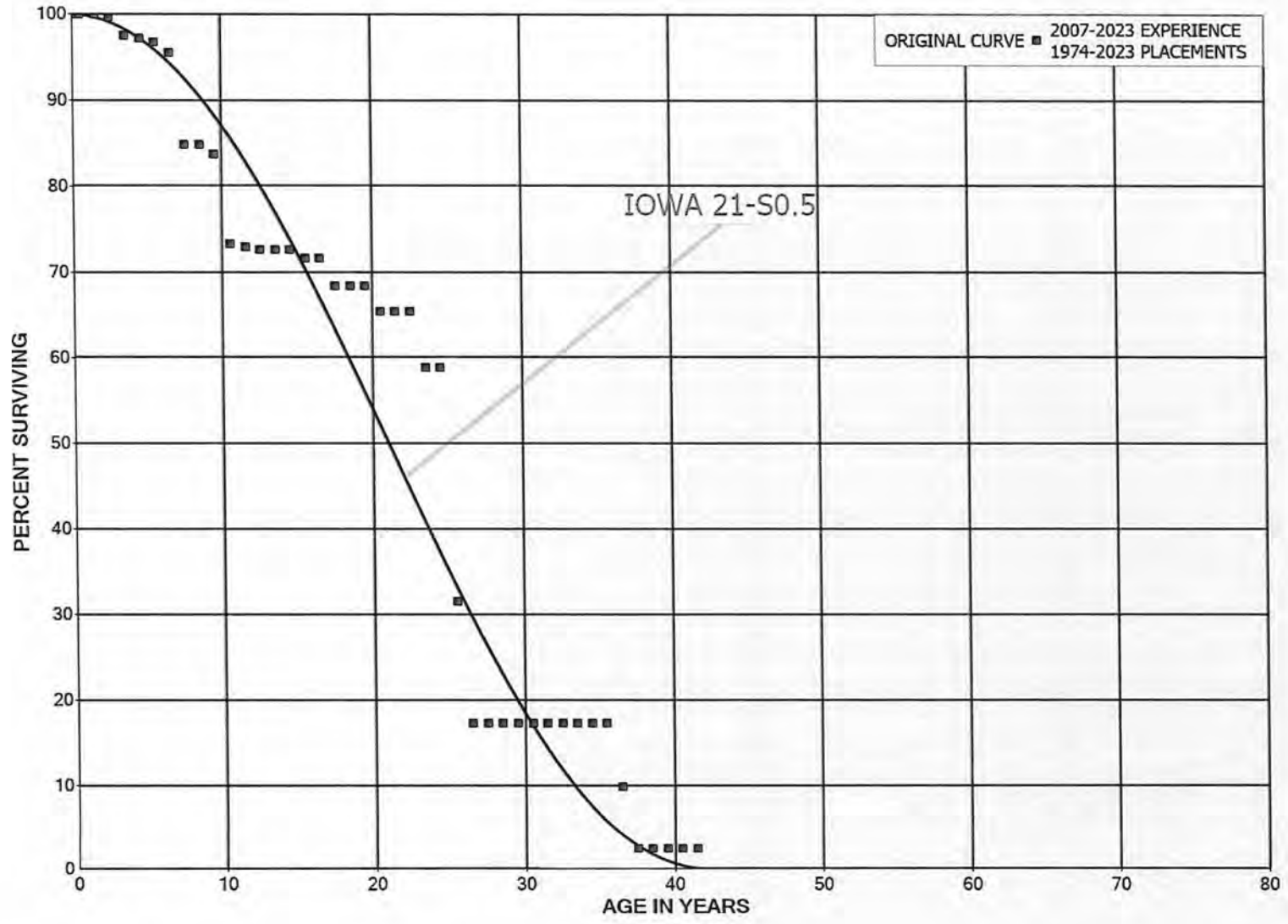
ACCOUNT 373.30 TRANSPORTATION EQUIPMENT - TRAILERS

ORIGINAL LIFE TABLE

PLACEMENT BAND 1905-2021		EXPERIENCE BAND 2007-2023			
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	190,560		0.0000	1.0000	100.00
0.5	190,560		0.0000	1.0000	100.00
1.5	229,135	55,692	0.2431	0.7569	100.00
2.5	108,290		0.0000	1.0000	75.69
3.5	108,290		0.0000	1.0000	75.69
4.5	127,237		0.0000	1.0000	75.69
5.5	127,237		0.0000	1.0000	75.69
6.5	127,237		0.0000	1.0000	75.69
7.5	127,237		0.0000	1.0000	75.69
8.5	71,545		0.0000	1.0000	75.69
9.5	141,043		0.0000	1.0000	75.69
10.5	134,347		0.0000	1.0000	75.69
11.5	127,020		0.0000	1.0000	75.69
12.5	127,020	13,329	0.1049	0.8951	75.69
13.5	113,691	4,276	0.0376	0.9624	67.75
14.5	117,967		0.0000	1.0000	65.20
15.5	117,967		0.0000	1.0000	65.20
16.5	79,392		0.0000	1.0000	65.20
17.5	79,392	4,276	0.0539	0.9461	65.20
18.5	79,415		0.0000	1.0000	61.69
19.5	60,468		0.0000	1.0000	61.69
20.5	60,468		0.0000	1.0000	61.69
21.5	60,468		0.0000	1.0000	61.69
22.5	60,468		0.0000	1.0000	61.69
23.5	60,468		0.0000	1.0000	61.69
24.5	4,299		0.0000	1.0000	61.69
25.5	4,299		0.0000	1.0000	61.69
26.5	4,299		0.0000	1.0000	61.69
27.5	4,299		0.0000	1.0000	61.69
28.5	4,299		0.0000	1.0000	61.69
29.5	4,299		0.0000	1.0000	61.69
30.5	4,299		0.0000	1.0000	61.69
31.5	4,299		0.0000	1.0000	61.69
32.5	4,299		0.0000	1.0000	61.69
33.5					61.69



SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 373.40 TRANSPORTATION EQUIPMENT - OTHER
ORIGINAL AND SMOOTH SURVIVOR CURVES



SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.40 TRANSPORTATION EQUIPMENT - OTHER

ORIGINAL LIFE TABLE

PLACEMENT BAND 1974-2023			EXPERIENCE BAND 2007-2023		
AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
0.0	692,079		0.0000	1.0000	100.00
0.5	593,238		0.0000	1.0000	100.00
1.5	655,088	2,675	0.0041	0.9959	100.00
2.5	460,558	9,856	0.0214	0.9786	99.59
3.5	451,809	1,247	0.0028	0.9972	97.46
4.5	438,148	2,159	0.0049	0.9951	97.19
5.5	435,989	5,318	0.0122	0.9878	96.71
6.5	455,758	51,064	0.1120	0.8880	95.53
7.5	454,476		0.0000	1.0000	84.83
8.5	425,220	5,263	0.0124	0.9876	84.83
9.5	419,957	52,813	0.1258	0.8742	83.78
10.5	254,554	1,103	0.0043	0.9957	73.24
11.5	233,622	864	0.0037	0.9963	72.93
12.5	175,022		0.0000	1.0000	72.66
13.5	136,755		0.0000	1.0000	72.66
14.5	163,487	2,266	0.0139	0.9861	72.66
15.5	165,973		0.0000	1.0000	71.65
16.5	104,123	4,752	0.0456	0.9544	71.65
17.5	99,371		0.0000	1.0000	68.38
18.5	99,371		0.0000	1.0000	68.38
19.5	121,180	5,304	0.0438	0.9562	68.38
20.5	115,876		0.0000	1.0000	65.39
21.5	90,789		0.0000	1.0000	65.39
22.5	90,789	9,106	0.1003	0.8997	65.39
23.5	90,789		0.0000	1.0000	58.83
24.5	90,789	42,249	0.4654	0.5346	58.83
25.5	48,540	21,818	0.4495	0.5505	31.45
26.5	30,180		0.0000	1.0000	17.32
27.5	30,180		0.0000	1.0000	17.32
28.5	30,180		0.0000	1.0000	17.32
29.5	25,267		0.0000	1.0000	17.32
30.5	25,267		0.0000	1.0000	17.32
31.5	25,267		0.0000	1.0000	17.32
32.5	25,267		0.0000	1.0000	17.32
33.5	25,267		0.0000	1.0000	17.32
34.5	25,018		0.0000	1.0000	17.32
35.5	25,018	10,780	0.4309	0.5691	17.32
36.5	14,238	10,780	0.7571	0.2429	9.85
37.5	3,458		0.0000	1.0000	2.39
38.5	3,458		0.0000	1.0000	2.39

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.40 TRANSPORTATION EQUIPMENT - OTHER

ORIGINAL LIFE TABLE, CONT.

PLACEMENT BAND 1974-2023

EXPERIENCE BAND 2007-2023

AGE AT BEGIN OF INTERVAL	EXPOSURES AT BEGINNING OF AGE INTERVAL	RETIREMENTS DURING AGE INTERVAL	RETMT RATIO	SURV RATIO	PCT SURV BEGIN OF INTERVAL
39.5	3,458		0.0000	1.0000	2.39
40.5	3,458		0.0000	1.0000	2.39
41.5					2.39

PART VIII. NET SALVAGE STATISTICS

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2009	157,765		0		0		0
2010							
2011		30,393				30,393-	
2012	16,801	86,507	515		0	86,507-	515-
2013							
2014							
2015							
2016		15,648				15,648-	
2017		273,673				273,673-	
2018		63,873				63,873-	
2019							
2020							
2021							
2022	48,998	186,246	380	2,414	5	183,832-	375-
2023		69,280				69,280-	
TOTAL	223,564	725,620	325	2,414	1	723,206-	323-

THREE-YEAR MOVING AVERAGES

09-11	52,588	10,131	19		0	10,131-	19-
10-12	5,600	38,967	696		0	38,967-	696-
11-13	5,600	38,967	696		0	38,967-	696-
12-14	5,600	28,836	515		0	28,836-	515-
13-15							
14-16		5,216				5,216-	
15-17		96,441				96,441-	
16-18		117,731				117,731-	
17-19		112,515				112,515-	
18-20		21,291				21,291-	
19-21							
20-22	16,333	62,082	380	805	5	61,277-	375-
21-23	16,333	85,175	522	805	5	84,371-	517-

FIVE-YEAR AVERAGE

19-23	9,800	51,105	522	483	5	50,622-	517-
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011		30,950				30,950-	
2012	15,351		0		0		0
2013	7,176		0		0		0
2014		78				78-	
2015							
2016		23,514				23,514-	
2017							
2018							
2019							
2020							
2021							
2022		29,788		8,650		21,138-	
2023				6,450		6,450	
TOTAL	22,527	84,330	374	15,100	67	69,230-	307-

THREE-YEAR MOVING AVERAGES

11-13	7,509	10,317	137		0	10,317-	137-
12-14	7,509	26	0		0	26-	0
13-15	2,392	26	1		0	26-	1-
14-16		7,864				7,864-	
15-17		7,838				7,838-	
16-18		7,838				7,838-	
17-19							
18-20							
19-21							
20-22		9,929		2,883		7,046-	
21-23		9,929		5,033		4,896-	

FIVE-YEAR AVERAGE

19-23		5,958		3,020		2,938-	
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007		4,511				4,511-	
2008	69,904		0		0		0
2009	281,911		0		0		0
2010		362				362-	
2011	112,360	21,433	19		0	21,433-	19-
2012	405,449		0		0		0
2013	24,404		0		0		0
2014	57,363	4,065	7		0	4,065-	7-
2015							
2016							
2017							
2018		3,391				3,391-	
2019				1,979		1,979	
2020							
2021	20,442		0		0		0
2022	1,547		0	21,821		21,821	
2023	64,269	26,553	41	64,360	100	37,807	59
TOTAL	1,037,649	60,314	6	88,160	8	27,846	3

THREE-YEAR MOVING AVERAGES

07-09	117,272	1,504	1		0	1,504-	1-
08-10	117,272	121	0		0	121-	0
09-11	131,424	7,265	6		0	7,265-	6-
10-12	172,603	7,265	4		0	7,265-	4-
11-13	180,738	7,144	4		0	7,144-	4-
12-14	162,405	1,355	1		0	1,355-	1-
13-15	27,256	1,355	5		0	1,355-	5-
14-16	19,121	1,355	7		0	1,355-	7-
15-17							
16-18		1,130				1,130-	
17-19		1,130		660		471-	
18-20		1,130		660		471-	
19-21	6,814		0	660	10	660	10
20-22	7,330		0	7,274	99	7,274	99
21-23	28,752	8,851	31	28,727	100	19,876	69

FIVE-YEAR AVERAGE

19-23	17,252	5,311	31	17,632	102	12,321	71
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2008		52,885				52,885-	
2009		52,885-				52,885	
2010							
2011							
2012	7,191		0		0		0
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023							
TOTAL	7,191		0		0		0

THREE-YEAR MOVING AVERAGES

08-10							
09-11		17,628-				17,628	
10-12	2,397		0		0		0
11-13	2,397		0		0		0
12-14	2,397		0		0		0
13-15							
14-16							
15-17							
16-18							
17-19							
18-20							
19-21							
20-22							
21-23							

FIVE-YEAR AVERAGE

19-23

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2011	3,679		0		0		0
2012	15,977		0		0		0
2013							
2014							
2015							
2016							
2017	11,095,876		0		0		0
2018							
2019							
2020							
2021							
2022							
2023		230				230-	
TOTAL	11,115,532	230	0		0	230-	0
THREE-YEAR MOVING AVERAGES							
11-13	6,552		0		0		0
12-14	5,326		0		0		0
13-15							
14-16							
15-17	3,698,625		0		0		0
16-18	3,698,625		0		0		0
17-19	3,698,625		0		0		0
18-20							
19-21							
20-22							
21-23		77				77-	
FIVE-YEAR AVERAGE							
19-23		46				46-	

SAN GABRIEL VALLEY WATER COMPANY
ACCOUNT 342.00 RESERVOIRS AND TANKS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2009		5,870				5,870-	
2010							
2011							
2012							
2013							
2014	37,278	48,467	130		0	48,467-	130-
2015		895				895-	
2016							
2017							
2018		98,943				98,943-	
2019		31,962				31,962-	
2020		103,266				103,266-	
2021							
2022							
2023		47,271				47,271-	
TOTAL	37,278	336,675	903		0	336,675-	903-

THREE-YEAR MOVING AVERAGES

09-11		1,957				1,957-	
10-12							
11-13							
12-14	12,426	16,156	130		0	16,156-	130-
13-15	12,426	16,454	132		0	16,454-	132-
14-16	12,426	16,454	132		0	16,454-	132-
15-17		298				298-	
16-18		32,981				32,981-	
17-19		43,635				43,635-	
18-20		78,057				78,057-	
19-21		45,076				45,076-	
20-22		34,422				34,422-	
21-23		15,757				15,757-	

FIVE-YEAR AVERAGE

19-23		36,500				36,500-	
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	194,574	59,144	30		0	59,144-	30-
2008	130,232	74,572	57		0	74,572-	57-
2009	516,403	187,255	36		0	187,255-	36-
2010	177,736	56,599	32		0	56,599-	32-
2011	198,169	52,287	26		0	52,287-	26-
2012	100,745	18,822	19		0	18,822-	19-
2013	125,362	60,817	49		0	60,817-	49-
2014	204,025	77,559	38		0	77,559-	38-
2015	79,824	111,378	140		0	111,378-	140-
2016	79,053	37,132	47		0	37,132-	47-
2017	43,370	24,231	56		0	24,231-	56-
2018	270,412	165,990	61		0	165,990-	61-
2019	115,172	148,163	129		0	148,163-	129-
2020	75,139	93,482	124		0	93,482-	124-
2021	73,310	125,911	172		0	125,911-	172-
2022	162,500	99,680	61		0	99,680-	61-
2023	82,760	227,411	275		0	227,411-	275-
TOTAL	2,628,787	1,620,433	62		0	1,620,433-	62-

THREE-YEAR MOVING AVERAGES

07-09	280,403	106,990	38		0	106,990-	38-
08-10	274,790	106,142	39		0	106,142-	39-
09-11	297,436	98,714	33		0	98,714-	33-
10-12	158,883	42,569	27		0	42,569-	27-
11-13	141,426	43,975	31		0	43,975-	31-
12-14	143,378	52,399	37		0	52,399-	37-
13-15	136,404	83,251	61		0	83,251-	61-
14-16	120,968	75,356	62		0	75,356-	62-
15-17	67,416	57,580	85		0	57,580-	85-
16-18	130,945	75,784	58		0	75,784-	58-
17-19	142,985	112,795	79		0	112,795-	79-
18-20	153,574	135,878	88		0	135,878-	88-
19-21	87,874	122,519	139		0	122,519-	139-
20-22	103,650	106,358	103		0	106,358-	103-
21-23	106,190	151,001	142		0	151,001-	142-

FIVE-YEAR AVERAGE

19-23	101,776	138,929	137		0	138,929-	137-
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES AND FIRE SERVICES

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	335,235	23,287	7		0	23,287-	7-
2008	1,337,835	38,274	3		0	38,274-	3-
2009	776,006	21,819	3		0	21,819-	3-
2010	784,990	15,825	2	440	0	15,385-	2-
2011	595,092	11,363	2		0	11,363-	2-
2012	498,774	7,939-	2-		0	7,939	2
2013	613,697	19,325	3		0	19,325-	3-
2014	417,424	8,641	2		0	8,641-	2-
2015	214,258	6,100	3		0	6,100-	3-
2016	248,784	16,380	7		0	16,380-	7-
2017	301,048	11,808	4		0	11,808-	4-
2018	573,988	19,318	3		0	19,318-	3-
2019	434,034	18,005	4		0	18,005-	4-
2020	393,061	29,275	7		0	29,275-	7-
2021		29,958				29,958-	
2022	3,540-	4,267	121-		0	4,267-	121
2023	1,009,912	44,435	4	2,500	0	41,935-	4-
TOTAL	8,530,599	310,140	4	2,940	0	307,201-	4-

THREE-YEAR MOVING AVERAGES

07-09	816,359	27,793	3		0	27,793-	3-
08-10	966,277	25,306	3	147	0	25,159-	3-
09-11	718,696	16,336	2	147	0	16,189-	2-
10-12	626,286	6,417	1	147	0	6,270-	1-
11-13	569,188	7,583	1		0	7,583-	1-
12-14	509,965	6,676	1		0	6,676-	1-
13-15	415,126	11,355	3		0	11,355-	3-
14-16	293,489	10,374	4		0	10,374-	4-
15-17	254,697	11,429	4		0	11,429-	4-
16-18	374,607	15,835	4		0	15,835-	4-
17-19	436,357	16,377	4		0	16,377-	4-
18-20	467,028	22,199	5		0	22,199-	5-
19-21	275,698	25,746	9		0	25,746-	9-
20-22	129,840	21,167	16		0	21,167-	16-
21-23	335,457	26,220	8	833	0	25,386-	8-

FIVE-YEAR AVERAGE

19-23	366,693	25,188	7	500	0	24,688-	7-
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 346.00 METERS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	159,724		0	38,950	24	38,950	24
2008	304,126		0	21,769	7	21,769	7
2009	607,035		0	69,432	11	69,432	11
2010	716,585		0	77,604	11	77,604	11
2011	443,900		0	43,089	10	43,089	10
2012	266,818		0	13,026	5	13,026	5
2013	312,286		0	15,089	5	15,089	5
2014	656,142		0	33,647	5	33,647	5
2015	505,575		0	12,213	2	12,213	2
2016	515,694		0	7,108	1	7,108	1
2017	393,421		0	1,138	0	1,138	0
2018	324,017		0	24,333	8	24,333	8
2019	274,771		0	33,263	12	33,263	12
2020	162,038		0	61,882	38	61,882	38
2021	449,824		0	78,696	17	78,696	17
2022	196,452		0	74,777	38	74,777	38
2023	715,810		0	97,057	14	97,057	14
TOTAL	7,004,219		0	703,072	10	703,072	10

THREE-YEAR MOVING AVERAGES

07-09	356,962		0	43,384	12	43,384	12
08-10	542,582		0	56,268	10	56,268	10
09-11	589,173		0	63,375	11	63,375	11
10-12	475,768		0	44,573	9	44,573	9
11-13	341,001		0	23,735	7	23,735	7
12-14	411,749		0	20,587	5	20,587	5
13-15	491,334		0	20,316	4	20,316	4
14-16	559,137		0	17,656	3	17,656	3
15-17	471,563		0	6,820	1	6,820	1
16-18	411,044		0	10,859	3	10,859	3
17-19	330,736		0	19,578	6	19,578	6
18-20	253,609		0	39,826	16	39,826	16
19-21	295,544		0	57,947	20	57,947	20
20-22	269,438		0	71,785	27	71,785	27
21-23	454,029		0	83,510	18	83,510	18

FIVE-YEAR AVERAGE

19-23	359,779		0	69,135	19	69,135	19
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	4,476	22,547	504		0	22,547-	504-
2008	183,723	9,539	5		0	9,539-	5-
2009	11,448	12,630	110	2,755	24	9,875-	86-
2010	59,563	16,109	27	1,854	3	14,255-	24-
2011	58,523	8,218	14	1,863	3	6,355-	11-
2012		3,000				3,000-	
2013		9,722				9,722-	
2014	25,666	11,352	44		0	11,352-	44-
2015	12,469	3,828	31	1,743	14	2,084-	17-
2016	16,259	12,573	77		0	12,573-	77-
2017	6,087	17,744	291	1,889	31	15,855-	260-
2018		18,454		7,142		11,312-	
2019		23,286		6,633		16,652-	
2020		21,014				21,014-	
2021		20,986				20,986-	
2022	124,206	20,542	17	1,951	2	18,591-	15-
2023	149,728	83,155	56		0	83,155-	56-
TOTAL	652,147	314,698	48	25,831	4	288,868-	44-

THREE-YEAR MOVING AVERAGES

07-09	66,549	14,905	22	918	1	13,987-	21-
08-10	84,911	12,759	15	1,536	2	11,223-	13-
09-11	43,178	12,319	29	2,157	5	10,162-	24-
10-12	39,362	9,109	23	1,239	3	7,870-	20-
11-13	19,508	6,980	36	621	3	6,359-	33-
12-14	8,555	8,025	94		0	8,025-	94-
13-15	12,712	8,301	65	581	5	7,720-	61-
14-16	18,131	9,251	51	581	3	8,670-	48-
15-17	11,605	11,381	98	1,211	10	10,171-	88-
16-18	7,449	16,257	218	3,010	40	13,247-	178-
17-19	2,029	19,828	977	5,221	257	14,606-	720-
18-20		20,918		4,592		16,326-	
19-21		21,762		2,211		19,551-	
20-22	41,402	20,847	50	650	2	20,197-	49-
21-23	91,311	41,561	46	650	1	40,910-	45-

FIVE-YEAR AVERAGE

19-23	54,787	33,796	62	1,717	3	32,080-	59-
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SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2008	3,803		0		0		0
2009	4,284		0		0		0
2010							
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							
2021							
2022							
2023				53,066		53,066	
TOTAL	8,087		0	53,066	656	53,066	656
THREE-YEAR MOVING AVERAGES							
08-10	2,696		0		0		0
09-11	1,428		0		0		0
10-12							
11-13							
12-14							
13-15							
14-16							
15-17							
16-18							
17-19							
18-20							
19-21							
20-22							
21-23				17,689		17,689	
FIVE-YEAR AVERAGE							
19-23				10,613		10,613	

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.00 TRANSPORTATION EQUIPMENT

SUMMARY OF BOOK SALVAGE

YEAR	REGULAR RETIREMENTS	COST OF REMOVAL		GROSS SALVAGE		NET SALVAGE	
		AMOUNT	PCT	AMOUNT	PCT	AMOUNT	PCT
2007	230,327		0	15,056	7	15,056	7
2008	361,817		0	12,933	4	12,933	4
2009	24,408-		0		0		0
2010	599,450		0	26,338	4	26,338	4
2011	654,443		0	36,913	6	36,913	6
2012	454,042		0	20,530	5	20,530	5
2013	200,558		0	16,200	8	16,200	8
2014							
2015	521,819		0	84,207	16	84,207	16
2016	580,606		0	73,470	13	73,470	13
2017	145,108		0	14,232	10	14,232	10
2018	418,261		0	99,351	24	99,351	24
2019	27,382		0	13,506	49	13,506	49
2020	766,284		0	68,972	9	68,972	9
2021	7,532		0	1,000	13	1,000	13
2022							
2023	425,708		0	66,131	16	66,131	16
TOTAL	5,368,929		0	548,839	10	548,839	10

THREE-YEAR MOVING AVERAGES

07-09	189,245		0	9,330	5	9,330	5
08-10	312,286		0	13,090	4	13,090	4
09-11	409,828		0	21,084	5	21,084	5
10-12	569,312		0	27,927	5	27,927	5
11-13	436,348		0	24,548	6	24,548	6
12-14	218,200		0	12,243	6	12,243	6
13-15	240,792		0	33,469	14	33,469	14
14-16	367,475		0	52,559	14	52,559	14
15-17	415,844		0	57,303	14	57,303	14
16-18	381,325		0	62,351	16	62,351	16
17-19	196,917		0	42,363	22	42,363	22
18-20	403,976		0	60,610	15	60,610	15
19-21	267,066		0	27,826	10	27,826	10
20-22	257,939		0	23,324	9	23,324	9
21-23	144,413		0	22,377	15	22,377	15

FIVE-YEAR AVERAGE

19-23	245,381		0	29,922	12	29,922	12
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**PART IX. DETAILED DEPRECIATION
CALCULATIONS**

LOS ANGELES DIVISION

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 306.10 LAND RIGHTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. 0						
2010	462,000.00	100,406		462,000	46.96	9,838
2011	34,000.00	6,857		34,000	47.90	710
2013	2,364,283.05	401,928		2,364,283	49.80	47,476
2014	1,822.48	281		1,822	50.75	36
2015	2,100,919.12	290,284		2,100,919	51.71	40,629
2019	5,155,880.45	378,957		5,155,880	55.59	92,748
2020	2,512,200.20	144,024		2,512,200	56.56	44,417
2021	65,494.32	2,685		65,494	57.54	1,138
2023	6,419,543.97	52,448		6,419,544	59.51	107,873
9999	745,838.81	53,759		745,839		13,455
	19,861,982.40	1,431,629		19,861,982		358,320
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						55.4 1.80

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. -15						
1931	2,097.35	2,364	2,412			
1942	2,107.42	2,375	2,424			
1945	1,611.96	1,801	1,854			
1946	33,408.18	37,136	38,419			
1950	8,675.01	9,442	9,976			
1951	2,544.85	2,755	2,927			
1952	9,460.89	10,186	10,880			
1953	12,401.53	13,278	14,262			
1954	25,756.04	27,422	29,619			
1955	12,354.43	13,082	14,208			
1956	21,697.44	22,846	24,952			
1960	25,651.13	26,390	29,499			
1961	694.96	710	799			
1963	42,839.81	43,226	49,266			
1965	16,889.96	16,801	19,423			
1971	45,751.81	43,176	52,615			
1973	30,545.89	28,208	35,128			
1974	7,915.87	7,224	9,103			
1975	85,513.96	77,080	98,341			
1976	61,483.83	54,698	70,706			
1977	10,007.91	8,781	11,509			
1978	108,336.24	93,714	124,587			
1979	4,487.77	3,823	5,161			
1980	19,825.35	16,625	22,799			
1982	21,391.71	17,343	24,312	288	14.75	20
1986	162,669.81	122,045	171,089	15,981	17.38	920
1987	335,662.46	246,507	345,566	40,446	18.07	2,238
1988	171,527.25	123,206	172,717	24,539	18.77	1,307
1989	555,946.65	390,124	546,896	92,443	19.49	4,743
1990	246,486.17	168,828	236,672	46,787	20.22	2,314
1991	59,450.16	39,694	55,645	12,723	20.97	607
1992	23,966.14	15,589	21,853	5,708	21.72	263
1994	16,399.97	10,086	14,139	4,721	23.26	203
1995	4,222.63	2,520	3,533	1,323	24.05	55
1996	45,408.33	26,266	36,821	15,399	24.85	620
1997	477,809.36	267,487	374,977	174,504	25.66	6,801
1998	281,933.24	152,515	213,804	110,419	26.48	4,170
1999	217,855.61	113,692	159,379	91,155	27.31	3,338
2000	19,880.74	9,991	14,006	8,857	28.15	315
2004	19,574.54	8,284	11,613	10,898	31.60	345
2005	1,108,510.33	446,430	625,829	648,958	32.49	19,974
2006	1,800,199.88	688,144	964,677	1,105,553	33.38	33,120

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. -15						
2007	11,591.06	4,191	5,875	7,455	34.28	217
2011	15,014.53	4,158	5,829	11,438	37.96	301
2014	1,112,000.38	235,811	330,572	948,228	40.78	23,252
2015	67,853.28	12,891	18,071	59,960	41.74	1,437
2017	1,622,163.12	236,544	331,600	1,533,888	43.66	35,133
2018	43,509.15	5,384	7,548	42,488	44.62	952
2019	781,977.45	79,316	111,189	788,085	45.59	17,286
2021	341,796.52	19,339	27,110	365,956	47.54	7,698
2022	26,915.74	916	1,284	29,669	48.52	611
2023	118,229.15	1,332	1,868	134,096	49.51	2,708
	10,302,004.95	4,011,776	5,515,343	6,331,963		170,948
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						37.0 1.66

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -10						
1947	722.09	712	794			
1952	5,848.71	5,609	6,434			
1953	4,548.99	4,337	5,004			
1954	9,238.33	8,751	10,162			
1955	3,487.51	3,282	3,836			
1956	3,679.23	3,439	4,047			
1960	796.56	722	876			
1961	12,236.26	10,997	13,460			
1962	8,067.76	7,185	8,875			
1963	873.53	771	961			
1964	10,220.65	8,930	11,243			
1965	297.68	257	327			
1969	5,703.14	4,712	6,273			
1970	436.99	357	481			
1971	509.09	410	560			
1972	1,003.84	798	1,104			
1973	7,246.90	5,677	7,972			
1974	2,086.47	1,611	2,295			
1975	13,917.32	10,581	15,309			
1976	1,415.56	1,059	1,557			
1977	18,804.15	13,845	20,685			
1978	5,326.67	3,856	5,859			
1979	22,309.03	15,873	24,540			
1980	35,228.71	24,614	38,752			
1981	13,234.17	9,074	14,451	107	22.60	5
1982	11,946.31	8,033	12,793	348	23.32	15
1983	36,510.78	24,064	38,323	1,839	24.05	76
1984	21,522.58	13,893	22,125	1,550	24.79	63
1985	14,885.73	9,407	14,981	1,393	25.53	55
1986	1,063.23	657	1,046	124	26.29	5
1987	39,611.12	23,921	38,096	5,476	27.06	202
1988	236,383.12	139,371	221,957	38,064	27.84	1,367
1989	13,974.81	8,037	12,799	2,573	28.63	90
1990	35,862.81	20,106	32,020	7,429	29.42	253
1991	69,040.76	37,682	60,011	15,934	30.23	527
1992	34,400.22	18,264	29,087	8,753	31.04	282
1993	156,022.95	80,492	128,189	43,436	31.86	1,363
1994	228,337.57	114,326	182,071	69,100	32.69	2,114
1995	108,082.17	52,451	83,531	35,359	33.53	1,055
1996	198,736.89	93,347	148,661	69,950	34.38	2,035
1997	45,180.82	20,517	32,675	17,024	35.23	483
1998	242,868.93	106,462	169,547	97,609	36.09	2,705

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -10						
1999	360,037.13	152,080	242,197	153,844	36.96	4,162
2000	78,400.72	31,851	50,725	35,516	37.84	939
2001	169,832.60	66,258	105,520	81,296	38.72	2,100
2002	43,957.01	16,432	26,169	22,184	39.61	560
2003	50,826.52	18,161	28,923	26,986	40.51	666
2004	41,658.34	14,198	22,611	23,213	41.41	561
2005	1,422,047.60	460,938	734,072	830,180	42.32	19,617
2006	3,541,190.71	1,088,077	1,732,830	2,162,480	43.24	50,011
2007	884,082.46	256,738	408,871	563,620	44.16	12,763
2008	29,711.73	8,127	12,943	19,740	45.08	438
2009	362,081.01	92,801	147,791	250,498	46.02	5,443
2010	118,087.40	28,230	44,958	84,938	46.96	1,809
2011	371,434.59	82,398	131,224	277,354	47.90	5,790
2012	161,750.10	33,064	52,656	125,269	48.85	2,564
2013	470,063.93	87,902	139,989	377,081	49.80	7,572
2014	711,405.83	120,645	192,135	590,411	50.75	11,634
2015	297,651.40	45,239	72,046	255,371	51.71	4,939
2016	1,509,327.77	202,552	322,577	1,337,684	52.68	25,393
2017	903,502.83	105,348	167,773	826,080	53.64	15,400
2018	1,469,403.95	144,938	230,823	1,385,521	54.62	25,367
2019	81,863.88	6,619	10,541	79,509	55.59	1,430
2020	459,231.92	28,961	46,122	459,033	56.56	8,116
2021	442,549.11	19,959	31,786	455,018	57.54	7,908
2022	23,683.07	643	1,024	25,027	58.52	428
2023	2,269,269.33	20,394	32,479	2,463,717	59.51	41,400
	17,954,721.08	4,051,042	6,422,554	13,327,639		269,705

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.4 1.50

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S1.5						
NET SALVAGE PERCENT.. -5						
1955	86,733.75	79,899	91,070			
1956	696.79	637	732			
1958	869.17	784	913			
1960	36,224.40	32,237	38,036			
1961	26,284.20	23,219	27,598			
1962	2,089.86	1,833	2,194			
1963	9,855.16	8,575	10,348			
1965	346,187.57	296,454	363,497			
1966	16,852.50	14,313	17,695			
1969	11,795.30	9,759	12,385			
1970	3,127.78	2,565	3,284			
1972	196.68	158	207			
1973	64,939.01	51,700	68,186			
1974	78,342.98	61,731	82,260			
1975	1,975,950.34	1,540,376	2,074,748			
1976	464,267.78	357,918	487,481			
1977	288,448.87	219,818	302,871			
1978	17,001.33	12,801	17,851			
1979	79,410.14	59,052	82,566	815	13.13	62
1980	243,554.49	178,841	250,055	5,677	13.53	420
1981	32,064.17	23,230	32,480	1,187	13.95	85
1982	160,413.12	114,609	160,246	8,188	14.38	569
1983	20,638.69	14,534	20,321	1,350	14.82	91
1984	235,292.95	163,224	228,219	18,839	15.27	1,234
1985	2,486,481.70	1,698,173	2,374,380	236,426	15.73	15,030
1986	84,521.54	56,798	79,415	9,333	16.20	576
1987	24,814.13	16,391	22,918	3,137	16.69	188
1988	206,826.86	134,210	187,652	29,516	17.19	1,717
1989	185,879.39	118,406	165,555	29,618	17.70	1,673
1990	302,576.78	189,000	264,259	53,447	18.23	2,932
1991	184,905.38	113,168	158,231	35,920	18.77	1,914
1992	751,463.16	450,279	629,579	159,457	19.32	8,253
1993	854,514.26	500,463	699,746	197,494	19.90	9,924
1994	792,879.67	453,634	634,270	198,254	20.48	9,680
1995	2,090,746.08	1,166,420	1,630,884	564,399	21.09	26,761
1996	1,002,718.44	545,147	762,223	290,631	21.70	13,393
1997	1,674,802.54	885,532	1,238,148	520,395	22.34	23,294
1998	1,499,207.51	769,941	1,076,529	497,639	22.99	21,646
1999	1,580,988.83	787,223	1,100,692	559,346	23.66	23,641
2000	210,033.42	101,201	141,499	79,036	24.35	3,246
2001	485,533.02	226,014	316,012	193,798	25.05	7,736
2002	590,551.46	264,978	370,491	249,588	25.77	9,685

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S1.5						
NET SALVAGE PERCENT.. -5						
2003	394,111.37	170,033	237,740	176,077	26.51	6,642
2004	614,867.28	254,371	355,661	289,950	27.27	10,633
2005	614,537.21	243,194	340,033	305,231	28.04	10,886
2006	2,584,583.96	975,154	1,363,457	1,350,356	28.83	46,839
2007	1,101,667.22	394,834	552,055	604,696	29.64	20,401
2008	1,184,273.19	401,509	561,388	682,099	30.47	22,386
2009	1,040,054.20	332,226	464,517	627,540	31.31	20,043
2010	137,290.25	41,100	57,466	86,689	32.17	2,695
2011	591,109.84	164,824	230,456	390,209	33.05	11,807
2012	171,208.02	44,183	61,777	117,991	33.94	3,476
2013	687,242.46	162,924	227,800	493,805	34.84	14,174
2014	825,437.87	177,962	248,826	617,884	35.76	17,279
2015	453,364.29	87,909	122,914	353,119	36.69	9,624
2016	588,860.56	101,130	141,400	476,904	37.64	12,670
2017	429,307.59	64,208	89,775	360,998	38.59	9,355
2018	169,658.44	21,536	30,112	148,029	39.56	3,742
2019	1,233,811.62	128,682	179,923	1,115,579	40.53	27,525
2020	1,502,410.89	121,991	170,567	1,406,964	41.52	33,886
2021	377,368.78	21,924	30,654	365,583	42.51	8,600
2022	955,083.09	33,425	46,735	956,102	43.50	21,979
2023	463,968.66	5,412	7,567	479,600	44.50	10,778
	35,330,897.99	15,693,776	21,748,549	15,348,894		509,170

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.1 1.44

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -5						
1979	2,132.71	1,448	1,806	433	21.19	20
1991	2,166.09	1,128	1,407	867	30.23	29
1994	11,187.57	5,347	6,670	5,077	32.69	155
1996	45,677.52	20,480	25,548	22,413	34.38	652
2000	14,477.35	5,614	7,003	8,198	37.84	217
2013	4,625.37	826	1,030	3,827	49.80	77
2015	654,492.95	94,953	118,452	568,766	51.71	10,999
2016	79,253.45	10,152	12,664	70,552	52.68	1,339
2017	273,362.65	30,425	37,955	249,076	53.64	4,643
2019	531,409.56	41,012	51,162	506,818	55.59	9,117
2020	832,128.14	50,091	62,488	811,247	56.56	14,343
2021	232,623.39	10,014	12,492	231,763	57.54	4,028
2022	1,673,069.40	43,338	54,063	1,702,660	58.52	29,095
2023	188,673.75	1,619	2,020	196,088	59.51	3,295
	4,545,279.90	316,447	394,760	4,377,784		78,009

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 56.1 1.72

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2.5						
NET SALVAGE PERCENT.. -10						
1985	40,072.34	32,762	34,864	9,216	10.27	897
1986	4,522.09	3,635	3,868	1,106	10.77	103
1991	347,072.13	252,070	268,245	113,534	13.59	8,354
1992	1,220,637.10	865,706	921,259	421,442	14.21	29,658
1993	1,957,313.02	1,353,727	1,440,596	712,448	14.85	47,976
1994	2,534.90	1,708	1,818	970	15.50	63
1995	3,506.05	2,298	2,445	1,412	16.17	87
1996	214,182.47	136,295	145,041	90,560	16.86	5,371
1997	18,630.87	11,497	12,235	8,259	17.56	470
1998	1,137,859.62	679,956	723,589	528,057	18.27	28,903
1999	331.38	191	203	162	19.00	9
2000	1,235,503.98	688,361	732,534	626,520	19.74	31,739
2001	131,698.21	70,659	75,193	69,675	20.49	3,400
2002	55,771.42	28,757	30,602	30,747	21.25	1,447
2003	6,309,625.08	3,118,059	3,318,147	3,622,441	22.03	164,432
2004	3,133,426.22	1,480,387	1,575,384	1,871,385	22.82	82,006
2005	19,131.91	8,618	9,171	11,874	23.62	503
2006	17,668,867.26	7,565,367	8,050,841	11,384,913	24.43	466,022
2007	4,499,876.05	1,825,262	1,942,390	3,007,474	25.25	119,108
2008	309,959.12	118,652	126,266	214,689	26.08	8,232
2009	423,305.91	152,263	162,034	303,603	26.92	11,278
2010	228,255.94	76,768	81,694	169,388	27.77	6,100
2011	3,440,741.85	1,075,834	1,144,871	2,639,945	28.63	92,209
2012	47,707.14	13,775	14,659	37,819	29.50	1,282
2013	192,671.51	51,024	54,298	157,641	30.37	5,191
2014	418,557.06	100,600	107,056	353,357	31.26	11,304
2015	5,506,948.39	1,188,812	1,265,099	4,792,544	32.15	149,068
2016	79,864.11	15,264	16,243	71,608	33.05	2,167
2017	898,725.76	149,278	158,857	829,741	33.96	24,433
2018	1,174,617.21	165,709	176,343	1,115,736	34.87	31,997
2019	2,856,035.98	330,658	351,877	2,789,763	35.79	77,948
2020	655,254.31	59,104	62,897	657,883	36.72	17,916
2021	8,176,386.18	528,399	562,306	8,431,719	37.65	223,950
2022	4,112,876.11	159,477	169,711	4,354,453	38.59	112,839
2023	286,851.29	3,708	3,946	311,591	39.53	7,882
	66,809,319.97	22,314,640	23,746,582	49,743,670		1,774,344

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 28.0 2.66

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 342.00 RESERVOIRS AND TANKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R4						
NET SALVAGE PERCENT.. -20						
1952	50,374.56	55,674	41,170	19,279	4.74	4,067
1953	17,304.54	19,028	14,071	6,694	5.02	1,333
1954	18,519.89	20,257	14,980	7,244	5.31	1,364
1955	24,729.19	26,900	19,892	9,783	5.61	1,744
1956	24,085.13	26,050	19,263	9,639	5.92	1,628
1959	1,826.88	1,939	1,434	758	6.93	109
1960	1,107.45	1,167	863	466	7.30	64
1961	66,021.98	69,059	51,068	28,158	7.70	3,657
1962	38,506.16	39,962	29,551	16,656	8.11	2,054
1963	33,288.23	34,254	25,330	14,616	8.55	1,709
1964	306,662.66	312,674	231,216	136,779	9.02	15,164
1965	53,066.16	53,586	39,626	24,053	9.51	2,529
1969	68,484.29	66,088	48,871	33,310	11.75	2,835
1970	164,497.17	156,699	115,876	81,521	12.37	6,590
1971	9,500.19	8,928	6,602	4,798	13.01	369
1972	246,221.36	228,150	168,712	126,754	13.67	9,272
1974	11,210.91	10,085	7,458	5,995	15.02	399
1975	966,000.00	855,490	632,617	526,583	15.72	33,498
1978	10,032.12	8,453	6,251	5,788	17.87	324
1979	32,001.46	26,491	19,590	18,812	18.61	1,011
1980	71.07	58	43	42	19.37	2
1981	170,569.04	136,012	100,578	104,105	20.13	5,172
1983	12,024.88	9,209	6,810	7,620	21.71	351
1984	2,057,142.86	1,542,437	1,140,600	1,327,971	22.51	58,995
1986	18,901.99	13,549	10,019	12,663	24.16	524
1987	836,049.58	585,231	432,766	570,493	25.00	22,820
1989	4,090.09	2,723	2,014	2,894	26.71	108
1990	55,462.11	35,951	26,585	39,970	27.59	1,449
1991	7,981.02	5,033	3,722	5,855	28.47	206
1992	2,545.80	1,560	1,154	1,901	29.36	65
1993	1,681,451.43	999,791	739,325	1,278,417	30.27	42,234
1994	113,991.74	65,704	48,587	88,203	31.18	2,829
1995	305,052.94	170,220	125,874	240,190	32.10	7,483
1996	375,582.57	202,589	149,810	300,889	33.03	9,110
1997	592,969.36	308,818	228,364	483,199	33.96	14,228
1998	420,918.25	211,299	156,251	348,851	34.90	9,996
1999	729,918.65	352,551	260,704	615,198	35.85	17,160
2003	185,292.64	75,266	55,658	166,693	39.69	4,200
2005	2,179,065.00	800,153	591,696	2,023,182	41.64	48,587
2006	3,291,564.99	1,144,161	846,083	3,103,795	42.62	72,825
2007	635,017.72	208,283	154,021	608,000	43.60	13,945
2010	1,260,488.91	338,819	250,550	1,262,037	46.56	27,106

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 342.00 RESERVOIRS AND TANKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R4						
NET SALVAGE PERCENT.. -20						
2011	124,880.79	31,095	22,994	126,863	47.55	2,668
2012	8,352.49	1,914	1,415	8,608	48.54	177
2013	1,651,946.68	345,918	255,799	1,726,537	49.53	34,858
2015	18,567.98	3,149	2,329	19,953	51.52	387
2016	79,700.19	11,939	8,829	86,811	52.51	1,653
2017	1,484,139.25	192,647	142,458	1,638,509	53.51	30,621
2018	305,444.79	33,538	24,801	341,733	54.51	6,269
2019	1,872,012.60	168,099	124,306	2,122,109	55.51	38,229
2020	481,300.37	33,689	24,912	552,648	56.50	9,781
2021	1,540,691.72	77,041	56,970	1,791,860	57.50	31,163
2022	1,367,542.99	41,026	30,338	1,610,714	58.50	27,534
2023	7,769,459.32	77,664	57,431	9,265,920	59.50	155,730
	33,783,632.14	10,248,070	7,578,237	32,962,121		788,185
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						41.8 2.33

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
1940	9,454.62	9,707	12,291			
1941	2,683.62	2,735	3,489			
1942	4,681.53	4,736	6,084	2	18.86	
1943	862.32	865	1,111	10	19.38	1
1944	368.21	367	471	8	19.90	
1945	6,612.28	6,529	8,387	209	20.44	10
1946	11,825.27	11,577	14,872	501	20.99	24
1947	64,193.76	62,304	80,039	3,413	21.54	158
1948	76,199.52	73,292	94,154	4,905	22.11	222
1949	92,061.42	87,733	112,706	6,974	22.69	307
1950	149,106.23	140,750	180,814	13,024	23.28	559
1951	193,584.09	180,958	232,467	19,192	23.88	804
1952	184,000.74	170,282	218,752	20,449	24.49	835
1953	140,611.49	128,795	165,456	17,339	25.11	691
1954	214,063.93	194,013	249,238	29,045	25.74	1,128
1955	228,887.54	205,208	263,620	33,934	26.38	1,286
1956	353,416.36	313,339	402,530	56,911	27.03	2,105
1957	119,905.84	105,099	135,015	20,863	27.69	753
1958	126,424.65	109,536	140,715	23,637	28.35	834
1959	94,024.73	80,486	103,396	18,836	29.03	649
1960	157,416.11	133,113	171,003	33,638	29.71	1,132
1961	315,732.48	263,654	338,702	71,750	30.40	2,360
1962	442,137.02	364,478	468,226	106,552	31.10	3,426
1963	475,906.80	387,144	497,343	121,336	31.81	3,814
1964	385,751.73	309,617	397,749	103,728	32.52	3,190
1965	2,622,392.94	2,075,944	2,666,855	742,256	33.24	22,330
1966	383,143.77	299,026	384,143	113,944	33.97	3,354
1967	235,881.21	181,427	233,070	73,576	34.71	2,120
1968	312,125.81	236,487	303,802	101,962	35.46	2,875
1969	405,667.96	302,709	388,874	138,494	36.21	3,825
1970	368,199.87	270,529	347,534	131,126	36.96	3,548
1971	386,590.70	279,488	359,043	143,525	37.73	3,804
1972	241,100.98	171,466	220,273	93,158	38.50	2,420
1973	355,611.62	248,659	319,439	142,856	39.28	3,637
1974	276,780.86	190,238	244,389	115,426	40.06	2,881
1975	406,751.57	274,652	352,831	175,946	40.85	4,307
1976	594,753.13	394,321	506,563	266,616	41.65	6,401
1977	442,638.84	288,055	370,049	205,381	42.45	4,838
1978	742,709.29	474,129	609,088	356,434	43.26	8,239
1979	1,277,252.43	799,347	1,026,879	633,549	44.08	14,373
1980	877,420.20	538,111	691,283	449,363	44.90	10,008
1981	741,039.00	445,184	571,904	391,447	45.72	8,562

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
1982	410,627.65	241,413	310,130	223,686	46.56	4,804
1983	798,258.87	459,167	589,868	447,869	47.39	9,451
1984	888,300.07	499,412	641,568	513,222	48.24	10,639
1985	1,295,457.85	711,480	914,001	770,094	49.09	15,687
1986	2,490,001.21	1,335,166	1,715,217	1,521,785	49.94	30,472
1987	2,245,897.54	1,174,728	1,509,111	1,410,556	50.80	27,767
1988	1,174,873.83	598,899	769,374	757,962	51.67	14,669
1989	757,335.57	375,975	482,995	501,541	52.54	9,546
1990	734,726.05	354,865	455,876	499,268	53.42	9,346
1991	1,549,661.82	727,619	934,734	1,079,826	54.30	19,886
1992	1,028,451.86	469,042	602,553	734,434	55.18	13,310
1993	1,023,116.64	452,537	581,350	748,702	56.08	13,351
1994	448,631.43	192,323	247,067	336,154	56.97	5,901
1995	1,237,626.85	513,533	659,709	949,206	57.87	16,402
1996	2,051,839.76	822,810	1,057,020	1,610,372	58.78	27,397
1997	3,018,563.18	1,168,450	1,501,046	2,423,086	59.69	40,595
1998	2,512,680.66	937,677	1,204,584	2,061,901	60.60	34,025
1999	3,435,559.89	1,233,751	1,584,935	2,881,293	61.52	46,835
2000	5,119,209.99	1,766,296	2,269,067	4,385,906	62.44	70,242
2001	6,019,745.44	1,991,398	2,558,243	5,267,426	63.37	83,122
2002	1,147,102.44	363,160	466,532	1,024,701	64.30	15,936
2003	4,476,615.32	1,353,581	1,738,874	4,080,726	65.23	62,559
2004	6,510,892.69	1,875,065	2,408,797	6,055,363	66.17	91,512
2005	4,181,504.34	1,144,106	1,469,772	3,966,184	67.11	59,100
2006	2,659,190.44	689,350	885,571	2,571,377	68.05	37,787
2007	2,101,078.00	514,159	660,513	2,070,888	69.00	30,013
2008	2,401,552.62	552,785	710,134	2,411,884	69.95	34,480
2009	3,281,613.41	707,660	909,093	3,357,004	70.90	47,348
2010	3,593,875.60	722,250	927,836	3,744,202	71.86	52,104
2011	2,980,089.08	555,122	713,136	3,160,980	72.82	43,408
2012	888,739.67	152,508	195,919	959,443	73.78	13,004
2013	7,703,282.25	1,207,620	1,551,365	8,462,902	74.75	113,216
2014	7,895,590.97	1,121,782	1,441,094	8,823,174	75.71	116,539
2015	3,542,134.83	450,715	579,010	4,025,765	76.68	52,501
2016	8,132,333.89	912,895	1,172,748	9,399,286	77.66	121,031
2017	4,139,483.21	403,277	518,069	4,863,259	78.63	61,850
2018	5,425,479.75	448,085	575,631	6,477,493	79.60	81,376
2019	10,231,006.85	691,616	888,482	12,411,827	80.58	154,031
2020	5,483,340.84	288,484	370,600	6,757,743	81.56	82,856

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
2021	5,055,993.16	190,217	244,362	6,328,429	82.54	76,671
2022	7,356,970.44	166,510	213,906	9,350,156	83.52	111,951
2023	22,731,400.58	170,213	218,664	29,332,157	84.51	347,085
	174,679,809.01	41,523,790	53,343,205	173,740,547		2,441,615
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						71.2 1.40

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 344.00 FIRE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. -30						
1958	2,427.73	2,531	2,839	317	12.88	25
1971	3,461.93	3,109	3,488	1,013	20.10	50
1975	9,239.11	7,805	8,756	3,255	22.76	143
	15,128.77	13,445	15,083	4,585		218
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						21.0 1.44

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 43-R3						
NET SALVAGE PERCENT.. -5						
1937	2,149.75	2,205	1,931	326	1.00	326
1961	3,711.21	3,672	3,216	681	2.48	275
1962	4,732.82	4,653	4,075	894	2.74	326
1963	4,101.65	4,006	3,509	798	3.00	266
1964	10,448.93	10,142	8,883	2,088	3.25	642
1965	6,288.91	6,064	5,311	1,292	3.51	368
1966	9,665.66	9,259	8,109	2,040	3.77	541
1967	6,124.77	5,828	5,104	1,327	4.03	329
1968	4,399.24	4,157	3,641	978	4.30	227
1969	10,090.43	9,471	8,295	2,300	4.56	504
1970	13,804.41	12,863	11,266	3,229	4.84	667
1971	18,546.23	17,150	15,020	4,454	5.13	868
1972	24,798.55	22,750	19,925	6,113	5.43	1,126
1973	31,853.35	28,981	25,382	8,064	5.74	1,405
1975	20,116.08	17,968	15,737	5,385	6.42	839
1976	36,771.42	32,522	28,484	10,126	6.78	1,494
1977	56,588.31	49,510	43,362	16,056	7.17	2,239
1978	96,126.53	83,164	72,838	28,095	7.57	3,711
1979	80,025.03	68,393	59,901	24,125	8.00	3,016
1980	131,106.55	110,642	96,904	40,758	8.44	4,829
1981	49,589.18	41,279	36,153	15,916	8.91	1,786
1982	59,717.15	48,981	42,899	19,804	9.41	2,105
1983	150,593.46	121,644	106,540	51,583	9.92	5,200
1984	121,139.71	96,255	84,303	42,894	10.46	4,101
1985	246,129.57	192,263	168,390	90,046	11.01	8,179
1986	257,853.22	197,772	173,215	97,531	11.59	8,415
1987	375,359.39	282,396	247,331	146,796	12.19	12,042
1988	360,095.43	265,460	232,498	145,602	12.81	11,366
1989	355,751.74	256,786	224,901	148,638	13.44	11,059
1990	384,723.98	271,498	237,786	166,174	14.10	11,785
1991	294,237.88	202,829	177,644	131,306	14.77	8,890
1992	238,222.34	160,203	140,311	109,822	15.46	7,104
1993	520,231.52	340,828	298,508	247,735	16.17	15,321
1994	737,832.92	470,421	412,009	362,716	16.89	21,475
1995	537,414.38	333,058	291,702	272,583	17.62	15,470
1996	906,901.03	545,437	477,710	474,536	18.37	25,832
1997	683,851.33	398,601	349,107	368,937	19.13	19,286
1998	794,634.61	448,038	392,405	441,961	19.91	22,198
1999	932,584.43	508,055	444,970	534,244	20.69	25,821
2000	2,373,086.51	1,246,444	1,091,674	1,400,067	21.49	65,150
2001	1,052,853.00	531,920	465,872	639,624	22.31	28,670
2002	1,039,076.01	504,154	441,553	649,477	23.13	28,079

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 43-R3						
NET SALVAGE PERCENT.. -5						
2003	1,454,487.31	675,883	591,959	935,253	23.97	39,018
2004	1,586,942.38	704,874	617,350	1,048,939	24.81	42,279
2005	1,297,994.66	549,274	481,071	881,823	25.67	34,352
2006	1,882,639.84	756,688	662,730	1,314,042	26.54	49,512
2007	2,862,046.60	1,088,856	953,653	2,051,496	27.42	74,818
2008	3,387,740.15	1,216,039	1,065,044	2,492,083	28.30	88,059
2009	1,922,486.01	647,833	567,392	1,451,218	29.20	49,699
2010	1,687,582.49	531,181	465,224	1,306,738	30.11	43,399
2011	1,851,905.87	541,738	474,471	1,470,030	31.02	47,390
2012	1,791,417.22	483,376	423,355	1,457,633	31.95	45,622
2013	2,463,108.52	608,677	533,098	2,053,166	32.88	62,444
2014	2,019,318.38	452,659	396,453	1,723,831	33.82	50,971
2015	2,637,365.28	530,668	464,775	2,304,459	34.76	66,296
2016	1,396,367.81	248,563	217,699	1,248,487	35.71	34,962
2017	1,399,291.55	216,289	189,432	1,279,824	36.67	34,901
2018	3,031,970.39	397,564	348,199	2,835,370	37.63	75,349
2019	5,593,799.71	601,034	526,404	5,347,086	38.60	138,526
2020	1,991,111.97	166,773	146,065	1,944,603	39.57	49,143
2021	1,941,936.24	116,184	101,757	1,937,276	40.55	47,775
2022	3,256,118.59	116,893	102,379	3,316,546	41.53	79,859
2023	5,960,709.90	71,350	62,490	6,196,255	42.51	145,760
	64,459,669.49	18,690,118	16,369,374	51,313,279		1,683,466

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 30.5 2.61

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R3						
NET SALVAGE PERCENT.. -5						
1948	1,034.41	1,059	1,086			
1950	1,545.26	1,582	1,623			
1951	1,861.70	1,906	1,955			
1952	4,724.83	4,837	4,961			
1953	4,671.41	4,782	4,905			
1954	3,070.50	3,143	3,224			
1955	7,317.02	7,491	7,683			
1956	9,204.54	9,423	9,665			
1957	10,424.31	10,672	10,946			
1958	12,642.35	12,943	13,274			
1959	7,251.34	7,424	7,614			
1960	11,085.01	11,348	11,639			
1961	15,074.17	15,349	15,828			
1962	16,708.80	16,904	17,544			
1963	19,696.00	19,797	20,681			
1964	19,661.36	19,633	20,644			
1965	16,379.68	16,244	17,199			
1966	36,767.30	36,222	38,606			
1967	39,414.86	38,561	41,386			
1968	128,124.08	124,474	134,530			
1969	58,209.35	56,154	61,120			
1970	123,726.64	118,546	129,913			
1971	60,421.09	57,479	63,442			
1972	44,679.63	42,187	46,914			
1973	92,750.44	86,919	97,388			
1974	71,399.70	66,386	74,970			
1975	126,961.54	117,079	133,310			
1976	24,499.72	22,393	25,725			
1977	33,136.89	30,010	34,794			
1978	54,425.76	48,818	57,147			
1979	76,560.86	67,949	80,389			
1980	80,257.89	70,429	84,271			
1981	81,002.19	70,232	85,052			
1982	51,940.15	44,461	53,849	688	7.39	93
1983	49,175.10	41,514	50,280	1,354	7.84	173
1984	64,169.63	53,380	64,651	2,727	8.31	328
1985	45,954.82	37,637	45,584	2,669	8.80	303
1986	108,598.98	87,460	105,927	8,102	9.32	869
1987	195,761.74	154,882	187,586	17,964	9.86	1,822
1988	157,680.68	122,435	148,288	17,277	10.42	1,658
1989	193,610.13	147,335	178,445	24,846	11.01	2,257
1990	243,938.37	181,728	220,100	36,035	11.62	3,101

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R3						
NET SALVAGE PERCENT.. -5						
1991	212,895.66	155,081	187,827	35,713	12.25	2,915
1992	146,957.24	104,580	126,662	27,643	12.89	2,145
1993	94,699.44	65,726	79,604	19,830	13.56	1,462
1994	110,885.07	74,951	90,777	25,652	14.25	1,800
1995	87,775.87	57,718	69,905	22,260	14.95	1,489
1996	163,750.40	104,581	126,664	45,274	15.67	2,889
1997	142,356.55	88,190	106,812	42,662	16.40	2,601
1998	102,893.20	61,717	74,749	33,289	17.15	1,941
1999	199,740.11	115,822	140,278	69,449	17.91	3,878
2000	217,573.30	121,708	147,407	81,045	18.69	4,336
2001	295,670.56	159,263	192,892	117,562	19.48	6,035
2002	262,482.77	135,805	164,481	111,126	20.29	5,477
2003	238,976.55	118,562	143,597	107,328	21.10	5,087
2004	292,621.14	138,801	168,109	139,143	21.93	6,345
2005	259,495.80	117,299	142,067	130,404	22.78	5,724
2006	187,727.52	80,669	97,703	99,411	23.63	4,207
2007	580,347.24	236,281	286,172	323,193	24.49	13,197
2008	348,143.99	133,700	161,931	203,620	25.37	8,026
2009	266,422.63	96,092	116,382	163,362	26.26	6,221
2010	198,919.48	67,098	81,266	127,599	27.15	4,700
2011	232,675.04	72,926	88,325	155,984	28.06	5,559
2012	75,432.52	21,821	26,429	52,775	28.98	1,821
2013	172,116.73	45,632	55,267	125,456	29.90	4,196
2014	377,224.50	90,803	109,976	286,110	30.83	9,280
2015	160,210.46	34,611	41,919	126,302	31.77	3,976
2016	627,108.60	119,840	145,145	513,319	32.72	15,688
2017	281,326.88	46,672	56,527	238,866	33.68	7,092
2018	785,860.78	110,571	133,918	691,236	34.64	19,955
2019	1,043,287.69	120,500	145,944	949,508	35.60	26,672
2020	36,847.02	3,318	4,019	34,670	36.57	948
2021	713,962.39	45,917	55,613	694,048	37.55	18,483
2022	612,840.30	23,648	28,641	614,841	38.53	15,957
2023	1,373,131.48	17,662	21,391	1,420,397	39.51	35,950

13,307,879.14 5,076,772 6,032,537 7,940,736 266,656

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 29.8 2.00

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 346.00 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S1						
NET SALVAGE PERCENT.. +5						
1970	35,228.00	31,793	8,365	25,102	1.00	25,102
1972	51,908.00	46,847	12,327	36,986	1.00	36,986
1976	338,304.00	305,319	80,336	241,053	1.00	241,053
2016	50,849.57	16,086	4,233	44,074	13.34	3,304
2017	326,023.99	91,368	24,041	285,682	14.10	20,261
2018	581,140.96	140,781	37,043	515,041	14.90	34,567
2019	672,761.76	136,133	35,820	603,304	15.74	38,329
2020	923,756.31	147,870	38,908	838,660	16.63	50,431
2021	1,099,725.02	127,980	33,674	1,011,065	17.55	57,611
2022	1,505,395.52	106,544	28,034	1,402,092	18.51	75,748
2023	1,545,877.66	36,715	9,660	1,458,924	19.50	74,817
	7,130,970.79	1,187,436	312,441	6,461,981		658,209

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.8 9.23

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R2.5						
NET SALVAGE PERCENT.. -40						
1948	215.89	249	276	26	11.43	2
1949	580.57	666	739	74	11.76	6
1950	1,352.79	1,541	1,710	184	12.11	15
1951	1,809.39	2,048	2,273	260	12.46	21
1952	1,187.44	1,334	1,480	182	12.83	14
1953	2,672.58	2,981	3,308	434	13.21	33
1954	21,814.29	24,150	26,800	3,740	13.60	275
1955	18,981.88	20,847	23,135	3,440	14.01	246
1956	20,273.83	22,082	24,505	3,878	14.43	269
1957	14,430.35	15,584	17,294	2,908	14.86	196
1958	8,295.34	8,880	9,855	1,758	15.30	115
1959	6,901.32	7,319	8,122	1,540	15.76	98
1960	33,967.70	35,673	39,588	7,967	16.24	491
1961	22,831.77	23,742	26,348	5,616	16.72	336
1962	47,151.54	48,524	53,850	12,162	17.22	706
1963	32,032.04	32,613	36,192	8,653	17.73	488
1964	29,467.54	29,665	32,921	8,334	18.26	456
1965	34,539.26	34,369	38,141	10,214	18.80	543
1966	36,197.62	35,591	39,497	11,180	19.35	578
1967	32,745.42	31,801	35,291	10,553	19.91	530
1968	206,606.24	198,112	219,855	69,394	20.48	3,388
1969	24,300.97	22,993	25,516	8,505	21.07	404
1970	85,520.59	79,814	88,574	31,155	21.67	1,438
1971	58,280.12	53,625	59,510	22,082	22.28	991
1972	43,741.29	39,663	44,016	17,222	22.90	752
1973	59,074.20	52,765	58,556	24,148	23.53	1,026
1974	51,673.57	45,442	50,429	21,914	24.17	907
1975	79,369.43	68,687	76,225	34,892	24.82	1,406
1976	307,557.63	261,793	290,525	140,056	25.48	5,497
1977	46,704.14	39,071	43,359	22,027	26.16	842
1978	122,924.87	101,033	112,121	59,974	26.84	2,235
1979	163,307.78	131,797	146,262	82,369	27.53	2,992
1980	142,966.23	113,256	125,686	74,467	28.22	2,639
1981	120,505.05	93,619	103,894	64,813	28.93	2,240
1982	41,374.60	31,511	34,969	22,955	29.64	774
1983	101,357.17	75,600	83,897	58,003	30.37	1,910
1984	126,991.60	92,724	102,900	74,888	31.10	2,408
1985	93,487.34	66,770	74,098	56,784	31.84	1,783
1986	187,769.85	131,076	145,462	117,416	32.59	3,603
1987	195,310.50	133,185	147,802	125,633	33.34	3,768
1988	82,773.95	55,089	61,135	54,749	34.10	1,606
1989	131,612.44	85,411	94,785	89,472	34.87	2,566

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R2.5						
NET SALVAGE PERCENT.. -40						
1990	182,116.69	115,126	127,761	127,202	35.65	3,568
1991	107,757.12	66,285	73,560	77,300	36.44	2,121
1992	89,331.62	53,431	59,295	65,769	37.23	1,767
1993	67,181.88	39,040	43,325	50,730	38.02	1,334
1994	59,412.92	33,489	37,164	46,014	38.83	1,185
1995	120,295.69	65,707	72,918	95,496	39.64	2,409
1996	120,147.76	63,505	70,475	97,732	40.46	2,416
1997	127,592.72	65,186	72,340	106,290	41.28	2,575
1998	55,505.45	27,365	30,368	47,340	42.11	1,124
1999	118,351.40	56,208	62,377	103,315	42.95	2,405
2000	53,760.79	24,560	27,255	48,010	43.79	1,096
2001	104,469.14	45,812	50,840	95,417	44.64	2,137
2002	135,635.24	56,967	63,219	126,670	45.50	2,784
2003	134,977.20	54,190	60,137	128,831	46.36	2,779
2004	110,127.89	42,174	46,803	107,376	47.22	2,274
2005	141,098.05	51,360	56,997	140,540	48.10	2,922
2006	58,027.89	20,035	22,234	59,005	48.97	1,205
2007	311,736.83	101,723	112,887	323,545	49.85	6,490
2008	186,949.48	57,418	63,720	198,009	50.74	3,902
2009	156,372.89	45,030	49,972	168,950	51.63	3,272
2010	173,959.02	46,724	51,852	191,691	52.53	3,649
2011	99,887.34	24,892	27,624	112,218	53.43	2,100
2012	75,695.17	17,396	19,305	86,668	54.33	1,595
2013	210,612.17	44,273	49,132	245,725	55.24	4,448
2014	294,016.10	56,042	62,193	349,430	56.15	6,223
2015	104,922.96	17,921	19,888	127,004	57.07	2,225
2016	231,923.74	35,018	38,861	285,832	57.99	4,929
2017	330,473.95	43,347	48,104	414,560	58.91	7,037
2018	463,272.79	51,484	57,135	591,447	59.84	9,884
2019	531,994.13	48,471	53,791	691,001	60.77	11,371
2020	139,818.96	9,909	10,996	184,751	61.71	2,994
2021	531,767.36	27,032	29,999	714,475	62.64	11,406
2022	568,178.25	17,381	19,289	776,161	63.58	12,208
2023	1,631,076.54	16,510	18,321	2,265,186	64.53	35,103

10,669,105.25 3,893,706 4,321,038 10,615,709 215,530

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.3 2.02

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
1940	930.54	937	777	200	2.27	88
1948	4,060.22	3,928	3,259	1,004	4.32	232
1949	66.00	64	53	16	4.58	3
1950	10,541.49	10,097	8,378	2,691	4.83	557
1951	75.68	72	60	19	5.10	4
1952	82,618.48	78,296	64,966	21,783	5.36	4,064
1962	388.83	346	287	121	8.40	14
1963	16,282.46	14,371	11,924	5,173	8.77	590
1965	17,604.39	15,272	12,672	5,813	9.56	608
1970	7,018.99	5,786	4,801	2,569	11.82	217
1971	196,879.84	160,380	133,075	73,649	12.33	5,973
1973	77,594.28	61,639	51,145	30,329	13.39	2,265
1974	57,002.57	44,683	37,076	22,777	13.94	1,634
1975	46,131.31	35,659	29,588	18,850	14.51	1,299
1979	2,078.94	1,510	1,253	930	16.96	55
1980	695.24	496	412	318	17.61	18
1981	866.35	607	504	406	18.27	22
1983	1,501.22	1,014	841	735	19.63	37
1984	5,511.76	3,648	3,027	2,760	20.33	136
1985	112.25	73	61	57	21.04	3
1987	9,997.16	6,203	5,147	5,350	22.50	238
1989	3,330.99	1,971	1,635	1,863	24.01	78
1990	9,054.56	5,226	4,336	5,171	24.77	209
1991	1,391.73	782	649	812	25.55	32
1992	592.04	324	269	353	26.34	13
1993	383,431.57	203,939	169,217	233,386	27.14	8,599
1994	23,796.88	12,293	10,200	14,787	27.94	529
2009	29,543.84	7,862	6,523	24,498	41.06	597
2010	3,273.95	813	675	2,763	41.99	66
2013	36,608.87	7,122	5,909	32,530	44.81	726
2014	80,147.93	14,123	11,718	72,437	45.77	1,583
2015	12,652.53	2,000	1,659	11,626	46.72	249
2016	40,400.98	5,638	4,678	37,743	47.69	791
2017	182,576.37	22,132	18,364	173,341	48.65	3,563
2018	96,678.37	9,930	8,239	93,273	49.62	1,880
2019	295,827.45	24,905	20,665	289,954	50.59	5,731
2020	435,732.76	28,531	23,674	433,845	51.57	8,413

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
2021	25,436.56	1,195	992	25,716	52.54	489
2022	51,743.76	1,462	1,213	53,118	53.52	992
2023	7,595.08	71	59	7,916	54.51	145
	2,257,774.22	795,400	659,980	1,710,683		52,742
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						32.4 2.34

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1986	173.63	162	146	28	1.00	28
1987	434.71	406	367	68	1.00	68
1988	768.08	717	648	120	1.00	120
1989	1,044.73	975	881	164	1.00	164
1990	523.58	489	442	82	1.00	82
1991	345.27	322	291	54	1.00	54
1992	2,218.61	2,071	1,872	347	1.00	347
1993	21,546.70	20,110	18,179	3,368	1.00	3,368
1994	11,494.80	10,728	9,698	1,797	1.00	1,797
1995	26,959.83	25,162	22,745	4,215	1.00	4,215
1996	15,068.06	14,063	12,712	2,356	1.00	2,356
1997	3,362.00	3,138	2,837	525	1.00	525
1998	487.32	455	411	76	1.00	76
1999	22,927.89	21,399	19,344	3,584	1.00	3,584
2000	3,444.26	3,215	2,906	538	1.00	538
2001	24,077.59	22,472	20,314	3,764	1.00	3,764
2002	65,104.51	60,764	54,928	10,177	1.00	10,177
2003	12,848.14	11,992	10,840	2,008	1.00	2,008
2004	6,735.78	6,287	5,683	1,053	1.00	1,053
2005	3,632.92	3,391	3,065	568	1.00	568
2006	149,766.41	139,781	126,356	23,410	1.00	23,410
2007	37,724.23	35,209	31,827	5,897	1.00	5,897
2009	1,818.28	1,697	1,534	284	1.00	284
2010	6,055.26	5,450	4,927	1,128	1.50	752
2011	558,214.21	465,177	420,500	137,714	2.50	55,086
2012	2,868.07	2,199	1,988	880	3.50	251
2013	119,142.15	83,400	75,390	43,752	4.50	9,723
2014	15,368.99	9,734	8,799	6,570	5.50	1,195
2015	322,564.13	182,787	165,231	157,333	6.50	24,205
2016	68,156.28	34,078	30,805	37,351	7.50	4,980
2017	207,583.06	89,952	81,313	126,270	8.50	14,855
2018	711,228.43	260,786	235,739	475,489	9.50	50,051
2019	249,198.89	74,760	67,580	181,619	10.50	17,297
2020	333,518.12	77,820	70,346	263,172	11.50	22,885
2021	705,121.67	117,523	106,235	598,887	12.50	47,911
2022	180,073.86	18,007	16,278	163,796	13.50	12,133
2023	208,575.52	6,952	6,284	202,292	14.50	13,951
	4,100,175.97	1,813,630	1,639,441	2,460,735		339,758

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.2 8.29

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.20 REMOTE READING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	31,982.62	28,784	24,789	7,194	1.00	7,194
2013	50,754.39	45,679	39,339	11,415	1.00	11,415
2017	43,055.25	27,986	24,101	18,954	3.50	5,415
2019	6,462.50	2,908	2,504	3,958	5.50	720
2021	54,945.00	13,736	11,830	43,115	7.50	5,749
	187,199.76	119,093	102,563	84,637		30,493
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.8						16.29

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.10 TRANSPORTATION EQUIPMENT - AUTO/VANS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 9-S0.5						
NET SALVAGE PERCENT.. 0						
2015	32,913.51	20,297	32,914			
2016	36,348.09	20,597	36,348			
2017	36,509.29	18,701	36,509			
2018	41,312.00	18,728	38,422	2,890	4.92	587
2020	44,442.69	14,123	28,975	15,468	6.14	2,519
	191,525.58	92,446	173,168	18,358		3,106
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.9 1.62

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.20 TRANSPORTATION EQUIPMENT - TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L2.5						
NET SALVAGE PERCENT.. 0						
1999	29,877.00	24,392	29,611	266	2.57	104
2001	49,002.84	38,642	46,909	2,094	2.96	707
2004	71,398.55	52,835	64,139	7,260	3.64	1,995
2005	34,954.06	25,267	30,673	4,281	3.88	1,103
2006	52,625.68	37,138	45,084	7,542	4.12	1,831
2008	17,102.19	11,544	14,014	3,088	4.55	679
2009	449,731.15	297,466	361,109	88,622	4.74	18,697
2010	140,579.84	91,176	110,683	29,897	4.92	6,077
2011	141,354.58	89,558	108,719	32,636	5.13	6,362
2012	141,968.68	87,412	106,114	35,855	5.38	6,664
2013	30,932.32	18,316	22,235	8,697	5.71	1,523
2014	167,450.92	94,012	114,126	53,325	6.14	8,685
2015	112,208.74	58,749	71,318	40,891	6.67	6,131
2016	72,438.24	34,615	42,021	30,417	7.31	4,161
2017	209,936.46	89,523	108,677	101,259	8.03	12,610
2018	404,568.99	149,403	181,368	223,201	8.83	25,278
2019	232,659.17	71,626	86,950	145,709	9.69	15,037
2020	52,918.13	12,852	15,602	37,316	10.60	3,520
2021	237,436.30	41,720	50,646	186,790	11.54	16,186
2022	301,949.69	32,137	39,013	262,937	12.51	21,018
2023	713,039.24	25,463	30,910	682,129	13.50	50,528
	3,664,132.77	1,383,846	1,679,921	1,984,212		208,896
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						9.5 5.70

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.30 TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-L1.5						
NET SALVAGE PERCENT.. 0						
1990	2,140.34	1,507	2,140			
2004	18,946.94	10,223	18,947			
2007	25,715.28	12,799	24,859	856	11.05	77
	46,802.56	24,529	45,946	857		77
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					11.1	0.16

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.40 TRANSPORTATION EQUIPMENT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 21-S0.5						
NET SALVAGE PERCENT.. 0						
1982	3,457.72	3,293	3,458			
1989	10,904.51	9,570	10,905			
2002	25,086.94	16,319	25,087			
2010	43,570.47	20,499	43,570			
2011	23,404.71	10,398	23,405			
2012	19,828.48	8,262	19,828			
2019	12,413.71	2,359	12,414			
2020	1,158.86	175	1,159			
2021	114,180.00	12,615	99,743	14,437	18.68	773
2023	98,840.35	2,306	18,233	80,607	20.51	3,930
	352,845.75	85,796	257,802	95,044		4,703

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 20.2 1.33

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 376.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1969	357.24	333	357			
1970	75.43	70	75			
1971	458.96	428	459			
1973	1,126.76	1,052	1,127			
1975	709.81	662	710			
1976	1,832.66	1,710	1,833			
1978	3,014.22	2,813	3,014			
1979	2,943.00	2,747	2,943			
1980	5,221.55	4,873	5,222			
1982	1,622.87	1,515	1,623			
1983	4,453.10	4,156	4,453			
1984	3,491.99	3,259	3,492			
1986	5,599.22	5,226	5,599			
1987	1,715.79	1,601	1,716			
1988	1,812.76	1,692	1,813			
1989	2,008.67	1,875	2,009			
1990	2,382.69	2,224	2,383			
1991	3,697.48	3,451	3,697			
1993	1,798.94	1,679	1,799			
1995	29,427.32	27,465	29,427			
1996	1,121.91	1,047	1,122			
1997	1,134.98	1,059	1,135			
1998	5,742.67	5,360	5,743			
1999	5,872.94	5,481	5,873			
2001	16,206.69	15,126	16,207			
2002	3,634.58	3,392	3,635			
2004	28,713.56	26,799	28,714			
2005	3,897.94	3,638	3,898			
2006	24,262.94	22,645	24,263			
2007	2,953.11	2,756	2,953			
2008	6,959.04	6,495	6,959			
2009	6,906.80	6,446	6,907			
2010	7,844.06	7,060	7,844			
2012	27,234.38	20,880	27,234			
2013	1,576.50	1,104	1,576			
2014	5,479.94	3,471	5,480			
2015	4,348.42	2,464	4,348			
2016	12,241.86	6,121	12,242			
2017	140,625.56	60,937	140,626			

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 376.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2018	268.53	98	269			
2019	11,786.42	3,536	11,786			
2020	28,251.10	6,592	26,943	1,308	11.50	114
	420,814.39	281,338	419,508	1,307		114
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					11.5	0.03

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 378.00 TOOLS, SHOP, AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1970	43.71	42	40	4	1.00	4
1971	55.89	53	51	5	1.00	5
1972	834.38	793	763	71	1.00	71
1974	846.63	804	774	73	1.00	73
1975	2,766.38	2,628	2,529	237	1.00	237
1976	583.81	555	534	50	1.00	50
1977	3,670.30	3,487	3,355	315	1.00	315
1978	1,254.05	1,191	1,146	108	1.00	108
1979	4,274.57	4,061	3,907	368	1.00	368
1980	7,880.88	7,487	7,204	677	1.00	677
1981	13,762.22	13,074	12,580	1,182	1.00	1,182
1982	6,660.15	6,327	6,088	572	1.00	572
1983	11,362.90	10,795	10,387	976	1.00	976
1984	8,489.28	8,065	7,760	729	1.00	729
1985	33,814.07	32,123	30,908	2,906	1.00	2,906
1986	12,426.61	11,805	11,359	1,068	1.00	1,068
1987	2,915.36	2,770	2,665	250	1.00	250
1988	17,563.37	16,685	16,054	1,509	1.00	1,509
1989	5,700.27	5,415	5,210	490	1.00	490
1990	5,080.36	4,826	4,643	437	1.00	437
1991	31,537.09	29,960	28,827	2,710	1.00	2,710
1992	4,026.97	3,826	3,681	346	1.00	346
1993	4,396.47	4,177	4,019	377	1.00	377
1994	9,813.14	9,322	8,969	844	1.00	844
1995	7,614.47	7,234	6,960	654	1.00	654
1996	9,861.65	9,369	9,015	847	1.00	847
1997	53,635.12	50,953	49,026	4,609	1.00	4,609
1998	115,565.85	109,788	105,636	9,930	1.00	9,930
1999	53,999.29	51,299	49,359	4,640	1.00	4,640
2000	4,433.24	4,212	4,053	380	1.00	380
2001	35,048.03	33,296	32,037	3,011	1.00	3,011
2002	6,222.01	5,911	5,687	535	1.00	535
2003	31,138.77	29,582	28,463	2,676	1.00	2,676
2004	54,591.19	51,862	49,901	4,690	1.00	4,690
2005	129,797.35	120,063	115,522	14,275	1.50	9,517
2007	20,551.55	16,955	16,314	4,238	3.50	1,211
2008	32,635.60	25,293	24,336	8,300	4.50	1,844
2009	7,675.88	5,565	5,355	2,321	5.50	422
2010	10,304.49	6,956	6,693	3,611	6.50	556
2011	15,489.73	9,681	9,315	6,175	7.50	823
2012	14,135.19	8,128	7,821	6,314	8.50	743
2013	3,729.11	1,958	1,884	1,845	9.50	194

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 378.00 TOOLS, SHOP, AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
2014	45,317.40	21,526	20,712	24,605	10.50	2,343
2015	41,880.86	17,799	17,126	24,755	11.50	2,153
2016	20,512.95	7,692	7,401	13,112	12.50	1,049
2017	86,384.05	28,075	27,013	59,371	13.50	4,398
2018	60,343.78	16,595	15,967	44,377	14.50	3,060
2019	32,441.75	7,299	7,023	25,419	15.50	1,640
2020	15,047.74	2,633	2,533	12,515	16.50	758
2021	28,396.46	3,550	3,416	24,980	17.50	1,427
2022	13,166.31	987	949	12,217	18.50	660
2023	48,150.02	1,204	1,159	46,991	19.50	2,410
	1,187,828.70	835,736	804,129	383,700		83,484

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.6 7.03

FONTANA DIVISION

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 306.10 LAND RIGHTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. 0						
2014	158,840.84	24,488		158,841	50.75	3,130
2018	87,008.60	7,802		87,009	54.62	1,593
2019	8,052.58	592		8,053	55.59	145
2023	8,347.67	68		8,348	59.51	140
9999	3,400.00	427		3,400		65
	265,649.69	33,377		265,650		5,073
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						52.4 1.91

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 315.00 WELLS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 50-R3						
NET SALVAGE PERCENT.. -15						
1985	12,850.42	9,842	14,778			
1990	338,479.47	231,838	356,862	32,389	20.22	1,602
1991	966,874.04	645,572	993,711	118,194	20.97	5,636
1992	1,332,491.42	866,706	1,334,096	198,269	21.72	9,128
1994	473,406.19	291,154	448,165	96,252	23.26	4,138
1995	256,122.23	152,867	235,304	59,237	24.05	2,463
1996	4,988.72	2,886	4,442	1,295	24.85	52
1997	42,712.05	23,911	36,806	12,313	25.66	480
1998	60,793.39	32,887	50,622	19,290	26.48	728
1999	4,940.42	2,578	3,968	1,713	27.31	63
2000	923,699.48	464,205	714,538	347,716	28.15	12,352
2001	251,948.62	121,691	187,316	102,425	29.00	3,532
2002	840,653.70	389,408	599,405	367,347	29.86	12,302
2003	106,598.65	47,246	72,724	49,864	30.73	1,623
2004	19,452.66	8,232	12,671	9,700	31.60	307
2005	404,521.14	162,913	250,768	214,431	32.49	6,600
2006	31,385.81	11,998	18,468	17,626	33.38	528
2007	32,327.03	11,688	17,991	19,185	34.28	560
2008	42,951.05	14,630	22,520	26,874	35.19	764
2012	1,524,643.64	389,592	599,688	1,153,652	38.89	29,664
2013	754,074.88	176,212	271,238	595,948	39.84	14,959
2014	157,354.71	33,369	51,364	129,594	40.78	3,178
2015	118,465.47	22,506	34,643	101,592	41.74	2,434
2016	93,215.85	15,672	24,123	83,075	42.69	1,946
2017	16,418.04	2,394	3,685	15,196	43.66	348
2018	1,041,107.56	128,827	198,300	998,974	44.62	22,388
2019	294,740.38	29,896	46,018	292,933	45.59	6,425
2021	426,236.35	24,116	37,121	453,051	47.54	9,530
2022	222,730.33	7,582	11,671	244,469	48.52	5,039
2023	395,133.75	4,453	6,855	447,549	49.51	9,040
	11,191,317.45	4,326,871	6,659,861	6,210,154		167,809

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 37.0 1.50

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 316.00 SUPPLY MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R2.5						
NET SALVAGE PERCENT.. -10						
2022	813,918.53	21,192	24,052	871,258	58.58	14,873
2023	13,824.55	119	135	15,072	59.53	253
	827,743.08	21,311	24,187	886,330		15,126
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						58.6 1.83

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -10						
1947	2,717.16	2,678	2,989			
1951	2,117.66	2,043	2,329			
1953	2,174.31	2,073	2,392			
1954	1,839.98	1,743	2,024			
1969	9,587.78	7,922	10,547			
1980	3,445.86	2,408	3,695	95	21.89	4
1981	6,997.23	4,798	7,363	334	22.60	15
1982	9,632.70	6,478	9,940	656	23.32	28
1983	30,978.64	20,418	31,331	2,746	24.05	114
1984	1,439.70	929	1,426	158	24.79	6
1987	3,027.77	1,828	2,805	526	27.06	19
1988	12,117.22	7,144	10,962	2,367	27.84	85
1990	25,386.15	14,232	21,839	6,086	29.42	207
1991	12,710.51	6,937	10,645	3,337	30.23	110
1992	447,941.93	237,829	364,949	127,787	31.04	4,117
1993	80,345.21	41,450	63,605	24,775	31.86	778
1994	60,911.80	30,498	46,799	20,204	32.69	618
1995	43,031.93	20,883	32,045	15,290	33.53	456
1997	25,733.65	11,686	17,932	10,375	35.23	294
1998	107,751.34	47,233	72,479	46,047	36.09	1,276
1999	122,114.49	51,581	79,151	55,175	36.96	1,493
2000	229,443.08	93,214	143,037	109,350	37.84	2,890
2001	345,894.64	134,946	207,075	173,409	38.72	4,479
2002	210,359.55	78,635	120,666	110,730	39.61	2,796
2003	66,413.15	23,730	36,414	36,640	40.51	904
2004	485.96	166	255	280	41.41	7
2005	1,278,327.09	414,353	635,825	770,335	42.32	18,203
2006	792,865.86	243,618	373,832	498,320	43.24	11,525
2007	1,269,428.21	368,642	565,682	830,689	44.16	18,811
2008	138,417.06	37,862	58,099	94,160	45.08	2,089
2009	7,823.34	2,005	3,077	5,529	46.02	120
2010	300,793.79	71,909	110,344	220,529	46.96	4,696
2011	1,491,474.54	330,864	507,711	1,132,911	47.90	23,652
2012	475,041.20	97,105	149,008	373,537	48.85	7,647
2013	324,513.55	60,684	93,120	263,845	49.80	5,298
2014	2,416,593.73	409,823	628,874	2,029,379	50.75	39,988
2015	342,452.20	52,048	79,868	296,829	51.71	5,740
2016	1,313,789.07	176,310	270,548	1,174,620	52.68	22,297
2017	784,094.27	91,425	140,292	722,212	53.64	13,464
2018	1,067,465.49	105,292	161,570	1,012,642	54.62	18,540
2019	3,555,301.52	287,446	441,086	3,469,746	55.59	62,417
2020	2,055,245.96	129,610	198,886	2,061,885	56.56	36,455

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 321.00 STRUCTURES AND IMPROVEMENTS - PUMPING

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -10						
2021	4,139,195.49	186,678	286,458	4,266,657	57.54	74,151
2022	1,410,182.92	38,268	58,722	1,492,479	58.52	25,504
2023	8,244.17	74	114	8,955	59.51	150
	25,035,848.86	3,957,498	6,067,810	21,471,624		411,443
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						52.2 1.64

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S1.5						
NET SALVAGE PERCENT.. -5						
1962	2,181.99	1,913	2,291			
1967	687.03	579	721			
1968	68.36	57	72			
1969	65,402.05	54,114	68,672			
1970	2,987.78	2,450	3,137			
1971	1,029.51	836	1,081			
1972	3,248.44	2,613	3,411			
1973	302.62	241	318			
1974	269.66	212	283			
1976	2,307.25	1,779	2,423			
1979	5,236.46	3,894	5,498			
1980	22.05	16	23			
1981	67,823.94	49,138	71,215			
1982	4,600.68	3,287	4,831			
1983	8,968.83	6,316	9,417			
1984	15,338.23	10,640	16,105			
1985	15,705.84	10,726	16,491			
1986	95,183.25	63,963	99,942			
1987	54,757.76	36,171	57,496			
1988	89,334.31	57,969	93,801			
1989	287,631.96	183,223	302,014			
1990	283,653.91	177,180	297,837			
1991	1,142,995.76	699,553	1,200,146			
1992	3,100,678.27	1,857,937	3,255,712			
1993	352,682.27	206,555	367,204	3,112	19.90	156
1994	715,102.26	409,135	727,341	23,516	20.48	1,148
1995	879,902.15	490,894	872,688	51,209	21.09	2,428
1996	239,700.33	130,318	231,673	20,012	21.70	922
1997	1,116,367.64	590,266	1,049,347	122,839	22.34	5,499
1998	1,433,872.24	736,387	1,309,114	196,452	22.99	8,545
1999	510,925.17	254,405	452,269	84,202	23.66	3,559
2000	2,100,142.69	1,011,921	1,798,945	406,205	24.35	16,682
2001	948,670.55	441,603	785,061	211,043	25.05	8,425
2002	2,374,242.85	1,065,314	1,893,865	599,090	25.77	23,248
2003	1,444,988.86	623,418	1,108,283	408,955	26.51	15,426
2004	788,753.86	326,307	580,093	248,099	27.27	9,098
2005	3,000,976.28	1,187,590	2,111,241	1,039,784	28.04	37,082
2006	1,915,989.99	722,896	1,285,130	726,659	28.83	25,205
2007	3,052,994.80	1,094,183	1,945,186	1,260,459	29.64	42,526
2008	2,293,007.52	777,409	1,382,041	1,025,617	30.47	33,660
2009	472,546.18	150,946	268,345	227,828	31.31	7,277
2010	946,062.28	283,218	503,491	489,874	32.17	15,228

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 324.00 PUMPING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 45-S1.5						
NET SALVAGE PERCENT.. -5						
2011	866,193.56	241,528	429,377	480,126	33.05	14,527
2012	727,631.34	187,779	333,825	430,188	33.94	12,675
2013	3,775,308.42	895,009	1,591,104	2,372,970	34.84	68,111
2014	2,838,133.28	611,892	1,087,793	1,892,247	35.76	52,915
2015	1,283,421.93	248,860	442,411	905,182	36.69	24,671
2016	2,106,855.56	361,827	643,239	1,568,959	37.64	41,683
2017	921,680.03	137,848	245,060	722,704	38.59	18,728
2018	445,919.86	56,603	100,626	367,590	39.56	9,292
2019	1,410,824.53	147,144	261,586	1,219,780	40.53	30,096
2020	1,892,883.21	153,695	273,231	1,714,296	41.52	41,288
2021	2,983,745.52	173,345	308,164	2,824,769	42.51	66,450
2022	4,957,085.66	173,481	308,407	4,896,533	43.50	112,564
2023	3,307,627.83	38,585	68,594	3,404,415	44.50	76,504
	57,354,654.59	17,155,168	30,277,671	29,944,716		825,618
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						36.3 1.44

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 331.00 STRUCTURES AND IMPROVEMENTS - WATER TREATMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R3						
NET SALVAGE PERCENT.. -5						
1953	2,960.58	2,694	3,109			
1957	4,062.12	3,598	4,265			
1960	10,575.04	9,150	11,104			
1961	1,536.42	1,318	1,613			
1965	22,903.00	18,906	24,048			
1966	4,205.18	3,434	4,415			
1967	288.33	233	303			
1969	413.52	326	430	4	14.93	
1975	2,918.50	2,118	2,795	269	18.53	15
1979	4,552.98	3,092	4,080	701	21.19	33
1985	6,681.17	4,030	5,318	1,697	25.53	66
1989	5,638.91	3,096	4,085	1,836	28.63	64
1995	3,778.77	1,750	2,309	1,659	33.53	49
1997	165,702.49	71,827	94,777	79,211	35.23	2,248
1998	49,359.97	20,653	27,252	24,576	36.09	681
1999	62,499.76	25,200	33,252	32,373	36.96	876
2000	158,741.24	61,559	81,228	85,450	37.84	2,258
2002	36,830.16	13,142	17,341	21,331	39.61	539
2005	78,258.75	24,214	31,951	50,221	42.32	1,187
2007	5,635.01	1,562	2,061	3,856	44.16	87
2008	2,350,858.99	613,818	809,945	1,658,457	45.08	36,789
2009	56,863.29	13,912	18,357	41,349	46.02	899
2010	532,276.09	121,464	160,274	398,616	46.96	8,488
2011	627,211.55	132,814	175,251	483,321	47.90	10,090
2012	45,250.67	8,829	11,650	35,863	48.85	734
2013	50,167.22	8,955	11,816	40,860	49.80	820
2016	6,932.40	888	1,172	6,107	52.68	116
2017	233,980.01	26,042	34,363	211,316	53.64	3,940
2018	2,189,736.67	206,171	272,048	2,027,176	54.62	37,114
2019	11,785.29	910	1,201	11,174	55.59	201
2021	282,363.37	12,156	16,040	280,442	57.54	4,874
2022	141,550.14	3,667	4,838	143,790	58.52	2,457
2023	6,142.53	53	70	6,380	59.51	107
	7,162,660.12	1,421,581	1,872,761	5,648,032		114,732

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.2 1.60

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2.5						
NET SALVAGE PERCENT.. -10						
1940	2,581.00	2,768	2,839			
1947	4,997.79	5,360	5,498			
1951	377.00	404	415			
1955	320.91	340	353			
1956	75.25	79	83			
1958	4,825.14	4,998	5,308			
1960	9,390.24	9,604	10,329			
1961	731.87	744	805			
1962	7,876.01	7,958	8,616	48	3.26	15
1964	801.61	800	866	16	3.69	4
1965	179,190.76	177,842	192,554	4,556	3.91	1,165
1966	3,177.91	3,134	3,393	103	4.14	25
1967	1,573.08	1,541	1,668	62	4.37	14
1968	2,900.80	2,824	3,058	133	4.60	29
1969	206,990.35	200,196	216,758	10,931	4.83	2,263
1970	2,165.73	2,080	2,252	130	5.08	26
1971	2,489.76	2,374	2,570	169	5.32	32
1972	6,686.35	6,329	6,853	502	5.58	90
1973	6,263.32	5,884	6,371	519	5.84	89
1974	2,859.82	2,664	2,884	262	6.12	43
1975	8,383.58	7,746	8,387	835	6.40	130
1976	8,737.99	7,999	8,661	951	6.71	142
1977	3,177.57	2,882	3,120	375	7.02	53
1978	1,754.87	1,575	1,705	225	7.36	31
1979	4,510.73	4,005	4,336	626	7.71	81
1980	510.63	448	485	77	8.08	10
1981	13,488.99	11,692	12,659	2,179	8.48	257
1982	219.60	188	204	38	8.89	4
1983	1,127.06	951	1,030	210	9.33	23
1984	313.99	261	283	62	9.79	6
1986	3,056.71	2,457	2,660	702	10.77	65
1987	7,996.90	6,312	6,834	1,963	11.30	174
1988	10,000.86	7,745	8,386	2,615	11.84	221
1989	25,457.92	19,316	20,914	7,090	12.41	571
1990	1,613.67	1,199	1,298	477	12.99	37
1991	9,953.30	7,229	7,827	3,122	13.59	230
1992	385,651.47	273,514	296,141	128,076	14.21	9,013
1993	78,661.91	54,405	58,906	27,622	14.85	1,860
1994	156,830.71	105,665	114,406	58,108	15.50	3,749
1995	84,814.43	55,581	60,179	33,117	16.17	2,048
1996	278,803.14	177,416	192,093	114,590	16.86	6,797
1997	61,545.96	37,980	41,122	26,579	17.56	1,514

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 332.00 WATER TREATMENT EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R2.5						
NET SALVAGE PERCENT.. -10						
1998	132,384.86	79,110	85,655	59,968	18.27	3,282
1999	1,657,824.10	957,393	1,036,595	787,012	19.00	41,422
2000	423,282.18	235,832	255,342	210,268	19.74	10,652
2001	16,779.49	9,003	9,748	8,709	20.49	425
2003	3,001,561.87	1,483,297	1,606,006	1,695,712	22.03	76,973
2004	32,998.67	15,590	16,880	19,419	22.82	851
2005	73,720.38	33,207	35,954	45,138	23.62	1,911
2006	231,244.53	99,013	107,204	147,165	24.43	6,024
2007	331,852.34	134,608	145,744	219,294	25.25	8,685
2008	37,319,335.88	14,285,842	15,467,670	25,583,599	26.08	980,966
2009	607,816.68	218,632	236,719	431,879	26.92	16,043
2010	91,775.97	30,867	33,421	67,533	27.77	2,432
2011	463,009.10	144,771	156,747	352,563	28.63	12,314
2012	1,446,716.90	417,740	452,298	1,139,091	29.50	38,613
2013	22,667.68	6,003	6,500	18,434	30.37	607
2014	2,062,569.49	495,739	536,750	1,732,076	31.26	55,409
2015	160,314.48	34,608	37,471	138,875	32.15	4,320
2016	69,558.97	13,294	14,394	62,121	33.05	1,880
2017	134,720.61	22,377	24,228	123,965	33.96	3,650
2018	364,454.10	51,415	55,668	345,232	34.87	9,901
2019	120,111.48	13,906	15,056	117,067	35.79	3,271
2020	35,224.61	3,177	3,440	35,307	36.72	962
2021	17,419.24	1,126	1,219	17,942	37.65	477
2022	192,472.61	7,463	8,081	203,639	38.59	5,277
2023	100,450.89	1,298	1,405	109,091	39.53	2,760
	50,703,153.80	20,019,800	21,675,304	34,098,165		1,319,918

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 25.8 2.60

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 342.00 RESERVOIRS AND TANKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 60-R4						
NET SALVAGE PERCENT.. -20						
1981	78,954.81	62,959	73,930	20,816	20.13	1,034
1982	693,211.53	541,953	636,394	195,460	20.91	9,348
1983	28,692.18	21,973	25,802	8,629	21.71	397
1985	652,078.73	478,237	561,575	220,919	23.33	9,469
1986	9,668.96	6,931	8,139	3,464	24.16	143
1987	7,574.63	5,302	6,226	2,864	25.00	115
1988	5,186.33	3,542	4,159	2,065	25.85	80
1990	44,268.42	28,695	33,695	19,427	27.59	704
1992	642,590.94	393,782	462,403	308,706	29.36	10,515
1993	24,400.57	14,509	17,037	12,244	30.27	404
1994	38,073.96	21,946	25,770	19,919	31.18	639
1995	63,523.73	35,446	41,623	34,605	32.10	1,078
1996	49,526.33	26,715	31,370	28,062	33.03	850
1997	6,337.86	3,301	3,876	3,729	33.96	110
1998	6,182.28	3,103	3,644	3,775	34.90	108
2000	1,043,327.50	484,108	568,469	683,524	36.80	18,574
2001	461,814.40	205,417	241,213	312,964	37.76	8,288
2003	148,167.32	60,186	70,674	107,127	39.69	2,699
2004	110,289.66	42,660	50,094	82,254	40.66	2,023
2005	379,213.01	139,247	163,512	291,544	41.64	7,002
2006	666,234.99	231,586	271,942	527,540	42.62	12,378
2007	2,386,548.13	782,778	919,186	1,944,672	43.60	44,603
2008	455,009.40	140,325	164,778	381,233	44.58	8,552
2009	713,915.54	206,036	241,940	614,759	45.57	13,490
2010	904,000.68	242,995	285,340	799,461	46.56	17,171
2011	1,266,622.68	315,389	370,349	1,149,598	47.55	24,177
2012	414.13	95	112	385	48.54	8
2014	1,200,875.55	227,686	267,363	1,173,688	50.52	23,232
2015	2,892,082.64	490,486	575,959	2,894,540	51.52	56,183
2016	773,736.30	115,903	136,100	792,384	52.51	15,090
2018	3,371,136.81	370,151	434,654	3,610,710	54.51	66,239
2019	899,555.18	80,776	94,852	984,614	55.51	17,738
2020	6,236,802.86	436,551	512,625	6,971,538	56.50	123,390
2021	2,308,223.79	115,420	135,533	2,634,336	57.50	45,815
2023	5,752,488.75	57,502	67,523	6,835,464	59.50	114,882
	34,320,730.58	6,393,691	7,507,861	33,677,016		656,528

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 51.3 1.91

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
1913	671.98	788	874			
1922	838.85	952	1,091			
1923	3,104.98	3,507	4,036			
1924	127.24	143	165			
1926	17,710.71	19,741	23,024			
1927	18,539.62	20,568	24,102			
1928	324.04	358	421			
1929	2,183.43	2,398	2,838			
1930	3,302.93	3,609	4,294			
1931	7,547.25	8,202	9,811			
1932	2,889.10	3,123	3,756			
1933	11.10	12	14			
1934	438.87	469	571			
1935	372.90	396	485			
1936	538.16	568	700			
1937	30.18	32	39			
1938	304.37	317	396			
1939	22.80	24	30			
1940	1,103.62	1,133	1,435			
1941	37.43	38	49			
1942	2,794.15	2,826	3,632			
1943	13,169.18	13,217	17,120			
1944	22,402.55	22,305	29,123			
1945	2,497.28	2,466	3,246			
1946	7,261.38	7,109	9,360	80	20.99	4
1947	5,988.15	5,812	7,652	133	21.54	6
1948	15,468.79	14,879	19,590	519	22.11	23
1949	27,044.42	25,773	33,933	1,225	22.69	54
1950	46,817.88	44,194	58,185	2,678	23.28	115
1951	31,909.73	29,829	39,273	2,210	23.88	93
1952	120,778.20	111,773	147,159	9,853	24.49	402
1953	140,917.28	129,076	169,940	13,252	25.11	528
1954	92,168.14	83,535	109,982	9,837	25.74	382
1955	89,606.34	80,336	105,770	10,718	26.38	406
1956	73,263.01	64,955	85,519	9,723	27.03	360
1957	67,725.53	59,362	78,156	9,887	27.69	357
1958	81,816.42	70,887	93,329	13,032	28.35	460
1959	80,450.12	68,866	90,668	13,917	29.03	479
1960	22,167.62	18,745	24,680	4,138	29.71	139
1961	25,245.67	21,082	27,756	5,063	30.40	167
1962	69,162.47	57,014	75,064	14,847	31.10	477
1963	165,828.81	134,900	177,608	37,969	31.81	1,194

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
1964	314,862.68	252,719	332,728	76,593	32.52	2,355
1965	542,260.81	429,266	565,168	139,771	33.24	4,205
1966	278,868.77	217,645	286,550	75,979	33.97	2,237
1967	65,331.34	50,249	66,157	18,774	34.71	541
1968	108,595.69	82,279	108,328	32,846	35.46	926
1969	114,448.55	85,402	112,440	36,343	36.21	1,004
1970	151,904.68	111,610	146,945	50,531	36.96	1,367
1971	155,643.60	112,523	148,147	54,190	37.73	1,436
1972	103,353.44	73,503	96,773	37,586	38.50	976
1973	294,482.25	205,915	271,106	111,721	39.28	2,844
1974	164,861.57	113,313	149,187	65,133	40.06	1,626
1975	122,182.75	82,502	108,621	50,217	40.85	1,229
1976	272,586.37	180,725	237,941	116,421	41.65	2,795
1977	169,672.44	110,417	145,374	75,200	42.45	1,771
1978	740,476.20	472,704	622,358	340,261	43.26	7,865
1979	625,377.77	391,382	515,290	297,701	44.08	6,754
1980	1,269,209.38	778,391	1,024,824	625,148	44.90	13,923
1981	973,943.57	585,102	770,341	495,786	45.72	10,844
1982	578,018.80	339,824	447,410	304,014	46.56	6,530
1983	850,286.79	489,094	643,937	461,436	47.39	9,737
1984	2,380,505.45	1,338,346	1,762,056	1,332,601	48.24	27,624
1985	2,504,083.62	1,375,270	1,810,670	1,444,639	49.09	29,428
1986	2,295,928.22	1,231,102	1,620,859	1,363,848	49.94	27,310
1987	2,261,164.05	1,182,713	1,557,151	1,382,362	50.80	27,212
1988	1,337,176.33	681,634	897,434	840,895	51.67	16,274
1989	2,825,085.11	1,402,497	1,846,517	1,826,094	52.54	34,756
1990	2,496,796.82	1,205,925	1,587,711	1,658,125	53.42	31,039
1991	878,238.63	412,363	542,914	598,796	54.30	11,028
1992	2,718,301.88	1,239,725	1,632,212	1,901,580	55.18	34,461
1993	1,128,377.42	499,095	657,105	809,786	56.08	14,440
1994	2,073,945.13	889,075	1,170,549	1,525,580	56.97	26,779
1995	1,524,977.38	632,765	833,093	1,149,378	57.87	19,861
1996	4,928,883.47	1,976,536	2,602,292	3,805,257	58.78	64,737
1997	3,902,217.41	1,510,502	1,988,715	3,084,168	59.69	51,670
1998	4,150,622.82	1,548,921	2,039,297	3,356,513	60.60	55,388
1999	3,700,795.74	1,329,000	1,749,751	3,061,283	61.52	49,761
2000	4,430,840.96	1,528,786	2,012,788	3,747,305	62.44	60,014
2001	3,025,221.29	1,000,776	1,317,614	2,615,174	63.37	41,268
2002	7,356,418.85	2,328,961	3,066,292	6,497,053	64.30	101,043
2003	4,455,952.05	1,347,333	1,773,888	4,018,850	65.23	61,610
2004	5,755,385.27	1,657,488	2,182,236	5,299,765	66.17	80,093
2005	3,974,643.15	1,087,506	1,431,802	3,735,234	67.11	55,658

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 343.00 TRANSMISSION AND DISTRIBUTION MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 85-R3						
NET SALVAGE PERCENT.. -30						
2006	4,045,992.38	1,048,855	1,380,914	3,878,876	68.05	57,000
2007	13,956,081.61	3,415,221	4,496,453	13,646,453	69.00	197,775
2008	5,521,153.72	1,270,848	1,673,188	5,504,312	69.95	78,689
2009	3,379,874.30	728,850	959,598	3,434,239	70.90	48,438
2010	4,081,793.29	820,306	1,080,008	4,226,323	71.86	58,813
2011	5,258,063.89	979,456	1,289,544	5,545,939	72.82	76,160
2012	1,867,494.03	320,462	421,918	2,005,824	73.78	27,187
2013	5,887,147.85	922,911	1,215,097	6,438,195	74.75	86,130
2014	5,107,869.49	725,711	955,466	5,684,764	75.71	75,086
2015	9,543,000.69	1,214,290	1,598,725	10,807,176	76.68	140,939
2016	5,623,322.93	631,246	831,094	6,479,226	77.66	83,431
2017	4,704,251.55	458,298	603,391	5,512,136	78.63	70,102
2018	10,385,449.58	857,724	1,129,273	12,371,811	79.60	155,425
2019	11,189,094.15	756,383	995,848	13,549,974	80.58	168,156
2020	9,622,370.94	506,243	666,515	11,842,567	81.56	145,201
2021	13,973,826.69	525,723	692,163	17,473,812	82.54	211,701
2022	18,145,323.68	410,683	540,702	23,048,219	83.52	275,960
2023	13,274,309.80	99,398	130,867	17,125,736	84.51	202,647
	224,832,931.75	49,398,811	65,028,211	227,254,601		3,166,905
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						71.8 1.41

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 344.00 FIRE MAINS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R3						
NET SALVAGE PERCENT.. -30						
1965	806.26	782	831	218	16.48	13
	806.26	782	831	218		13
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..					16.8	1.61

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 43-R3						
NET SALVAGE PERCENT.. -5						
1966	2,248.69	2,154	1,920	441	3.77	117
1967	2,232.59	2,125	1,894	450	4.03	112
1968	4,619.97	4,366	3,891	960	4.30	223
1969	4,884.16	4,585	4,086	1,042	4.56	229
1970	2,044.69	1,905	1,698	449	4.84	93
1971	8,946.02	8,273	7,373	2,020	5.13	394
1972	6,451.11	5,918	5,274	1,500	5.43	276
1973	13,241.40	12,047	10,736	3,167	5.74	552
1974	7,453.82	6,722	5,990	1,837	6.07	303
1976	13,517.33	11,955	10,654	3,539	6.78	522
1977	15,178.16	13,280	11,835	4,102	7.17	572
1978	40,510.94	35,048	31,233	11,303	7.57	1,493
1979	71,924.59	61,470	54,780	20,741	8.00	2,593
1980	70,838.18	59,781	53,275	21,105	8.44	2,501
1981	73,739.39	61,383	54,702	22,724	8.91	2,550
1982	50,624.06	41,523	37,004	16,151	9.41	1,716
1983	54,517.08	44,037	39,244	17,999	9.92	1,814
1984	109,686.49	87,154	77,668	37,503	10.46	3,585
1985	205,480.23	160,510	143,040	72,714	11.01	6,604
1986	314,223.17	241,007	214,776	115,158	11.59	9,936
1987	345,885.46	260,222	231,900	131,280	12.19	10,769
1988	232,752.02	171,584	152,909	91,481	12.81	7,141
1989	548,576.96	395,969	352,872	223,134	13.44	16,602
1990	392,573.44	277,037	246,885	165,317	14.10	11,725
1991	136,189.35	93,880	83,662	59,337	14.77	4,017
1992	158,921.19	106,873	95,241	71,626	15.46	4,633
1993	394,548.91	258,488	230,354	183,922	16.17	11,374
1994	638,183.75	406,887	362,602	307,491	16.89	18,206
1995	471,338.02	292,108	260,315	234,590	17.62	13,314
1996	976,395.87	587,233	523,319	501,897	18.37	27,322
1997	766,807.97	446,954	398,308	406,840	19.13	21,267
1998	807,470.68	455,275	405,723	442,121	19.91	22,206
1999	957,869.45	521,830	465,035	540,728	20.69	26,135
2000	1,819,310.28	955,577	851,573	1,058,703	21.49	49,265
2001	1,163,513.46	587,828	523,850	697,839	22.31	31,279
2002	1,447,310.03	702,227	625,797	893,879	23.13	38,646
2003	931,396.61	432,809	385,703	592,263	23.97	24,709
2004	1,354,876.17	601,797	536,298	886,322	24.81	35,724
2005	1,076,653.34	455,608	406,020	724,466	25.67	28,222
2006	1,655,465.49	665,380	592,961	1,145,278	26.54	43,153
2007	3,191,213.75	1,214,086	1,081,946	2,268,828	27.42	82,744
2008	6,388,577.15	2,293,199	2,043,610	4,664,396	28.30	164,820

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.00 SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 43-R3						
NET SALVAGE PERCENT.. -5						
2009	1,875,490.32	631,996	563,210	1,406,055	29.20	48,153
2010	3,180,522.45	1,001,096	892,138	2,447,411	30.11	81,282
2011	2,037,201.87	595,943	531,081	1,607,981	31.02	51,837
2012	1,447,919.61	390,691	348,169	1,172,147	31.95	36,687
2013	1,857,814.79	459,099	409,131	1,541,575	32.88	46,885
2014	1,133,098.80	254,001	226,356	963,398	33.82	28,486
2015	733,317.30	147,552	131,493	638,490	34.76	18,369
2016	1,036,583.11	184,519	164,436	923,976	35.71	25,874
2017	1,066,730.12	164,885	146,939	973,128	36.67	26,537
2018	4,338,499.69	568,881	506,965	4,048,460	37.63	107,586
2019	3,872,719.35	416,110	370,821	3,695,534	38.60	95,739
2020	1,980,359.13	165,872	147,819	1,931,558	39.57	48,814
2021	2,105,391.16	125,963	112,253	2,098,408	40.55	51,749
2022	4,447,500.75	159,663	142,285	4,527,591	41.53	109,020
2023	5,472,317.41	65,504	58,375	5,687,558	42.51	133,793
	63,513,657.28	18,379,869	16,379,427	50,309,913		1,640,269
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						30.7 2.58

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R3						
NET SALVAGE PERCENT.. -5						
1953	2,103.20	2,153	2,208			
1955	2,042.70	2,091	2,145			
1956	736.20	754	773			
1958	2,334.41	2,390	2,451			
1959	3,715.42	3,804	3,901			
1961	1,908.63	1,943	2,004			
1965	378.09	375	397			
1966	1,752.83	1,727	1,840			
1967	4,815.84	4,712	5,057			
1968	5,736.90	5,573	6,024			
1969	4,802.54	4,633	5,043			
1970	7,605.45	7,287	7,986			
1971	4,402.38	4,188	4,622			
1972	3,221.17	3,041	3,382			
1973	2,482.38	2,326	2,606			
1974	3,153.31	2,932	3,311			
1975	17,772.85	16,389	18,661			
1977	7,416.66	6,717	7,787			
1978	26,094.46	23,406	27,399			
1979	68,621.07	60,902	72,052			
1980	71,638.99	62,866	75,221			
1981	35,021.99	30,365	36,773			
1982	28,852.82	24,698	30,295			
1983	37,778.09	31,892	39,211	456	7.84	58
1984	104,931.90	87,289	107,321	2,857	8.31	344
1985	205,667.08	168,441	207,096	8,854	8.80	1,006
1986	139,721.50	112,525	138,348	8,360	9.32	897
1987	262,370.84	207,581	255,218	20,271	9.86	2,056
1988	288,719.87	224,184	275,631	27,525	10.42	2,642
1989	506,918.50	385,759	474,285	57,979	11.01	5,266
1990	348,758.96	259,817	319,441	46,756	11.62	4,024
1991	298,358.09	217,335	267,210	46,066	12.25	3,760
1992	42,412.36	30,182	37,108	7,425	12.89	576
1993	88,484.05	61,412	75,505	17,403	13.56	1,283
1994	61,982.54	41,896	51,511	13,571	14.25	952
1995	122,906.51	80,819	99,366	29,686	14.95	1,986
1996	150,196.94	95,925	117,938	39,769	15.67	2,538
1997	162,666.70	100,772	123,898	46,902	16.40	2,860
1998	151,569.11	90,913	111,776	47,372	17.15	2,762
1999	243,491.52	141,192	173,594	82,072	17.91	4,582
2000	505,500.18	282,770	347,662	183,113	18.69	9,797
2001	319,496.72	172,097	211,591	123,881	19.48	6,359

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 345.10 FIRE SERVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 40-R3						
NET SALVAGE PERCENT.. -5						
2002	472,088.59	244,253	300,306	195,387	20.29	9,630
2003	396,613.37	196,770	241,926	174,518	21.10	8,271
2004	653,188.57	309,832	380,934	304,914	21.93	13,904
2005	434,955.58	196,611	241,730	214,973	22.78	9,437
2006	554,822.13	238,414	293,127	289,436	23.63	12,249
2007	1,400,071.92	570,022	700,834	769,242	24.49	31,410
2008	442,948.79	170,109	209,147	255,949	25.37	10,089
2009	258,588.53	93,266	114,669	156,849	26.26	5,973
2010	405,368.43	136,736	168,115	257,522	27.15	9,485
2011	164,596.40	51,589	63,428	109,398	28.06	3,899
2012	261,919.02	75,767	93,154	181,861	28.98	6,275
2013	204,775.36	54,291	66,750	148,264	29.90	4,959
2014	399,007.13	96,046	118,087	300,870	30.83	9,759
2015	510,496.63	110,286	135,595	400,426	31.77	12,604
2016	1,462,236.69	279,433	343,559	1,191,790	32.72	36,424
2017	480,046.62	79,640	97,916	406,133	33.68	12,059
2018	1,213,610.52	170,755	209,941	1,064,350	34.64	30,726
2019	1,722,397.74	198,937	244,590	1,563,928	35.60	43,931
2020	1,253,049.48	112,821	138,712	1,176,990	36.57	32,185
2021	1,890,438.64	121,579	149,479	1,835,482	37.55	48,881
2022	4,232,381.60	163,317	200,796	4,243,205	38.53	110,127
2023	4,852,805.54	62,419	76,743	5,018,702	39.51	127,024
	28,014,949.03	6,800,966	8,345,186	21,070,510		643,049

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 32.8 2.30

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 346.00 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S1						
NET SALVAGE PERCENT.. +5						
2016	69,611.96	22,022	8,279	57,852	13.34	4,337
2017	617,862.81	173,156	65,095	521,875	14.10	37,012
2018	310,298.96	75,170	28,259	266,525	14.90	17,888
2019	564,521.47	114,231	42,944	493,351	15.74	31,344
2020	1,142,567.13	182,896	68,757	1,016,682	16.63	61,135
2021	1,234,582.79	143,675	54,013	1,118,841	17.55	63,752
2022	684,745.36	48,463	18,219	632,289	18.51	34,159
2023	1,311,261.16	31,142	11,707	1,233,991	19.50	63,282
	5,935,451.64	790,755	297,273	5,341,406		312,909
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						17.1 5.27

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R2.5						
NET SALVAGE PERCENT.. -40						
1946	1,600.75	1,869	2,191	50	10.80	5
1947	749.88	870	1,020	30	11.11	3
1948	979.60	1,130	1,325	46	11.43	4
1949	814.52	934	1,095	45	11.76	4
1950	2,660.67	3,031	3,553	172	12.11	14
1951	2,364.15	2,675	3,136	174	12.46	14
1952	4,288.49	4,819	5,649	355	12.83	28
1953	4,329.83	4,830	5,662	400	13.21	30
1954	2,724.63	3,016	3,535	279	13.60	21
1955	4,363.16	4,792	5,617	491	14.01	35
1956	3,101.61	3,378	3,960	382	14.43	26
1957	1,231.38	1,330	1,559	165	14.86	11
1958	789.43	845	991	114	15.30	7
1959	2,191.08	2,324	2,724	344	15.76	22
1960	81.39	85	100	14	16.24	1
1961	2,300.89	2,393	2,805	416	16.72	25
1962	2,732.80	2,812	3,296	530	17.22	31
1963	1,543.24	1,571	1,842	319	17.73	18
1964	6,642.01	6,687	7,839	1,460	18.26	80
1965	6,982.32	6,948	8,145	1,630	18.80	87
1966	8,211.10	8,073	9,464	2,032	19.35	105
1967	1,908.70	1,854	2,173	499	19.91	25
1968	6,489.80	6,223	7,295	1,791	20.48	87
1969	10,687.73	10,113	11,855	3,108	21.07	148
1970	20,729.47	19,346	22,678	6,343	21.67	293
1971	18,788.43	17,288	20,266	6,038	22.28	271
1972	20,704.78	18,774	22,008	6,979	22.90	305
1973	20,106.49	17,959	21,052	7,097	23.53	302
1974	7,398.33	6,506	7,627	2,731	24.17	113
1975	9,331.83	8,076	9,467	3,598	24.82	145
1976	32,419.41	27,595	32,348	13,039	25.48	512
1977	16,340.47	13,670	16,025	6,852	26.16	262
1978	120,978.55	99,434	116,561	52,809	26.84	1,968
1979	169,080.45	136,455	159,958	76,755	27.53	2,788
1980	168,508.94	133,491	156,484	79,429	28.22	2,815
1981	154,360.42	119,921	140,576	75,529	28.93	2,611
1982	42,690.14	32,513	38,113	21,653	29.64	731
1983	102,453.91	76,418	89,580	53,855	30.37	1,773
1984	226,015.27	165,026	193,451	122,970	31.10	3,954
1985	312,557.18	223,231	261,681	175,899	31.84	5,524
1986	433,177.13	302,387	354,471	251,977	32.59	7,732
1987	395,957.46	270,008	316,515	237,825	33.34	7,133

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 348.00 HYDRANTS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 65-R2.5						
NET SALVAGE PERCENT.. -40						
1988	297,424.13	197,945	232,040	184,354	34.10	5,406
1989	430,539.30	279,401	327,526	275,229	34.87	7,893
1990	389,055.96	245,944	288,306	256,372	35.65	7,191
1991	187,482.91	115,327	135,191	127,285	36.44	3,493
1992	86,422.01	51,691	60,594	60,397	37.23	1,622
1993	87,983.67	51,128	59,934	63,243	38.02	1,663
1994	39,678.30	22,365	26,217	29,333	38.83	755
1995	69,884.72	38,172	44,747	53,092	39.64	1,339
1996	193,561.33	102,308	119,930	151,056	40.46	3,733
1997	239,357.33	122,285	143,348	191,752	41.28	4,645
1998	251,038.65	123,765	145,083	206,371	42.11	4,901
1999	247,298.18	117,447	137,676	208,541	42.95	4,855
2000	246,325.76	112,530	131,912	212,944	43.79	4,863
2001	322,206.89	141,295	165,632	285,458	44.64	6,395
2002	608,016.32	255,367	299,352	551,871	45.50	12,129
2003	285,231.63	114,514	134,238	265,086	46.36	5,718
2004	521,442.96	199,690	234,085	495,935	47.22	10,503
2005	294,038.50	107,030	125,465	286,189	48.10	5,950
2006	343,513.23	118,604	139,033	341,886	48.97	6,982
2007	1,046,227.11	341,396	400,199	1,064,519	49.85	21,354
2008	111,224.95	34,161	40,045	115,670	50.74	2,280
2009	268,822.84	77,412	90,746	285,606	51.63	5,532
2010	282,383.92	75,845	88,909	306,428	52.53	5,833
2011	296,501.99	73,888	86,615	328,488	53.43	6,148
2012	122,990.24	28,264	33,132	139,054	54.33	2,559
2013	223,376.02	46,956	55,044	257,682	55.24	4,665
2014	282,112.58	53,773	63,035	331,923	56.15	5,911
2015	187,301.21	31,991	37,501	224,721	57.07	3,938
2016	809,687.19	122,255	143,312	990,250	57.99	17,076
2017	404,117.92	53,007	62,137	503,628	58.91	8,549
2018	478,438.42	53,170	62,328	607,486	59.84	10,152
2019	596,274.29	54,328	63,685	771,099	60.77	12,689
2020	456,289.64	32,336	37,906	600,899	61.71	9,737
2021	764,491.79	38,862	45,556	1,024,733	62.64	16,359
2022	457,549.41	13,996	16,406	624,163	63.58	9,817
2023	1,181,299.81	11,957	14,017	1,639,803	64.53	25,411
	15,460,958.93	5,431,105	6,366,574	15,278,769		308,109

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 49.6 1.99

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
1945	17,162.34	16,857	15,401	2,619	3.55	738
1946	5,141.56	5,026	4,592	807	3.80	212
1948	1,582.99	1,532	1,400	262	4.32	61
1954	5,929.68	5,558	5,078	1,148	5.90	195
1958	811.17	742	678	174	7.06	25
1959	3,612.05	3,284	3,000	793	7.37	108
1960	560.76	506	462	127	7.70	16
1964	274.51	240	219	69	9.16	8
1967	365.74	311	284	100	10.41	10
1969	49,386.89	41,174	37,617	14,239	11.33	1,257
1972	335.60	270	247	105	12.85	8
1974	1,805.69	1,415	1,293	603	13.94	43
1975	613.07	474	433	211	14.51	15
1981	245.46	172	157	101	18.27	6
1982	2,296.42	1,581	1,444	967	18.94	51
1983	6,262.13	4,228	3,863	2,712	19.63	138
1984	2,055.19	1,360	1,243	915	20.33	45
1985	868.63	563	514	398	21.04	19
1986	1,154.18	732	669	543	21.77	25
1987	4,924.81	3,056	2,792	2,379	22.50	106
1988	40,030.87	24,264	22,168	19,864	23.25	854
1989	1,633.71	967	883	832	24.01	35
1990	6,606.12	3,813	3,484	3,452	24.77	139
1992	21,788.27	11,921	10,891	11,987	26.34	455
1993	66,736.50	35,496	32,429	37,644	27.14	1,387
1995	1,604.23	804	735	949	28.76	33
1996	100,712.82	48,856	44,635	61,113	29.59	2,065
1997	25,855.14	12,133	11,085	16,063	30.42	528
1999	4,279.96	1,870	1,708	2,786	32.11	87
2000	2,235.51	940	859	1,488	32.97	45
2005	62,860.53	21,133	19,307	46,697	37.39	1,249
2006	16,850.58	5,372	4,908	12,785	38.30	334
2007	26,359.06	7,946	7,260	20,417	39.21	521
2009	4,017,299.54	1,069,094	976,734	3,241,431	41.06	78,944
2010	616,657.99	153,164	139,932	507,559	41.99	12,088
2011	48,032.89	11,068	10,112	40,323	42.93	939
2012	2,056.11	437	399	1,760	43.87	40
2014	4,960.74	874	798	4,411	45.77	96
2015	26,078.43	4,122	3,766	23,616	46.72	505
2016	19,350.45	2,700	2,467	17,851	47.69	374
2017	39,844.76	4,830	4,413	37,424	48.65	769
2018	125,779.61	12,919	11,803	120,266	49.62	2,424

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
2019	183,039.32	15,410	14,078	178,113	50.59	3,521
2020	51,968.54	3,403	3,109	51,458	51.57	998
2021	83,716.02	3,932	3,593	84,309	52.54	1,605
2022	186.65	5	5	191	53.52	4
2023	152,363.20	1,425	1,301	158,680	54.51	2,911
	5,854,276.42	1,547,979	1,414,248	4,732,742		116,036
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						40.8 1.98

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE,, 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1996	2,901.34	2,708	2,670	231	1.00	231
1997	231.29	216	213	18	1.00	18
1998	5,708.77	5,328	5,254	455	1.00	455
1999	8,892.85	8,300	8,184	709	1.00	709
2000	15,992.08	14,926	14,717	1,275	1.00	1,275
2001	12,113.87	11,306	11,148	966	1.00	966
2002	15,451.33	14,421	14,219	1,232	1.00	1,232
2003	6,594.90	6,155	6,069	526	1.00	526
2004	16,152.54	15,076	14,865	1,288	1.00	1,288
2005	26,407.91	24,647	24,303	2,105	1.00	2,105
2006	63,615.92	59,375	58,545	5,071	1.00	5,071
2009	88,945.69	83,016	81,856	7,090	1.00	7,090
2010	26,381.01	23,743	23,411	2,970	1.50	1,980
2011	17,252.48	14,377	14,176	3,076	2.50	1,230
2012	27,621.99	21,177	20,881	6,741	3.50	1,926
2013	267,718.72	187,403	184,784	82,935	4.50	18,430
2014	974,192.26	616,985	608,362	365,830	5.50	66,515
2015	186,324.51	105,585	104,109	82,216	6.50	12,649
2016	84,970.69	42,485	41,891	43,080	7.50	5,744
2017	158,637.35	68,742	67,781	90,856	8.50	10,689
2018	671,749.44	246,310	242,868	428,881	9.50	45,145
2019	189,495.87	56,849	56,054	133,442	10.50	12,709
2020	158,822.72	37,058	36,540	122,283	11.50	10,633
2021	728,955.63	121,495	119,797	609,159	12.50	48,733
2022	143,632.74	14,363	14,162	129,471	13.50	9,590
2023	177,006.71	5,900	5,818	171,189	14.50	11,806
	4,075,770.61	1,807,946	1,782,677	2,293,094		278,745

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 8.2 6.84

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.20 REMOTE READING DEVICES

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 10-SQUARE						
NET SALVAGE PERCENT.. 0						
2010	31,918.96	28,727	26,449	5,470	1.00	5,470
2013	45,699.12	41,129	37,867	7,832	1.00	7,832
2017	43,055.25	27,986	25,766	17,289	3.50	4,940
2021	42,735.00	10,684	9,837	32,898	7.50	4,386
	163,408.33	108,526	99,919	63,489		22,628
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.8						13.85

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.10 TRANSPORTATION EQUIPMENT - AUTO/VANS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 9-S0.5						
NET SALVAGE PERCENT.. 0						
2010	31,278.75	25,927	31,279			
2014	62,599.64	41,524	61,733	867	3.03	286
2017	142,328.28	72,903	108,383	33,945	4.39	7,732
2019	44,521.40	17,314	25,740	18,781	5.50	3,415
2021	39,910.15	9,534	14,174	25,736	6.85	3,757
2022	52,970.50	8,004	11,900	41,070	7.64	5,376
	373,608.72	175,206	253,209	120,400		20,566
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.9 5.50

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.20 TRANSPORTATION EQUIPMENT - TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L2.5						
NET SALVAGE PERCENT.. 0						
1900	3,400.00	3,157	3,400			
1999	18,727.25	15,289	18,727			
2001	114,590.76	90,363	113,198	1,393	2.96	471
2004	46,305.34	34,266	42,925	3,380	3.64	929
2005	156,043.69	112,798	141,302	14,742	3.88	3,799
2008	102,696.16	69,320	86,837	15,859	4.55	3,485
2009	358,445.64	237,087	296,999	61,447	4.74	12,964
2011	342,654.45	217,096	271,956	70,698	5.13	13,781
2012	129,828.22	79,937	100,137	29,691	5.38	5,519
2013	112,724.25	66,749	83,617	29,107	5.71	5,098
2014	50,074.32	28,113	35,217	14,857	6.14	2,420
2015	373,523.50	195,566	244,986	128,538	6.67	19,271
2016	307,112.44	146,757	183,842	123,270	7.31	16,863
2017	137,223.75	58,516	73,303	63,921	8.03	7,960
2018	165,895.57	61,264	76,745	89,151	8.83	10,096
2019	300,710.87	92,577	115,971	184,740	9.69	19,065
2020	105,953.91	25,732	32,235	73,719	10.60	6,955
2021	365,810.39	64,277	80,520	285,290	11.54	24,722
2022	315,321.20	33,560	42,041	273,280	12.51	21,845
2023	657,822.85	23,491	29,427	628,396	13.50	46,548
	4,164,864.56	1,655,915	2,073,385	2,091,480		221,791

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.4 5.33

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.30 TRANSPORTATION EQUIPMENT - TRAILERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 22-L1.5						
NET SALVAGE PERCENT.. 0						
1905	920.13	878	920			
1990	2,159.03	1,520	2,017	142	6.51	22
1999	56,169.00	33,753	44,789	11,380	8.78	1,296
2007	12,859.72	6,401	8,494	4,366	11.05	395
2012	7,327.00	2,961	3,929	3,398	13.11	259
2013	6,696.00	2,544	3,376	3,320	13.64	243
2015	55,691.80	18,024	23,918	31,774	14.88	2,135
2021	65,152.94	6,989	9,274	55,879	19.64	2,845
	206,975.62	73,070	96,717	110,259		7,195
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.3 3.48

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.40 TRANSPORTATION EQUIPMENT - OTHER

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 21-S0.5						
NET SALVAGE PERCENT.. 0						
1989	10,904.51	9,570	10,905			
1994	4,913.40	3,912	4,913			
2007	61,849.89	33,605	61,362	488	9.59	51
2011	34,331.57	15,253	27,852	6,480	11.67	555
2013	157,623.60	61,248	111,838	45,786	12.84	3,566
2015	29,255.76	9,599	17,528	11,728	14.11	831
2021	82,993.36	9,169	16,742	66,251	18.68	3,547
	381,872.09	142,356	251,140	130,732		8,550
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						15.3 2.24

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 376.00 COMMUNICATION EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1981	30.16	28	30			
1982	238.27	222	238			
1984	2,213.25	2,066	2,213			
1986	1,983.24	1,851	1,983			
1987	11,277.65	10,526	11,278			
1988	7,831.80	7,310	7,832			
1989	601.78	562	602			
1991	1,166.40	1,089	1,166			
1995	4,763.48	4,446	4,763			
1996	3,645.85	3,403	3,646			
1997	2,678.19	2,500	2,678			
1998	5,543.42	5,174	5,543			
1999	4,480.92	4,182	4,481			
2001	5,700.51	5,320	5,701			
2002	3,596.14	3,356	3,596			
2004	11,747.41	10,964	11,747			
2006	3,629.43	3,387	3,629			
2007	1,968.54	1,837	1,969			
2009	4,939.30	4,610	4,939			
2010	2,618.24	2,356	2,618			
2011	524.41	437	524			
2012	32,048.46	24,571	32,048			
2013	3,156.20	2,209	3,156			
2014	3,128.82	1,982	3,088	41	5.50	7
2015	5,273.52	2,988	4,655	619	6.50	95
2016	12,033.08	6,017	9,375	2,658	7.50	354
2017	139,852.43	60,602	94,419	45,433	8.50	5,345
2018	9,364.91	3,434	5,350	4,015	9.50	423
2019	10,716.85	3,215	5,009	5,708	10.50	544
2020	21,154.61	4,936	7,691	13,464	11.50	1,171
2021	9,489.12	1,582	2,465	7,024	12.50	562
2023	3,142.74	105	163	2,979	14.50	205
	330,539.13	187,267	248,595	81,944		8,706

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 9.4 2.63

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 378.00 TOOLS, SHOP, AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1996	505.04	480	505			
1997	12,057.75	11,455	12,058			
1998	40,489.71	38,465	40,490			
1999	4,808.45	4,568	4,808			
2000	9,885.29	9,391	9,885			
2001	3,946.03	3,749	3,946			
2002	45,397.25	43,127	45,397			
2003	8,966.30	8,518	8,966			
2004	16,145.34	15,338	16,145			
2005	88,398.18	81,768	87,226	1,172	1.50	781
2006	32,718.67	28,629	30,540	2,179	2.50	872
2007	5,054.03	4,170	4,448	606	3.50	173
2008	9,647.94	7,477	7,976	1,672	4.50	372
2009	559,744.19	405,815	432,904	126,840	5.50	23,062
2010	47,380.52	31,982	34,117	13,264	6.50	2,041
2011	11,862.96	7,414	7,909	3,954	7.50	527
2012	13,584.79	7,811	8,332	5,253	8.50	618
2013	39,437.58	20,705	22,087	17,351	9.50	1,826
2014	79,651.29	37,834	40,359	39,292	10.50	3,742
2015	51,428.45	21,857	23,316	28,112	11.50	2,445
2016	108,966.97	40,863	43,591	65,376	12.50	5,230
2017	87,355.69	28,391	30,286	57,070	13.50	4,227
2018	19,463.74	5,353	5,710	13,754	14.50	949
2019	562,493.70	126,561	135,009	427,485	15.50	27,580
2021	36,217.22	4,527	4,829	31,388	17.50	1,794
2022	36,308.60	2,723	2,905	33,404	18.50	1,806
2023	422,033.45	10,551	11,256	410,778	19.50	21,066
	2,353,949.13	1,009,522	1,075,000	1,278,949		99,111

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 12.9 4.21

GENERAL CORPORATION DIVISION

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 346.00 METERS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 20-S1						
NET SALVAGE PERCENT.. +5						
1990	14,592.14	12,622	9,514-	23,377	1.79	13,060
1991	18,239.40	15,525	11,703-	29,030	2.08	13,957
1992	23,195.18	19,413	14,633-	36,668	2.38	15,407
1993	22,737.76	18,696	14,093-	35,694	2.69	13,269
1994	69,405.75	56,045	42,246-	108,181	3.00	36,060
1995	133,094.70	105,451	79,487-	205,927	3.32	62,026
1996	71,208.20	55,336	41,711-	109,359	3.64	30,044
1997	134,996.58	102,726	77,433-	205,680	3.98	51,678
1998	162,352.82	120,843	91,090-	245,325	4.33	56,657
1999	204,653.45	148,926	112,258-	306,679	4.68	65,530
2000	277,366.99	196,965	148,469-	411,968	5.05	81,578
2001	306,446.45	212,229	159,975-	451,099	5.42	83,229
2002	37,476.48	25,260	19,041-	54,644	5.81	9,405
2003	166,923.24	109,339	82,418-	240,995	6.21	38,808
2004	248,892.62	158,065	119,147-	355,595	6.63	53,634
2005	199,645.56	122,712	92,499-	282,162	7.06	39,966
2006	100,677.93	59,730	45,024-	140,668	7.51	18,731
2007	109,394.37	62,459	47,081-	151,006	7.98	18,923
2008	48,737.38	26,692	20,120-	66,421	8.47	7,842
2009	337,427.62	176,626	133,138-	453,694	8.98	50,523
2010	634,202.03	316,007	238,201-	840,693	9.51	88,401
2011	380,754.10	179,592	135,374-	497,090	10.07	49,363
2012	238,010.76	105,593	79,594-	305,704	10.66	28,678
2013	549,977.07	227,801	171,713-	694,191	11.28	61,542
2014	729,265.41	279,546	210,718-	903,520	11.93	75,735
2015	791,315.48	277,772	209,381-	961,131	12.61	76,220
2016	504,236.33	159,515	120,240-	599,264	13.34	44,922
	6,515,225.80	3,351,486	2,526,301-	8,715,765		1,185,188
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 7.4						18.19

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
1948	1,987.31	1,923	2,075	12	4.32	3
1952	2,280.51	2,161	2,332	63	5.36	12
1955	284.49	265	286	13	6.17	2
1957	6,598.88	6,078	6,558	371	6.75	55
1958	11,134.89	10,191	10,995	697	7.06	99
1959	19,252.13	17,506	18,888	1,327	7.37	180
1964	22,328.71	19,540	21,082	2,363	9.16	258
1965	189,207.21	164,135	177,092	21,576	9.56	2,257
1966	14,884.32	12,793	13,803	1,826	9.98	183
1967	646.40	550	593	86	10.41	8
1968	263.61	222	240	37	10.86	3
1970	13,029.00	10,740	11,588	2,092	11.82	177
1971	439.35	358	386	75	12.33	6
1978	39,798.00	29,388	31,708	10,080	16.32	618
1982	2,251.47	1,550	1,672	692	18.94	37
1983	1,497.00	1,011	1,091	481	19.63	25
1984	92,514.11	61,233	66,067	31,073	20.33	1,528
1985	15,617.04	10,125	10,924	5,474	21.04	260
1986	15,593.82	9,893	10,674	5,700	21.77	262
1987	112,760.75	69,963	75,486	42,913	22.50	1,907
1988	4,815.41	2,919	3,149	1,907	23.25	82
1989	11,933.42	7,060	7,617	4,913	24.01	205
1991	34,273.66	19,269	20,790	15,197	25.55	595
1992	7,310.46	4,000	4,316	3,360	26.34	128
1993	139,567.63	74,233	80,093	66,453	27.14	2,449
1994	6,273.91	3,241	3,497	3,091	27.94	111
1995	54,302.88	27,203	29,350	27,668	28.76	962
1996	4,510.57	2,188	2,361	2,375	29.59	80
1998	7,671.17	3,477	3,751	4,304	31.26	138
1999	107,310.10	46,893	50,595	62,081	32.11	1,933
2000	64,728.07	27,223	29,372	38,592	32.97	1,171
2001	4,792.11	1,936	2,089	2,943	33.84	87
2003	6,654.50	2,465	2,660	4,327	35.60	122
2005	51,225.68	17,222	18,581	35,206	37.39	942
2006	150,076.99	47,848	51,625	105,956	38.30	2,766
2007	448,211.91	135,111	145,776	324,847	39.21	8,285
2009	12,114,794.80	3,224,019	3,478,518	9,242,017	41.06	225,086
2010	64,887.44	16,117	17,389	50,743	41.99	1,208
2012	476,592.52	101,265	109,259	391,163	43.87	8,916
2013	542,090.26	105,455	113,779	455,416	44.81	10,163
2014	128,778.71	22,692	24,483	110,735	45.77	2,419
2015	33,180.73	5,245	5,659	29,181	46.72	625

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 371.00 STRUCTURES AND IMPROVEMENTS - GENERAL

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 55-R3						
NET SALVAGE PERCENT.. -5						
2016	318,924.80	44,508	48,022	286,849	47.69	6,015
2019	444,912.52	37,457	40,414	426,744	50.59	8,435
2020	73,521.24	4,814	5,194	72,003	51.57	1,396
2021	29,001.70	1,362	1,469	28,983	52.54	552
2022	41,789.93	1,181	1,274	42,605	53.52	796
2023	42,874.98	401	433	44,586	54.51	818
	15,977,377.10	4,416,429	4,765,055	12,011,191		294,365
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						40.8 1.84

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1979	510.39	476	392	118	1.00	118
1980	2,195.26	2,049	1,686	509	1.00	509
1981	1,777.57	1,659	1,365	413	1.00	413
1982	1,491.73	1,392	1,146	346	1.00	346
1983	2,590.78	2,418	1,990	601	1.00	601
1984	12,262.01	11,445	9,419	2,843	1.00	2,843
1985	5,523.01	5,155	4,243	1,280	1.00	1,280
1986	1,775.11	1,657	1,364	411	1.00	411
1987	15,044.93	14,042	11,557	3,488	1.00	3,488
1988	4,764.90	4,447	3,660	1,105	1.00	1,105
1989	4,586.34	4,281	3,523	1,063	1.00	1,063
1990	24,585.56	22,946	18,885	5,701	1.00	5,701
1991	10,644.29	9,935	8,177	2,467	1.00	2,467
1992	99,959.11	93,295	76,783	23,176	1.00	23,176
1993	19,620.98	18,313	15,072	4,549	1.00	4,549
1994	122,893.57	114,700	94,399	28,495	1.00	28,495
1995	62,700.87	58,521	48,163	14,538	1.00	14,538
1996	68,348.85	63,792	52,501	15,848	1.00	15,848
1997	46,271.96	43,187	35,543	10,729	1.00	10,729
1998	112,979.81	105,447	86,784	26,196	1.00	26,196
1999	95,542.82	89,173	73,390	22,153	1.00	22,153
2000	74,618.21	69,643	57,317	17,301	1.00	17,301
2001	37,101.17	34,628	28,499	8,602	1.00	8,602
2002	18,507.82	17,274	14,217	4,291	1.00	4,291
2003	40,685.08	37,973	31,252	9,433	1.00	9,433
2004	47,369.50	44,211	36,386	10,984	1.00	10,984
2005	9,213.98	8,600	7,078	2,136	1.00	2,136
2006	44,611.83	41,638	34,268	10,344	1.00	10,344
2007	11,948.72	11,152	9,178	2,771	1.00	2,771
2009	1,011,530.96	944,092	776,997	234,534	1.00	234,534
2010	53,987.38	48,589	39,989	13,998	1.50	9,332
2011	208,030.19	173,358	142,676	65,354	2.50	26,142
2012	145,798.10	111,779	91,995	53,803	3.50	15,372
2013	316,779.49	221,746	182,499	134,280	4.50	29,840
2014	109,190.23	69,153	56,914	52,276	5.50	9,505
2015	216,103.60	122,459	100,785	115,319	6.50	17,741
2016	58,822.87	29,411	24,206	34,617	7.50	4,616
2017	147,707.20	64,006	52,678	95,029	8.50	11,180
2018	312,532.20	114,596	94,313	218,219	9.50	22,970
2019	157,610.63	47,283	38,914	118,697	10.50	11,304

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.00 OFFICE FURNITURE AND EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
2020	165,660.31	38,654	31,813	133,847	11.50	11,639
2022	218,969.62	21,897	18,021	200,949	13.50	14,885
2023	375,410.78	12,512	10,298	365,113	14.50	25,180
	4,498,259.72	2,952,984	2,430,335	2,067,925		676,131
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						3.1 15.03

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 372.10 DATA PROCESSING EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 5-SQUARE						
NET SALVAGE PERCENT.. 0						
1986	128.17	103	74	54	1.00	54
1988	6,639.41	5,312	3,831	2,808	1.00	2,808
1989	11,022.19	8,818	6,359	4,663	1.00	4,663
1990	1,244.62	996	718	527	1.00	527
1991	10,005.69	8,005	5,773	4,233	1.00	4,233
1993	278.29	223	161	117	1.00	117
1995	18,158.29	14,527	10,476	7,682	1.00	7,682
1996	118,621.84	94,897	68,432	50,190	1.00	50,190
1997	103,543.97	82,835	59,734	43,810	1.00	43,810
2009	22,380.19	17,904	12,911	9,469	1.00	9,469
2011	72,526.37	58,021	41,840	30,686	1.00	30,686
2012	2,682.82	2,146	1,548	1,135	1.00	1,135
2013	142,453.50	113,963	82,181	60,272	1.00	60,272
2016	59,721.01	47,777	34,453	25,268	1.00	25,268
2020	187,402.24	131,182	94,598	92,804	1.50	61,869
2021	7,056,121.48	3,528,061	2,544,147	4,511,974	2.50	1,804,790
2022	548,071.63	164,421	118,567	429,505	3.50	122,716
2023	44,673.44	4,467	3,221	41,452	4.50	9,212
	8,405,675.15	4,283,658	3,089,024	5,316,651		2,239,501
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 2.4						26.64

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.10 TRANSPORTATION EQUIPMENT - AUTO/VANS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 9-S0.5						
NET SALVAGE PERCENT.. 0						
2010	27,150.16	22,504	24,942	2,208	1.54	1,434
2013	66,603.99	47,141	52,249	14,355	2.63	5,458
2014	27,328.65	18,128	20,092	7,237	3.03	2,388
2015	140,014.82	86,343	95,699	44,316	3.45	12,845
2016	108,814.14	61,662	68,344	40,470	3.90	10,377
2017	230,091.88	117,858	130,629	99,463	4.39	22,657
2018	117,831.73	53,417	59,205	58,627	4.92	11,916
2019	123,762.73	48,130	53,345	70,418	5.50	12,803
2020	175,387.37	55,735	61,774	113,613	6.14	18,504
2021	161,081.91	38,481	42,651	118,431	6.85	17,289
2022	269,410.85	40,711	45,122	224,289	7.64	29,357
2023	117,937.88	6,290	6,972	110,966	8.52	13,024
	1,565,416.11	596,400	661,024	904,392		158,052
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						5.7 10.10

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 373.20 TRANSPORTATION EQUIPMENT - TRUCKS

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. IOWA 14-L2.5						
NET SALVAGE PERCENT.. 0						
2019	166,662.34	51,309	69,195	97,467	9.69	10,059
	166,662.34	51,309	69,195	97,467		10,059
COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT ..						9.7 6.04

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 376.00 COMMUNICATIONS EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 15-SQUARE						
NET SALVAGE PERCENT.. 0						
1989	1,262.16	1,178	1,249	13	1.00	13
1995	1,499.80	1,400	1,485	15	1.00	15
1997	555.83	519	550	6	1.00	6
1999	644.06	601	637	7	1.00	7
2009	84,165.48	78,554	83,298	867	1.00	867
2011	10,443.47	8,703	9,229	1,214	2.50	486
2012	98,126.71	75,231	79,774	18,353	3.50	5,244
2013	251,699.69	176,190	186,831	64,869	4.50	14,415
2015	3,647.87	2,067	2,192	1,456	6.50	224
	452,045.07	344,443	365,245	86,800		21,277

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 4.1 4.71

SAN GABRIEL VALLEY WATER COMPANY

ACCOUNT 378.00 TOOLS, SHOP, AND GARAGE EQUIPMENT

CALCULATED REMAINING LIFE DEPRECIATION ACCRUAL
RELATED TO ORIGINAL COST AS OF DECEMBER 31, 2023

YEAR (1)	ORIGINAL COST (2)	CALCULATED ACCRUED (3)	ALLOC. BOOK RESERVE (4)	FUTURE BOOK ACCRUALS (5)	REM. LIFE (6)	ANNUAL ACCRUAL (7)
SURVIVOR CURVE.. 20-SQUARE						
NET SALVAGE PERCENT.. 0						
1972	4,351.71	4,134	4,290	62	1.00	62
1973	1,184.46	1,125	1,167	17	1.00	17
1975	116.03	110	114	2	1.00	2
1977	1,049.60	997	1,035	15	1.00	15
1978	1,171.38	1,113	1,155	16	1.00	16
1979	161.12	153	159	2	1.00	2
1982	3,820.05	3,629	3,766	54	1.00	54
1984	2,583.65	2,454	2,547	37	1.00	37
1985	1,079.20	1,025	1,064	15	1.00	15
1990	2,470.26	2,347	2,435	35	1.00	35
1992	14,056.38	13,354	13,858	198	1.00	198
1993	254.33	242	251	3	1.00	3
1994	8,786.86	8,348	8,663	124	1.00	124
1995	844.35	802	832	12	1.00	12
1997	738.02	701	727	11	1.00	11
2000	424.64	403	418	7	1.00	7
2003	1,332.56	1,266	1,314	19	1.00	19
2004	5,224.10	4,963	5,150	74	1.00	74
2005	170.40	158	164	6	1.50	4
2009	532.12	386	401	131	5.50	24
2012	4,635.35	2,665	2,765	1,870	8.50	220
2016	1,111.23	417	433	678	12.50	54
2018	610.69	168	174	436	14.50	30
	56,708.49	50,960	52,882	3,826		1,035

COMPOSITE REMAINING LIFE AND ANNUAL ACCRUAL RATE, PERCENT .. 3.7 1.83

EXHIBIT SG-4 (Reiker)
ATTACHMENT I

EXHIBIT SG-4 (Reiker)
ATTACHMENT J

LOS ANGELES COUNTY DIVISION

	Test Year	Escalation Year	
	<u>2023-2024</u>	<u>2024-2025</u>	<u>2025-2026</u>
<u>Revenue Requirement Calculation (\$000)</u>			
Rate Base	\$247,936.9	\$264,740.3	\$281,543.7
Required Rate of Return	8.12%	8.12%	8.12%
Required Operating Income	\$20,140.3	\$21,505.2	\$22,870.2
Operating Income at Present/Prior Year Rates	\$16,648.5	\$19,194.0	\$20,474.8
Operating Income Deficiency	\$3,491.7	\$2,311.2	\$2,395.4
Plus:			
Additional Uncollectibles at Proposed Rates	\$7.8	\$5.1	\$5.3
Additional Franchise Fees at Proposed Rates	\$50.9	\$33.3	\$34.6
Additional State Income Taxes at Proposed Rates	\$447.5	\$293.3	\$304.1
Additional Federal Income Taxes at Proposed Rates	\$1,123.5	\$713.8	\$740.7
Subtotal	\$1,629.7	\$1,045.5	\$1,084.7
Required Increase in Gross Revenues	\$5,121.4	\$3,356.7	\$3,480.1
Total Operating Revenues at Present/Prior Year Rates	\$87,142.6	\$92,470.8	\$96,042.8
% Required Increase in Gross Revenues	5.9%	3.5%	3.6%
Gross Revenue Requirement	\$92,264.0	\$95,827.5	\$99,522.9

Allocation of Fixed and Variable Revenues (\$000)

Gross Revenue Requirement	\$92,264.0	\$95,827.5	\$99,522.9
Less: Miscellaneous (Fixed) Revenue	(\$10,530.0)	(\$10,530.0)	(\$10,530.0)
Metered Water Revenues	\$81,734.0	\$85,297.4	\$88,992.9
% of Metered Water Revenues Allocated to Quantity Rates	64.60%	64.60%	64.60%
Quantity Rate Revenue Target	\$52,800.2	\$55,102.2	\$57,489.4
Revenues Generated by Proposed Quantity Rates	\$52,800.1	\$55,102.1	\$57,489.4
Difference	(\$0.0)	(\$0.0)	\$0.0
% of Metered Water Revenues Allocated to Service Charges	35.40%	35.40%	35.40%
Service Charge Revenue Target	\$28,933.8	\$30,195.3	\$31,503.5
Revenues Generated by Proposed Service Charges	\$28,933.8	\$30,195.3	\$31,503.5
Difference	(\$0.0)	(\$0.0)	(\$0.0)

Source(s): Company accounting records, Ex. SG-6 (Reiker)
 Supporting Work Paper(s): EX1, GI1, RB1, RV2, SOE1, TX2

LOS ANGELES COUNTY DIVISION

Rate Design	Present	Proposed
Schedule LA-1C Tier 1 Breakover (Ccfs):	11	10
% of Schedule LA-1C Sales Occuring in Tier 1:	69.2%	68.4%
Schedule LA-1C Tier 2 Breakover (Ccfs):	n/a	20
% of Schedule LA-1C Sales Occuring in Tier 2:	n/a	21.6%
Schedule LA-1C Tier 1 Rate as % of Tier 2 Rate:	n/a	87.0%
Schedule LA-1C Tier 3 Rate as % of Tier 2 Rate:	n/a	130.0%
Schedule LA-6 Discount from Potable Single Block Rate:	15%	15%

Meter Capacity Multiplier	Quantity Rates Per Ccf				
	Present	Proposed			
	Eff. 4/18/2023 Per AL 587	Test Year 2023-2024	Escalation Year 2024-2025 2025-2026		
Monthly Service Charges					
% x 3/4-inch	1	\$27.14	\$28.04	\$29.17	\$30.33
3/4-inch	1.5	\$40.71	\$42.06	\$43.75	\$45.50
1-inch	2.5	\$67.86	\$70.12	\$72.93	\$75.85
1 1/2-inch	5	\$135.69	\$140.22	\$145.85	\$151.67
2-inch	8	\$217.16	\$224.34	\$233.36	\$242.67
3-inch	15	\$407.06	\$420.65	\$437.55	\$455.01
4-inch	25	\$678.50	\$701.08	\$729.24	\$758.35
6-inch	50	\$1,352.00	\$1,402.16	\$1,458.49	\$1,516.70
8-inch	80	\$2,174.00	\$2,243.45	\$2,333.58	\$2,426.71
10-inch	115	\$3,120.00	\$3,224.96	\$3,354.52	\$3,488.40
12-inch	165	\$4,483.00	\$4,627.11	\$4,813.00	\$5,005.09
2 2-inch	16	\$435.00	\$448.69	\$466.72	\$485.34
3 2-inch	24	\$651.00	\$673.03	\$700.07	\$728.01
4 2-inch	32	\$868.00	\$897.38	\$933.43	\$970.68
2 3-inch	30	\$814.00	\$841.29	\$875.09	\$910.02
2 4-inch	50	\$1,357.00	\$1,402.16	\$1,458.49	\$1,516.70
3 4-inch	75	\$2,039.00	\$2,103.23	\$2,187.73	\$2,275.04
1 8-inch, 1 2-inch	78	\$2,118.00	\$2,187.36	\$2,275.24	\$2,366.04
Private Fire Service (per inch diameter of svc. connection)		\$17.93	\$18.53	\$19.27	\$20.04
CARW/CAP Subsidy		(\$9.82)	(\$10.35)	(\$10.35)	(\$10.35)

Quantity Rates Per Ccf	Present	2023-2024	2024-2025	2025-2026
Rate Schedule LA-1	\$4.1746	\$4.5586	\$4.7518	\$4.9518
Rate Schedule LA-1C - Tier 1	\$4.0121	\$4.2135	\$4.3922	\$4.5770
Rate Schedule LA-1C - Tier 2	\$4.5398	\$4.8454	\$5.0508	\$5.2633
Rate Schedule LA-1C - Tier 3	n/a	\$6.2990	\$6.5660	\$6.8423
City of Montebello - Contract	\$2.7128	\$2.8492	\$2.8492	\$2.8492
Recycled Contract - Munoz Nursery	\$2.6249	\$2.8083	\$2.8708	\$2.9343
Recycled Contract - Grant Rea Park	\$4.3904	\$3.4030	\$3.5383	\$3.6783
Recycled Contract - Whittier Narrows	\$2.4288	\$2.4288	\$2.4340	\$2.4392
Recycled Contract - W.N. Golf Course	\$4.1746	\$3.6468	\$3.8015	\$3.9614
Recycled Water - Rate Schedule LA-6	\$3.5484	\$3.8748	\$4.0390	\$4.2090
Rate Schedule LA-AS CARW/CAP Surcharge	\$0.2158	\$0.3029	\$0.3029	\$0.3029

California Alternative Rates for Water (CARW) Program Surcharge	
Customers Enrolled in CARW/CAP as of 06/30/2021:	20,840
CARW/CAP Participation Rate:	53.5%
Total Test Year CARW/CAP Subsidy:	\$2,624,186
Total Metered Water Sales (Ccf):	11,428,981
Less: CARW/CAP Customer Usage at Avg. S.F. Res. Usage:	(2,764,662)
Subtotal:	8,664,319
CARW/CAP Surcharge Per Ccf:	\$0.3029

Source(s): Company accounting records, current tariff schedules as indicated, Ex. SG-6 (Reiker)
 Supporting Work Paper(s): RV1, RV2

FONTANA WATER COMPANY DIVISION

	Test Year	Escalation Year	
	<u>2023-2024</u>	<u>2024-2025</u>	<u>2025-2026</u>
<u>Revenue Requirement Calculation (\$000)</u>			
Rate Base	\$231,531.3	\$255,108.0	\$278,684.8
Required Rate of Return	8.12%	8.12%	8.12%
Required Operating Income	\$18,807.6	\$20,722.8	\$22,637.9
Operating Income at Present/Prior Year Rates	\$16,182.5	\$17,997.5	\$19,927.9
Operating Income Deficiency	\$2,625.1	\$2,725.3	\$2,710.0
Plus:			
Additional Uncollectibles at Proposed Rates	\$10.4	\$10.6	\$10.6
Additional Franchise Fees at Proposed Rates	\$25.6	\$26.1	\$25.9
Additional State Income Taxes at Proposed Rates	\$340.8	\$346.7	\$344.8
Additional Federal Income Taxes at Proposed Rates	\$888.8	\$850.5	\$845.4
Subtotal	\$1,265.6	\$1,233.9	\$1,226.7
Required Increase in Gross Revenues	\$3,890.7	\$3,959.2	\$3,936.7
Total Operating Revenues at Present/Prior Year Rates	\$85,053.1	\$89,515.6	\$94,071.6
% Required Increase in Gross Revenues	4.6%	4.3%	4.2%
Gross Revenue Requirement	<u>\$88,943.8</u>	<u>\$93,474.8</u>	<u>\$98,008.3</u>
<u>Allocation of Fixed and Variable Revenues (\$000)</u>			
Gross Revenue Requirement	\$88,943.8	\$93,474.8	\$98,008.3
Less: Miscellaneous (Fixed) Revenue	(\$544.2)	(\$544.2)	(\$544.2)
Metered Water Revenues	\$88,399.6	\$92,930.7	\$97,464.1
% of Metered Water Revenues Allocated to Quantity Rates	<u>70.00%</u>	<u>70.00%</u>	<u>70.00%</u>
Quantity Rate Revenue Target	\$61,879.7	\$65,051.5	\$68,224.9
Revenues Generated by Proposed Quantity Rates	\$61,879.7	\$65,051.4	\$68,224.9
Difference	\$0.0	(\$0.0)	(\$0.0)
% of Metered Water Revenues Allocated to Service Charges	30.00%	30.00%	30.00%
Service Charge Revenue Target	\$26,519.9	\$27,879.2	\$29,239.2
Revenues Generated by Proposed Service Charges	\$26,519.9	\$27,879.2	\$29,239.3
Difference	\$0.0	(\$0.0)	\$0.0

Source(s): Company accounting records, Ex. SG-6 (Reiker)
 Supporting Work Paper(s): EX1, GI1, RB1, RV2, SOE1, TX2

FONTANA WATER COMPANY DIVISION					
Rate Design	Present	T.Y. '23-'24			
Schedule FO-1C Tier 1 Breakover (Ccfs):	14	13			
% of Schedule FO-1C Sales Occuring in Tier 1:	70.6%	68.4%			
Schedule FO-1C Tier 2 Breakover (Ccfs):	n/a	24			
% of Schedule FO-1C Sales Occuring in Tier 2:	n/a	21.6%			
Schedule FO-1C Tier 1 Rate as % of Tier 2 Rate:	n/a	87.0%			
Schedule FO-1C Tier 3 Rate as % of Tier 2 Rate:	n/a	130.0%			
Schedule FO-6 Discount from Potable Single Block Rate:	25%	25%			
			Quantity Rates Per Ccf		
	Meter Capacity Multiplier	Present Eff. 1/1/2023 Per AL 584	Test Year 2023-2024	Proposed Escalation Year 2024-2025 2025-2026	
<u>Monthly Service Charges</u>					
% x 3/4-inch	1	\$20.61	\$20.86	\$21.75	\$22.63
3/4-inch	1.5	\$30.89	\$31.29	\$32.62	\$33.94
1-inch	2.5	\$51.49	\$52.15	\$54.38	\$56.57
1 1/2-inch	5	\$102.96	\$104.29	\$108.74	\$113.13
2-inch	8	\$164.73	\$166.87	\$173.99	\$181.01
3-inch	15	\$308.91	\$312.87	\$326.23	\$339.39
4-inch	25	\$514.78	\$521.46	\$543.72	\$565.64
6-inch	50	\$1,028.00	\$1,042.92	\$1,087.45	\$1,131.29
8-inch	80	\$1,651.00	\$1,668.66	\$1,739.91	\$1,810.06
10-inch	115	\$2,362.00	\$2,398.70	\$2,501.12	\$2,601.96
12-inch	165	\$3,402.00	\$3,441.62	\$3,588.57	\$3,733.24
2 2-inch	16	\$329.00	\$333.73	\$347.98	\$362.01
3 2-inch	24	\$494.00	\$500.60	\$521.97	\$543.02
4 2-inch	32	\$659.00	\$667.47	\$695.96	\$724.02
2 3-inch	30	\$619.00	\$625.75	\$652.47	\$678.77
2 4-inch	50	\$1,030.00	\$1,042.92	\$1,087.45	\$1,131.29
Private Fire Service (per inch diameter of svc. connection)		\$13.81	\$13.98	\$14.57	\$15.16
CARW/CAP Subsidy		(\$9.82)	(\$10.35)	(\$10.35)	(\$10.35)
<u>Quantity Rates Per Ccf</u>					
Rate Schedule FO-1		\$4.2667	\$4.5354	\$4.7423	\$4.9471
Rate Schedule FO-1C - Tier 1		\$4.1069	\$4.1922	\$4.3834	\$4.5727
Rate Schedule FO-1C - Tier 2		\$4.6500	\$4.8208	\$5.0407	\$5.2584
Rate Schedule FO-1C - Tier 3		n/a	\$6.2670	\$6.5529	\$6.8359
CEMEX USA - Contract		\$2.0913	\$2.2597	\$2.3557	\$2.4508
Recycled Contract - City & School Dist.		\$1.8388	\$1.8247	\$1.8358	\$1.8470
Recycled Contract - California Steel Ind.		\$1.5591	\$1.6684	\$1.6684	\$1.6684
Recycled Contract - Cal. Speedway Corp.		\$1.5591	\$1.6684	\$1.6684	\$1.6684
Recycled Contract -		\$0.0000	\$0.0000	\$0.0000	\$0.0000
Recycled Water - Rate Schedule FO-6		\$3.2000	\$3.4016	\$3.5568	\$3.7103
Rate Schedule FO-AS CARW/CAP Surcharge		\$0.2389	\$0.3330	\$0.3330	\$0.3330
<u>California Alternative Rates for Water (CARW) Program Surcharge</u>					
Customers Enrolled in CARW/CAP as of 06/30/2021:		24,454			
CARW/CAP Participation Rate:		58.4%			
Total Test Year CARW/CAP Subsidy:		\$3,131,394			
Total Metered Water Sales (Ccf):		13,584,927			
Less: CARW/CAP Customer Usage at Avg. S.F. Res. Usage:		(4,180,801)			
Subtotal:		9,404,126			
CARW/CAP Surcharge Per Ccf:		\$0.3330			

Source(s): Company accounting records, current tariff schedules as indicated, Ex. SG-6 (Reiker)
 Supporting Work Paper(s): RV1, RV2

EXHIBIT SG-4 (Reiker)
ATTACHMENT K

SAN GABRIEL VALLEY WATER COMPANY
 Conservation Rate Schedules LA-1C & FO-1C
 Cumulative Billed Usage

LOS ANGELES COUNTY DIVISION
 Cumulative Billed Usage %

Billed Usage (Ccf)	Historical										Forecasted				Test Year
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2026-2027
1	6.8%	8.2%	8.2%	8.0%	7.9%	8.4%	7.8%	7.8%	8.6%	9.4%	8.9%	9.1%	9.2%	9.4%	9.3%
2	13.5%	16.3%	16.3%	15.8%	15.6%	16.7%	15.4%	15.6%	17.1%	18.5%	17.7%	17.9%	18.2%	18.5%	18.4%
3	20.1%	24.2%	24.2%	23.5%	23.2%	24.7%	22.9%	23.1%	25.4%	27.3%	26.1%	26.5%	27.0%	27.4%	27.2%
4	26.6%	31.8%	31.9%	30.9%	30.6%	32.4%	30.1%	30.5%	33.3%	35.7%	34.2%	34.7%	35.2%	35.7%	35.5%
5	32.9%	39.1%	39.1%	37.9%	37.6%	39.7%	37.0%	37.4%	40.8%	43.5%	41.7%	42.3%	42.9%	43.5%	43.2%
6	38.9%	46.0%	45.9%	44.5%	44.1%	46.4%	43.5%	44.0%	47.6%	50.5%	48.7%	49.3%	50.0%	50.6%	50.3%
7	44.6%	52.3%	52.1%	50.5%	50.2%	52.6%	49.5%	50.1%	53.9%	56.9%	55.0%	55.6%	56.3%	57.0%	56.6%
8	50.0%	58.0%	57.8%	56.0%	55.8%	58.1%	55.0%	55.7%	59.6%	62.5%	60.6%	61.3%	61.9%	62.6%	62.3%
9	54.9%	63.2%	62.8%	61.0%	60.8%	63.1%	60.0%	60.7%	64.6%	67.4%	65.5%	66.2%	66.9%	67.6%	67.2%
10	59.5%	67.7%	67.3%	65.4%	65.3%	67.4%	64.4%	65.2%	69.0%	71.6%	69.8%	70.5%	71.1%	71.8%	71.5% (% of sales expected to occur in Tier 1)
11	63.6%	71.8%	71.3%	69.4%	69.3%	71.3%	68.4%	69.3%	72.9%	75.3%	73.6%	74.2%	74.9%	75.5%	75.2%
12	67.4%	75.3%	74.8%	72.9%	72.8%	74.7%	72.0%	72.8%	76.2%	78.4%	76.9%	77.5%	78.1%	78.6%	78.3%
13	70.8%	78.4%	77.9%	76.0%	75.9%	77.7%	75.2%	75.9%	79.1%	81.1%	79.7%	80.3%	80.8%	81.3%	81.1%
14	73.8%	81.1%	80.6%	78.7%	78.7%	80.3%	77.9%	78.7%	81.7%	83.5%	82.2%	82.7%	83.2%	83.6%	83.4%
15	76.5%	83.4%	82.9%	81.1%	81.0%	82.5%	80.4%	81.1%	83.8%	85.5%	84.3%	84.7%	85.2%	85.6%	85.4%
16	78.9%	85.4%	84.9%	83.2%	83.1%	84.5%	82.5%	83.2%	85.7%	87.2%	86.1%	86.5%	86.9%	87.3%	87.1%
17	81.1%	87.1%	86.7%	85.0%	84.9%	86.2%	84.4%	85.0%	87.3%	88.6%	87.6%	88.0%	88.4%	88.7%	88.6%
18	83.0%	88.6%	88.2%	86.6%	86.5%	87.7%	86.0%	86.6%	88.7%	89.9%	89.0%	89.3%	89.6%	90.0%	89.8%
19	84.7%	89.9%	89.5%	88.0%	87.9%	88.9%	87.4%	88.0%	89.9%	91.0%	90.2%	90.4%	90.7%	91.0%	90.9%
20	86.1%	90.9%	90.6%	89.2%	89.1%	90.0%	88.7%	89.1%	90.9%	91.8%	91.1%	91.3%	91.6%	91.9%	91.7% (91.72% - 71.47% = 20.3% of sales expected to occur in Tier 2)
21	87.4%	91.9%	91.6%	90.2%	90.2%	91.0%	89.8%	90.1%	91.8%	92.6%	92.0%	92.2%	92.4%	92.7%	92.5%
22	88.6%	92.7%	92.4%	91.2%	91.1%	91.8%	90.7%	91.1%	92.6%	93.4%	92.7%	92.9%	93.1%	93.4%	93.2%
23	89.6%	93.4%	93.2%	92.0%	91.9%	92.6%	91.6%	91.9%	93.3%	94.0%	93.4%	93.6%	93.8%	94.0%	93.9%
24	90.6%	94.1%	93.8%	92.7%	92.6%	93.3%	92.3%	92.6%	93.9%	94.5%	94.0%	94.2%	94.3%	94.5%	94.4%
25	91.4%	94.6%	94.4%	93.4%	93.3%	93.9%	93.0%	93.2%	94.4%	95.0%	94.5%	94.7%	94.8%	95.0%	94.9%

FONTANA WATER COMPANY DIVISION
 Cumulative Billed Usage %

Billed Usage (Ccf)	Historical										Forecasted				Test Year
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2026-2027
1	5.0%	6.3%	6.7%	6.3%	6.3%	6.8%	6.1%	6.1%	6.7%	7.4%	7.1%	7.2%	7.3%	7.5%	7.4%
2	10.0%	12.5%	13.3%	12.6%	12.6%	13.5%	12.2%	12.2%	13.3%	14.6%	14.1%	14.3%	14.6%	14.8%	14.7%
3	14.9%	18.7%	19.9%	18.8%	18.7%	20.0%	18.2%	18.2%	19.8%	21.7%	20.9%	21.3%	21.7%	22.0%	21.8%
4	19.7%	24.8%	26.3%	24.8%	24.8%	26.4%	24.1%	24.1%	26.2%	28.6%	27.6%	28.0%	28.5%	29.0%	28.8%
5	24.5%	30.7%	32.4%	30.6%	30.6%	32.5%	29.8%	29.8%	32.3%	35.1%	33.9%	34.5%	35.1%	35.6%	35.3%
6	29.2%	36.4%	38.4%	36.2%	36.3%	38.4%	35.2%	35.3%	38.2%	41.3%	40.0%	40.6%	41.2%	41.9%	41.6%
7	33.8%	41.9%	44.0%	41.5%	41.7%	43.9%	40.4%	40.5%	43.7%	47.0%	45.6%	46.3%	47.0%	47.7%	47.3%
8	38.2%	47.1%	49.3%	46.5%	46.8%	49.0%	45.3%	45.5%	48.9%	52.3%	50.8%	51.6%	52.3%	53.0%	52.7%
9	42.5%	52.0%	54.2%	51.2%	51.6%	53.7%	49.9%	50.1%	53.7%	57.1%	55.7%	56.4%	57.1%	57.9%	57.5%
10	46.6%	56.5%	58.7%	55.6%	56.0%	58.0%	54.2%	54.5%	58.1%	61.5%	60.1%	60.8%	61.5%	62.3%	61.9%
11	50.5%	60.7%	62.9%	59.6%	60.1%	62.0%	58.2%	58.5%	62.2%	65.4%	64.1%	64.8%	65.5%	66.3%	65.9% (% of sales expected to occur in Tier 1)
12	54.2%	64.6%	66.7%	63.3%	63.9%	65.7%	61.9%	62.3%	65.9%	69.0%	67.7%	68.4%	69.1%	69.8%	69.5%
13	57.7%	68.2%	70.1%	66.8%	67.4%	69.0%	65.3%	65.7%	69.3%	72.2%	71.0%	71.6%	72.3%	73.0%	72.7%
14	60.9%	71.5%	73.3%	69.9%	70.6%	72.1%	68.4%	68.9%	72.4%	75.1%	73.9%	74.6%	75.2%	75.9%	75.6%
15	64.0%	74.4%	76.1%	72.8%	73.5%	74.8%	71.3%	71.7%	75.1%	77.7%	76.6%	77.2%	77.8%	78.4%	78.1%
16	66.9%	77.1%	78.7%	75.4%	76.1%	77.3%	73.9%	74.4%	77.6%	80.0%	79.0%	79.6%	80.1%	80.7%	80.4%
17	69.6%	79.5%	81.0%	77.8%	78.5%	79.5%	76.3%	76.8%	79.9%	82.1%	81.1%	81.7%	82.2%	82.8%	82.5%
18	72.0%	81.6%	83.0%	79.9%	80.6%	81.5%	78.5%	78.9%	81.9%	83.9%	83.0%	83.5%	84.1%	84.6%	84.3%
19	74.3%	83.6%	84.8%	81.9%	82.6%	83.4%	80.5%	80.9%	83.7%	85.6%	84.8%	85.2%	85.7%	86.2%	85.9%
20	76.4%	85.2%	86.4%	83.6%	84.3%	85.0%	82.2%	82.7%	85.3%	87.0%	86.3%	86.7%	87.2%	87.6%	87.4%
21	78.3%	86.7%	87.8%	85.2%	85.8%	86.4%	83.9%	84.3%	86.7%	88.3%	87.6%	88.0%	88.5%	88.9%	88.7%
22	80.1%	88.1%	89.1%	86.6%	87.2%	87.7%	85.3%	85.7%	88.0%	89.5%	88.9%	89.2%	89.6%	90.0%	89.8%
23	81.8%	89.3%	90.3%	87.9%	88.5%	88.9%	86.7%	87.1%	89.2%	90.5%	90.0%	90.3%	90.7%	91.0%	90.8%
24	83.3%	90.4%	91.3%	89.1%	89.6%	90.0%	87.9%	88.2%	90.2%	91.4%	90.9%	91.2%	91.6%	91.9%	91.7% (91.73% - 65.88% = 25.9% of sales expected to occur in Tier 2)
25	84.7%	91.4%	92.2%	90.1%	90.6%	90.9%	89.0%	89.3%	91.1%	92.2%	91.8%	92.1%	92.4%	92.7%	92.5%