

Docket		<u>A.26-04-017</u>
Exhibit Number	:	<u>Cal Adv-01</u>
Commissioner	:	<u>Matthew Baker</u>
Administrative Law Judge	:	<u>Douglas M. Long</u>
Public Advocates Office	:	<u>Anthony Andrade</u>
Witness(es)		<u>Mehboob Aslam</u>



PUBLIC ADVOCATES OFFICE
CALIFORNIA PUBLIC UTILITIES COMMISSION

**REPORT ON SAFE ANNUAL YIELD,
TARIFF RULE 3, AND PROPOSED
SPECIAL AGREEMENT**

Los Angeles, California
September 18, 2026

TABLE OF CONTENTS

	<u>Page</u>
MEMORANDUM.....	ii
EXECUTIVE SUMMARY	iii
CHAPTER 1 SAFE ANNUAL YIELD, TARIFF RULE 3, AND PROPOSED SPECIAL AGREEMENT.....	1-1
I. INTRODUCTION.....	1-1
II. SUMMARY OF RECOMMENDATIONS.....	1-1
III. ANALYSIS	1-2
A. The Commission should adopt a Safe Annual Yield of 405.3 AFY to accurately reflect the MRAT Water System’s leakage.....	1-3
B. The Commission should maintain the existing Water Requirement Factors for residential buildings and Hotels/Bed & Breakfasts in Tariff Rule 3.	1-9
C. The Commission should reject the proposed Special Agreement until SCE and SCICo agree on the value of the Easement that SCE will acquire from SCICo.	1-13
D. The Commission should require SCE to include Operation and Maintenance Costs in its Contribution Calculation in a future Application or Advice Letter.	1-16
IV. CONCLUSION	1-18
APPENDIX A – QUALIFICATIONS OF WITNESSES	
APPENDIX B – SUPPORTING ATTACHMENTS	

1 **MEMORANDUM**

2 The Public Advocates Office at the California Public Utilities Commission (“Cal
3 Advocates”) examined application material, data request responses, and other
4 information presented by Southern California Edison Company (“SCE”) in Application
5 (“A.”) 26-04-017 to provide the California Public Utilities Commission (“Commission”
6 or “CPUC”) with recommendations in the interests of ratepayers for safe and reliable
7 service at the lowest cost. Mr. Mehboob Aslam is Cal Advocates’ project lead for this
8 proceeding. Mr. Victor Chan is the oversight supervisor, and Ms. Marybelle Ang is the
9 legal counsel.

10 Although every effort was made to comprehensively review, analyze, and provide
11 the Commission with recommendations on each ratemaking and policy aspect presented
12 in the Application, the absence from Cal Advocates’ testimony of any particular issue
13 should not be construed as either agreement or disagreement of the underlying request,
14 methodology, or policy position related to that issue.

Chapter #	Description	Witness
1	Safe Annual Yield, Tariff Rule 3, and Proposed Special Agreement	Anthony Andrade

EXECUTIVE SUMMARY

In this application, Southern California Edison (SCE) requests Commission's authorization to revise and increase its Tariff Schedule Fresh Water Yield (FWY) to reflect an increase in its Safe Annual Yield (SAY), primarily due to increase in water production of its desalination plant. SCE also requests approval of a Special Agreement with Santa Catalina Island Company (SCICo), which would increase the water allocation to SCICo. Finally, SCE requests revision of the Water Requirement Factors in its existing Tariff Rule 3.

The Commission should authorize a revised Tariff Schedule FWY based on a lower Safe Annual Yield of 405.3 Acre Fee Per Year (AFY) to correctly account for significant water loss within the system. The Commission should also reject SCE's request to revise the existing Water Requirement Factors in Tariff Rule 3, as SCE fails to provide sufficient support for the proposed revisions. Additionally, the Commission should reject the proposed Special Agreement between SCE and SCICo until both parties agree on the value of easement that SCE will acquire from SCICo and consider the ongoing Operations and Maintenance (O&M) expenses in determining the appropriate amount of water allocation to SCICo. Once the parties agree on the easement value, the Commission should require SCE to file a separate application or a Tier 3 Advice Letter.

1 **CHAPTER 1 SAFE ANNUAL YIELD, TARIFF RULE 3, AND PROPOSED**
2 **SPECIAL AGREEMENT**

3 **I. INTRODUCTION**

4 The Safe Annual Yield, the Water Requirement Factors in Tariff Rule 3, and the
5 proposed Special Agreement between SCE and the Santa Catalina Island Company
6 (SCICo) are closely related issues. A reasonable Safe Annual Yield is necessary to
7 determine whether the water systems have the available water supply to serve new
8 customers while maintaining reliable supply for existing customers. The Water
9 Requirement Factors in Tariff Rule 3 are necessary to determine the amount of water
10 supply that a potential new customer will need. The proposed Special Agreement
11 between SCE and SCICo concerns the amount of water allocated to a proposed
12 connection and the corresponding contribution from SCICo. Cal Advocates reviewed
13 SCE's testimony, conducted discovery, and performed relevant research to develop the
14 following recommendations.

15 **II. SUMMARY OF RECOMMENDATIONS**

- 16 • The Commission should adopt a Safe Annual Yield of 405.3 acre feet per year
17 (AFY) to account for the Middle Ranch, Avalon, and Toyon (MRAT) Water
18 System's leakage. Water loss in the MRAT Water System is significant and
19 should be accounted for in the Safe Annual Yield.
- 20 • The Commission should maintain the same Water Requirement Factors for
21 residential buildings and Hotels/Bed & Breakfasts as currently established in
22 the current Tariff Rule 3. SCE has not provided sufficient evidence to
23 establish that Water use in the Hotels/Bed & Breakfast category is comparable
24 to that of the Single Family/Duplex house category.
- 25 • The Commission should reject the proposed Special Agreement between SCE
26 and SCICo until both parties agree on the value of the Easement that SCE will
27 acquire from SCICo.
- 28 • The Commission should require SCE and SCICo to include Operation and
29 Maintenance Costs in the Contribution Calculation in a future proposed Special
30 Agreement. SCE may submit an application or a Tier-3 Advice Letter to the
31 Commission after SCE and SCICo agree on the Easement value.

III. ANALYSIS

SCE is a Class C water utility that serves Santa Catalina Island, and operates multiple water systems including the Middle Ranch, Avalon, and Toyon Integrated Fresh Water System (MRAT Water System) and the Isthmus and West End Integrated Fresh Water System (Isthmus and West End Water System).¹ SCE's tariff refers to the MRAT and Isthmus and West End water systems jointly as the Integrated Fresh Water System.² SCE proposes that the Commission revise SCE's water utility's Tariff Schedule Fresh Water Yield (Schedule FWY) pursuant to Tariff Rule 3 – Application for Service, revise the Water Requirement Factors in Tariff Rule 3, allocate water per an Agreement for Desalination System Enhancements Between SCE and SCICo (Special Agreement), and approve the Special Agreement.³

SCE's proposed revisions to Schedule FWY consist of two changes to the Safe Annual Yield of the MRAT Water System, including increases due to desalination facility improvements and reductions to existing groundwater well production.⁴ After these revisions, the MRAT Water System's Safe Annual Yield would increase from 547.8 acre feet per year (AFY) to 569.5 AFY.⁵ SCE's proposed Schedule FWY revisions do not change the Safe Annual Yield of the Isthmus and West End Integrated Fresh Water System.

¹ Testimony in Support of Application of Southern California Edison Company (U 338-E) for Authority To Revise and Increase the Safe Annual Yield, Revise Rule 3, and Allocate Water Per a Special Agreement for its Class C Water Utility (SCE Mackenzie and Spencer Testimony) at 1 to 2.

² SCE "Catalina Increase to SAY" Workpapers, Rate Schedule FWY at 2.

³ SCE Mackenzie and Spencer Testimony at 1, lines 3 to 14.

⁴ SCE Mackenzie and Spencer Testimony at 5, lines 1 to 24.

⁵ In response to discovery, SCE stated that two well capacity adjustments in its Safe Annual Yield calculation are errors. The result of SCE's proposed Safe Annual Yield calculation based on the correct well capacity adjustments is 569.5 AFY. See Attachment 1-2: SCE's Response to Data Request (DR) AA9-001, Item 1.f.

1 **A. The Commission should adopt a Safe Annual Yield of 405.3 AFY**
2 **to accurately reflect the MRAT Water System’s leakage.**

3 The Commission has stated that the Safe Annual Yield determines water
4 availability.⁶ Therefore, the Safe Annual Yield should be based on the annual amount of
5 fresh water available to the water system’s customers. Once adopted, the utility may
6 compare the Safe Annual Yield to the water consumed by customers and determine
7 whether excess water supply is available for allocation to new customers.

8 The MRAT Water System’s freshwater-producing sources include groundwater
9 wells and desalination facilities. SCE states that the Safe Annual Yield generally refers
10 to the annual amount of water that can be withdrawn from a groundwater basin equal to
11 the replenishment rate in addition to the permitted production capacity of the desalination
12 facilities.⁷ While it is reasonable to consider groundwater and desalination facility
13 capacity as a basis for Safe Annual Yield, water loss is another significant limitation on
14 the amount of water supply available to customers and should be reflected in the
15 calculation. Accounting for water loss is consistent with the Safe Annual Yield’s
16 description as “Total fresh water resources from the Integrated Fresh Water System
17 available for allocation” in the existing Tariff’s Schedule FWY.⁸

18 The Commission has historically considered water loss in determining Safe
19 Annual Yield. In 1978, the Commission reviewed SCE’s application to provide fresh
20 water service to new residential units. In the year preceding that application, the
21 Commission determined that SCE’s water resources were inadequate to meet the
22 potential demands of existing customers and restricted SCE from connecting new
23 customers until it increased its water supply.⁹ In that application, SCE requested that the

⁶ Decision (D.) 90-05-033 at 1.

⁷ SCE Mackenzie and Spencer Testimony at 1, lines 21 to 23 and footnote 3.

⁸ SCE “Catalina Increase to SAY” Workpapers at 2.

⁹ D.89190 at 1.

1 Commission add the production capacity of newly drilled wells and lift the restriction.¹⁰

2 The Commission added the incremental capacity of the newly drilled wells with a 10%
3 water loss.¹¹

4 The Commission has used water loss or “leakage” as a reduction to Safe Annual
5 Yield. In 1980, the Commission adopted a Safe Annual Yield that was equal to the total
6 production of its water sources less “leakage.” While the total production at the time was
7 551 AFY, the Commission reduced the production capacity by a 10% leakage amount
8 which equals to 52 AFY. This reduction resulted in an adjusted Safe Annual Yield of
9 499 AFY.¹² The Commission has revised the Safe Annual Yield over the years but has
10 maintained leakage in the calculation.¹³ This demonstrates that the Commission has
11 historically adopted a Safe Annual Yield at a level below the full production capacity to
12 account for leakage.

13 The leakage variable that SCE proposes to use in its current Safe Annual Yield
14 calculation fails to account for the actual water loss of its water systems. SCE’s current
15 adopted leakage amount is equal to 44 AFY, which is about 10% of the groundwater well
16 capacity.¹⁴ SCE proposes to apply a leakage variable to each water source and update the
17 calculation to reflect changes in groundwater well capacity, but it does not propose to
18 change the leakage factor of 10% to reflect the system’s actual water loss. This contrasts
19 sharply with SCE’s actual water loss of 33.4% in its water systems. According to SCE’s
20 water audit, which follows the guidelines of the American Water Works Association,

¹⁰ D.89190 at 1.

¹¹ D.89190 at 3.

¹² D. 90-05-033 at 5.

¹³ Attachment 1-2: SCE’s Response to DR AA9-001, Item 1.b.

¹⁴ SCE Mackenzie and Spencer Testimony at 8, Table II-2: Schedule FWY - MRAT Water System Capacities (current) Including Leakage by Water Source.

1 SCE's water systems had a water loss of 182 AFY out of 545 AFY production, or 33.4%
2 in 2025.¹⁵

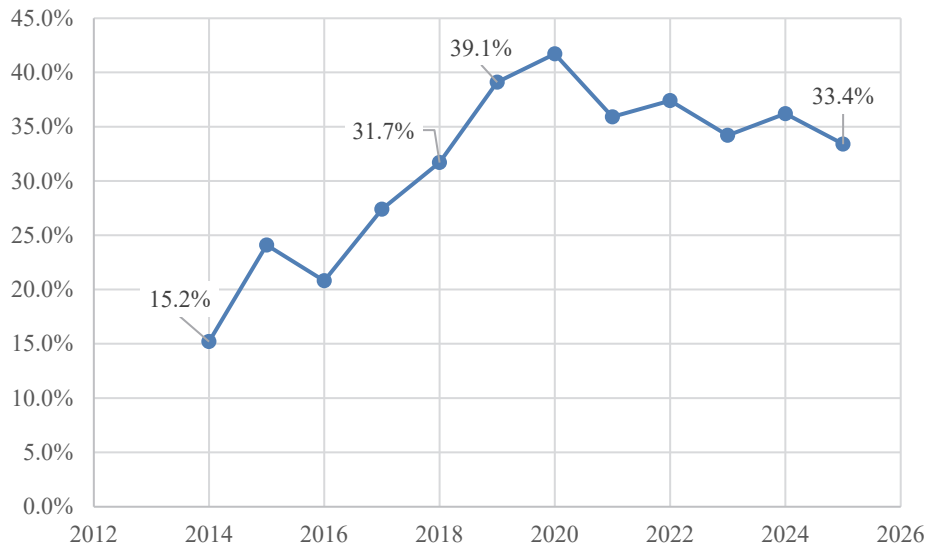
3 Water loss is an important limitation when considering water available to
4 customers on SCE's water systems on Santa Catalina Island. Therefore, it is
5 unreasonable to only apply the leakage variable to the individual water sources. If water
6 is lost through a break in the pipeline or at any point in the distribution system, that water
7 produced by a ground water well or desalination facility is not available for customer use.
8 Accordingly, system-wide water loss should be reflected in the Safe Annual Yield
9 calculation, regardless of where the loss occurs.

10 The water loss on SCE's water systems has increased since SCE started to
11 measure it in 2014.¹⁶ Water loss on the SCE water systems has more than doubled from
12 15.2% in 2014 to 33.4% in 2025. The Commission should recognize that water loss for
13 SCE's water systems has increased, which in turn has reduced the total water that can be
14 allocated to customers. The figure below shows SCE's water loss over time.

¹⁵ Attachment 1-3: 2025 AWWA Water Audit for SCE Catalina Excerpt.

¹⁶ Attachment 1-4: SCE Response to DR AA9-002, Item 1.e.

Figure 1-1: SCE Water System Water Loss from 2014 to 2025



SCE unreasonably contends that it accounts for water loss during allocation. In response to discovery, SCE stated that its calculated system demand already accounts for actual system water loss.^{17, 18} However, demand is not part of the Safe Annual Yield calculation. SCE states that it considers system water loss when determining whether sufficient water supply is available to allocate to new customers,¹⁹ but, as explained below, SCE’s methodology for accounting for water loss is unreasonable.

SCE argues that Water Requirement Factors generally account for the water demand, including water loss, of new projects.²⁰ In general, Water Requirement Factors are specified in SCE’s Tariff Rule 3 and are used by the utility to calculate the demand for planned water uses.²¹ For example, using the Water Requirement Factors, SCE

¹⁷ Attachment 1-4: SCE’s Response to DR AA9-002, Item 2.b.

¹⁸ The current Schedule FWY includes language indicating water system Demand includes a water loss factor. See SCE “Catalina Increase to SAY” Workpapers at 3.

¹⁹ Attachment 1-4: SCE’s Response to DR AA9-002, Item 2.b.

²⁰ Attachment 1-4: SCE’s Response to DR AA9-002, Item 2.b.

²¹ SCE Mackenzie and Spencer Testimony at 14, lines 4-5.

1 estimated that Mt. Ada project's annual water demand is 14.38 AFY, which SCE breaks
2 down into 9.29 AFY of metered use and 5.09 AFY attributed to water loss.²² However,
3 SCE's assumption that Water Requirement Factors account for system water loss is
4 unsupported based on a review of the study that established them. An independent study
5 established the Water Requirement Factors in 1979.²³

6 First, the study does not state that system water loss was considered when
7 developing the Water Requirement Factors.²⁴ Rather, the study based its findings on
8 customers' billing histories for different types of water uses, such as residential buildings
9 or hotels.²⁵ Because billing histories are based on metered customer water use, they do
10 not establish the amount of system water lost before reaching customers.

11 Second, even if SCE could demonstrate that the study considered system water
12 loss, it is unreasonable to assume that the level of water loss reflected in the 1979 study
13 remains representative of SCE's water systems in 2026. As shown above by Figure 1-1,
14 SCE's water loss increased from 15.2% in 2014 to 33.4% in 2025. Therefore, the
15 Commission should reject SCE's position that Water Requirement Factors account for
16 SCE's current system water loss.

17 Moreover, SCE's approach to include water loss in Demand does not address
18 whether the Safe Annual Yield itself accurately represents the amount of water available
19 for allocation.

20 To accurately calculate the Safe Annual Yield, the Commission should first update
21 the desalination facility capacity to 317.5 AFY, the Middle Ranch Wells' capacity to 372
22 AFY, the Toyon Canyon Well's capacity to 16 AFY, and remove the capacities of the

²² Attachment 1-4: SCE's Response to DR AA9-002, Item 2.e.

²³ SCE Mackenzie and Spencer Testimony at 4, lines 24-25.

²⁴ SCE "Catalina Increase to SAY" Workpapers at 109-136.

²⁵ SCE "Catalina Increase to SAY" Workpapers at 136.

Bullrush and Eagle’s Nest wells, pursuant to the updates to production capacity described in SCE’s testimony.²⁶

The Commission should also reduce the yields of Middle Ranch Wells to 278 AFY and the Toyon Canyon Well to 13 AFY, pursuant to SCE’s adjustments to support drought resiliency, which reduce Middle Ranch Wells’ yield by 94 AFY and the Toyon Canyon Well yield by 3 AFY.²⁷

Next, the Commission should apply a 33.4% system water loss factor to the total annual yield, instead of 10% leakage rate at the production source as proposed by SCE. This 33.4% factor is the water loss reported by SCE in 2025.²⁸ The 33.4% system water loss results in a leakage of 203.2 AFY as shown below.

Figure 1-2: Cal Advocates’ Leakage Calculation

$$\begin{aligned} \text{Leakage} &= \text{Water Loss Factor} \\ &\quad \times \text{Total Yield after Drought Resiliency Adjustments} \\ &= 33.4\% \times (278 + 317.5 + 13) \text{ AFY} = 203.2 \text{ AFY}. \end{aligned}$$

Whereas SCE’s proposed 10% leakage is equal to 39 AFY as shown in Table 1-1.²⁹ Therefore, SCE greatly understates the water loss or leakage in the system and distorts the availability of water supply of the MRAT Water System with an overstated Safe Annual Yield of 569.5 AFY.

²⁶ SCE Mackenzie and Spencer Testimony at 5.

²⁷ SCE first reduces its wells’ yields by 10% for leakage, then reduces yields due to drought resiliency. Cal Advocates applies leakage after the drought resiliency adjustment. SCE’s drought resiliency adjustment reduces the Middle Ranch Wells’ yield of 335 AFY by 94 AFY, resulting in 241 AFY, and the Toyon Canyon Well’s yield of 14 AFY by 3 AFY, resulting in 11 AFY in its Mackenzie and Spencer Testimony at 5. To account for drought resiliency, Cal Advocates reduces the Middle Wells’ yield of 372 AFY by 94 AFY, resulting in 278 AFY, and the Toyon Canyon Well’s yield of 16 AFY by 3 AFY, resulting in 13 AFY.

²⁸ Attachment 1-3: 2025 AWWA Water Audit for SCE Catalina Excerpt.

²⁹ SCE’s Leakage = SCE’s Middle Ranch Wells Leakage + SCE’s Toyon Canyon Well Leakage = (372 – 335)AFY + (16 – 14)AFY = 39 AFY.

The Commission should reduce the total annual yield by the leakage of 203.2 AFY, resulting in a Safe Annual Yield of 405.3 AFY as shown below.

Figure 1-3: Cal Advocates' Safe Annual Yield Calculation

$$\text{Safe Annual Yield} = \text{Total Yield after Drought Resiliency Adjustments} - \text{Leakage} \\ = (278 + 317.5 + 13) \text{ AFY} - 203.2 \text{ AFY} = 405.3 \text{ AFY}.$$

Table 1-1 summarizes the difference between Cal Advocates' and SCE's proposed Safe Annual Yield calculations.

Table 1-1: Difference Between Cal Advocates and SCE's Safe Annual Yield

(A) Water Source	(B) Production Capacity (AFY)	SCE		Cal Advocates	
		(C) After 10% Leakage (Applied to each Water Source)	(D) After Drought Resiliency	(E) After Drought Resiliency	(F) 33.4% Leakage (Separate at the System Level)
Middle Ranch Wells	372	335	241	278	278
Pebbly Beach Desalination Facility	317.5	317.5	317.5	317.5	317.5
Toyon Canyon Well	16	14	11	13	13
Leakage	--	--	--	--	(203.2)
Safe Annual Yield	--	--	569.5	--	405.3

B. The Commission should maintain the existing Water Requirement Factors for residential buildings and Hotels/Bed & Breakfasts in Tariff Rule 3.

Water Requirement Factors are necessary to determine whether there is sufficient water supply to serve new customer connections. While Safe Annual Yield is used to determine the total amount of water supply that may be allocated to all customers, and

1 existing system demand can account for the water system's current consumption, it is still
2 necessary to calculate the water demand associated with a proposed customer connection.
3 The utility calculates the proposed customer's demand using the Water Requirement
4 Factors.³⁰ If there is a surplus after reducing Safe Annual Yield by existing demand, then
5 the utility can determine whether the surplus can accommodate required demand of the
6 proposed customer connection.³¹ Consequently, Water Requirement Factors impact
7 whether new developments can obtain water service and whether those developments can
8 proceed. However, the Water Requirement Factors should not be used as a substitute for
9 accurately accounting for actual system water loss in the Safe Annual Yield calculation.
10 Safe Annual Yield and Water Requirement Factors serve different purposes: Safe Annual
11 Yield determines the amount of water available for allocation, while Water Requirement
12 Factors determine the amount of water expected to be required by a proposed new
13 connection.^{32, 33}

14 The existing Tariff Rule 3 section on the Application for Service specifies Water
15 Requirement Factors for multiple categories of developments. SCE proposes reducing
16 the Water Requirement Factors for developments in several categories of residential
17 buildings and the Hotel/Bed & Breakfast category. SCE's proposal would reduce the
18 water surplus necessary by 47% before a hotel can be built.³⁴ The following table
19 compares the individual Water Requirement Factors that SCE proposes to change with
20 the existing factors in gallons per capita per day (GPCD):
21

³⁰ SCE Mackenzie and Spencer Testimony at 14, lines 4 to 7.

³¹ SCE "Catalina Increase to SAY" Workpapers at 3, Schedule No. FWY, Special Condition 2.

³² SCE Mackenzie and Spencer Testimony at 14, lines 4 to 7.

³³ SCE "Catalina Increase to SAY" Workpapers at 2.

³⁴ For a hotel using saltwater for sanitation, SCE's proposal would reduce the water use factor from 75 to 40 gallons per capita per day.

**Table 1-2: Difference Between Existing and SCE's
Proposed Water Requirement Factors**

(A) Category	SCE's Proposed Use Factor ³⁵ (GPCD)		Existing Use Factor (GPCD)	
	(B) Saltwater	(C) Freshwater	(D) Saltwater	(E) Freshwater
Apartment/Dorm/Mobile Housing	40	50	45	60
Single Family/Duplex	40	50	40	50
Condominium	40	50	90	105
Hotel/Bed & Breakfast	40	50	75	90

SCE's proposal significantly reduces Water Requirement Factors. In response to discovery, SCE stated that changes to Water Requirement Factors only affect new customer connections and customers who add or modify their water use, such as converting a facility.³⁶ SCE's proposal drastically impacts the allocation to SCICo's proposed Mt. Ada Project. SCICo's Mt. Ada Project includes a proposed hotel with 74 rooms. According to SCE, reducing the Water Requirement Factor would decrease the calculated water supply requirement for the Mt. Ada Project from 14.38 to 8.58 AFY.³⁷ The difference of 5.8 AFY is significant and represents more than 10% of the MRAT Water System's Safe Annual Yield. Thus, although SCE characterizes changes to the Water Requirement Factors as affecting only new or modified customer connections, the proposed changes could materially affect the amount of water supply available for allocation to new development.

SCE's application lacks sufficient evidence to justify such a significant change to Water Requirement Factors. SCE cites several factors in support of its proposal, such as

³⁵ SCE Mackenzie and Spencer Testimony at 17, Table III-6: Rule 3 Water Requirement Factors (proposed).

³⁶ Attachment 1-2: SCE Response to DR AA9-001, Item 2.c.

³⁷ SCE Mackenzie and Spencer Testimony at 4, lines 8 to 10.

1 historical changes in water consumption since the 1979 establishment of Water
2 Requirement Factors, the conservation practices of hotels, its estimate that 23% of current
3 residential water customers operate as short-term vacation rentals, and the fact that the
4 City of Avalon does not distinguish between the residential buildings and Hotels/Bed &
5 Breakfasts in its permitting process.³⁸

6 However, these factors do not serve as a substitute for applicable water use data.
7 SCE states that the Water Requirement Factors were established by an independent water
8 study. Yet, in response to discovery, SCE states that it has not collected data on the water
9 consumption by customer water use category, such as the Hotels/Bed & Breakfast
10 category.³⁹ Therefore, there are no available data to support the Hotels/Bed & Breakfasts
11 are using water per capita at the same level as single family or duplex housing unit or a
12 47% reduction in the applicable Water Requirement Factor.

13 Although Hotels/Bed & Breakfasts do have the potential to conserve water, the
14 record does not establish the extent to which Hotels/Bed & Breakfasts on Santa Catalina
15 Island have reduced their water consumption. The United States Environmental
16 Protection Agency estimated that commercial buildings that implement water-efficient
17 practices could decrease water use by 15%.⁴⁰ However, this is still far less than the 47%
18 reduction proposed by SCE. Furthermore, it does not provide a basis to conclude that
19 such a reduction is warranted for Hotels/Bed & Breakfast on Santa Catalina Island. SCE
20 also refers to its estimate that 23% of residential water customers operate as vacation
21 rentals,⁴¹ but fails to support how such conversion changes the water consumption. In
22 fact, the Drought Contingency Plan, prepared by SCE's consultants states that visitors
23 generally consume more water per capita than residents.⁴² This evidence does not justify

³⁸ SCE Mackenzie and Spencer Testimony at 14 to 17.

³⁹ Attachment 1-2: SCE's Response to DR AA9-001, Item 2.a.

⁴⁰ Attachment 1-5: US EPA Article "Saving Water in Hotels."

⁴¹ SCE Mackenzie and Spencer Testimony at 16, lines 22 to 23.

⁴² Attachment 1-6: Catalina Island Water System Drought Contingency Plan Excerpt at 1-26.

1 treating Hotels/Bed & Breakfasts as having the same water requirements as residential
2 customers and instead supports the need to maintain greater Water Requirement Factors
3 for Hotels/Bed & Breakfasts compared to houses.

4 Due to limited fresh water resources on Santa Catalina Island, Water Requirement
5 Factors should be set to safely account for customers' potential water usage. In response
6 to discovery, SCE states that customers' actual usage may be different than the allocated
7 amount based on Water Requirement Factor calculations.⁴³ Beyond finding unauthorized
8 material changes in fresh water use, SCE did not state that it would prohibit a customer
9 from exceeding its allocated amount.⁴⁴ For these reasons, the Commission should reject
10 SCE's proposed changes and maintain the Water Requirement Factors at their current
11 levels.

12 **C. The Commission should reject the proposed Special Agreement**
13 **until SCE and SCICo agree on the value of the Easement that**
14 **SCE will acquire from SCICo.**

15 SCE proposes that the Commission approve the Special Agreement between SCE
16 and SCICo to allocate part of the Safe Annual Yield to SCICo for its proposed Mt. Ada
17 Project. The Special Agreement would grant SCE an easement on SCICo's property to
18 build and operate the Desalination Enhancements Project. In addition, SCE would
19 receive a financial contribution of \$500,000 toward the Project. The Desalination
20 Enhancement Project is expected to increase the water production capacity, which in turn
21 would increase Safe Annual Yield by 88.46 AFY.⁴⁵ In exchange for its contribution,
22 SCICo would receive an allocation of the Safe Annual Yield. The value of the Easement
23 and SCICo's corresponding contribution will affect SCE's water customers' rates.

24 The growth of new developments on Santa Catalina Island is constrained by the
25 water allocations that can be made with the water systems' Safe Annual Yield. SCE

⁴³ Attachment 1-4: SCE's Response to DR AA9-002, Item 4.c.

⁴⁴ Attachment 1-4: SCE's Response to DR AA9-002, Item 4.b.

⁴⁵ SCE Mackenzie and Spencer Testimony at 20, lines 2 to 3.

maintains a waitlist of applications for new connections.⁴⁶ Based on the conditions of SCE's tariff, customers who contribute to increasing the Safe Annual Yield may receive an allocation ahead of their place on the waitlist.⁴⁷ Because SCE's waitlist has approximately 30 customers,⁴⁸ the Commission should review whether the allocation proposed by the Special Agreement is just and reasonable.

SCE presents the following calculations as assessment for the allocation:

Figure 1-4: SCE's Allocation Formula

$$\text{Allocation} = \left(\frac{\text{SCICo's Phase 1 Financial Contribution}}{\text{Overall Phase 1 Project Costs}} \right) \times (\text{Desal SAY Increase})$$

Figure 1-5: Allocation Calculation (Case 1)

$$\text{Allocation} = \left(\frac{\$500,000 + \$1,226,000}{\$12,710,000 + \$1,226,000} \right) \times (88.46 \text{ AFY}) = 10.96 \text{ AFY}$$

In Case 1, where the Water Requirement Factors are not revised, SCE limits the allocation to 10.96 AFY. Note that the above formula gives the impression that the water allocation of 10.96 AFY is based on the ratio of SCICo's phase 1 Financial Contribution and the Overall Phase 1 Project cost, given the Desal Enhancements Project's increase to Safe Annual Yield 88.46 AFY. However, as SCE proposes to revise the Tariff Rule 3 Water Requirement Factors, it determines the water requirement of 8.58 AFY for SCICo's new Mt. Ada Project,⁴⁹ and presents the following version of the same formula with the predetermined value for water allocation of 8.58 AFY:

⁴⁶ SCE "Catalina Increase to SAY" Workpapers at 8, Rule No. 3. D.2.b.

⁴⁷ SCE "Catalina Increase to SAY" Workpapers at 8, Rule No. 3. D.8.

⁴⁸ SCE Mackenzie and Spencer Testimony, Appendix B Special Agreement, Exhibit B Catalina Water Waitlist at 1.

⁴⁹ SCE Mackenzie and Spencer Testimony, Exhibit C at 67.

Figure 1-6: Allocation Calculation (Case 2)⁵⁰

$$\text{Allocation} = \left(\frac{\$500,000 + \$811,000}{\$12,710,000 + \$811,000} \right) \times (88.46 \text{ AFY}) = 8.58 \text{ AFY}.$$

Note that now, under Case 2, the predetermined SCICo water allocation value of 8.58 AFY appears to be achieved by manipulating the ratio of SCICo's phase 1 Financial Contribution and the Overall Phase 1 Project cost, while the Desal Enhancements Project's Safe Annual Yield increase of 88.46 AFY, remains the same. This manipulation of easement value and the total project cost to achieve a predetermined value of water allocation, i.e. 8.58 AFY, cast doubt on the accuracy of these costs.

As shown by SCE's calculation, the cost of the Easement is an expected cost of the Desalination Enhancements Project. Capital project costs must be justified by the utility before they can be added to Rate Base to calculate customer rates. Although SCE and SCICo are proposing to offset the Easement's value in Rate Base with a property contribution, the Easement value should be determined before the Commission can adopt the terms of the Special Agreement. This is because SCE will charge customer rates for the remaining costs of the Desal Enhancements Project. Since other customers will also be paying for the Desal Enhancements Project which makes the Safe Annual Yield increase possible, the Commission should require that the Easement value be based on the appraised value to determine the correct allocation.

In its testimony, SCE states that SCE and SCICo were unable to agree on the value of the Easement.⁵¹ SCE and SCICo performed separate appraisals of the Easement. The Special Agreement's proposed solution is to determine the value of the Easement in the future and then, if the Commission does not approve the requested allocation to SCICo in this proceeding, SCE will make a payment to compensate SCICo for the Easement. SCE

⁵⁰ SCE Mackenzie and Spencer Testimony at 20.

⁵¹ SCE Mackenzie and Spencer Testimony at 21, lines 14 to 15.

believes the Determined Value of the Easement will be between \$115,000 to \$2,403,000.⁵²

The Commission should reject the Special Agreement until SCE and SCICo agree to the Easement value. If the Easement value is only \$115,000, then SCICo's contribution would only be 4.8% of the overall capital project costs as shown below:

Figure 1-7: SCICo's Contribution if Easement Value is \$115,000

$$\frac{\text{Cash Contribution} + \text{Easement Value}}{\text{Overall Phase 1 Project Costs}} = \frac{\$500,000 + \$115,000}{\$12,710,000 + \$115,000} = 4.8\%.$$

In exchange, SCICo would receive an allocation of 10.96 AFY or 12.4% of the incremental increase in Safe Annual Yield, 88.46 AFY as shown below:

Figure 1-8: SCICo's Allocation

$$\frac{\text{Proposed Allocation to SCICo}}{\text{Desal Enhancements Project's Increase to SAY}} = \frac{10.96 \text{ AFY}}{88.46 \text{ AFY}} = 12.4\%.$$

To prevent SCICo from receiving an allocation disproportionate to its financial contribution the Commission should require that Easement value be established beforehand.

D. The Commission should require SCE to include Operation and Maintenance Costs in its Contribution Calculation in a future Application or Advice Letter.

The Special Agreement fails to account for the accurate overall costs of the Desalination Enhancements Project. As shown in Figure 1-4 through 1-6 above, the Special Agreement calculates an allocation and financial contribution based on an "Overall Phase 1 Project Cost" based on a capital project cost of \$12,710,000 plus the Easement value. However, in order to support the Desal Enhancement Project's increase

⁵² SCE Mackenzie and Spencer Testimony at 22, lines 2 to 4.

1 to Safe Annual Yield, SCE would charge customers to recover Operation and
2 Maintenance (O&M) costs.

3 The Desal Enhancements Project's O&M costs are estimated to be \$680,471 per
4 year.⁵³ Over a minimum service life of 15 years,⁵⁴ these costs would be at least
5 \$10,207,605.⁵⁵ When O&M costs are considered, the overall project cost of the
6 Desalination Enhancements Project increases, and the Easement value becomes a smaller
7 proportion of 2.7% of the total costs.⁵⁶ This would make SCICo's allocation per the
8 Special Agreement of 12.4% of the Safe Annual Yield increase even more
9 disproportionate. The Commission should, when reviewing the Special Agreement,
10 account for the O&M costs to ensure that the financial contribution received by SCE in
11 exchange for an allocation of Safe Annual Yield is just and reasonable.

12 After an Easement value has been established, SCE should submit an application
13 or a Tier 3 Advice Letter to the Commission for approval of the proposed Special
14 Agreement. A Tier 3 Advice Letter would allow the Commission and Cal Advocates to
15 review whether SCE and SCICo appropriately based the Easement value on an appraisal
16 and whether the allocation received by SCICO is just and reasonable. The reasonable
17 allocation determination would include the final Easement value as well as any
18 Contribution made in cash and include the Desalination Enhancements Project's O&M
19 Costs as shown below:

⁵³ Attachment 1-2: SCE's Response to Data Request AA9-001, Item 6.

⁵⁴ Attachment 1-2: SCE's Response to Data Request AA9-001, Item 5.

⁵⁵ Annual O&M Costs × Service Life = \$680,471 × 15 years = \$10,207,605.

⁵⁶
$$\frac{\text{Cash Contribution + Easement Value}}{\text{Overall Phase 1 Project Costs}} = \frac{\$500,000 + \$115,000}{\$12,710,000 + \$115,000 + \$10,207,605} = 2.7\%.$$

Figure 1-9: Cal Advocates' Allocation Formula

$$\text{Allocation} = \left(\frac{\text{Cash Contribution} + \text{Easement Value}}{\text{Phase 1 Project Costs} + \text{O\&M Costs}} \right) \times (\text{Desal SAY Increase}).$$

IV. CONCLUSION

The Commission should adopt a Safe Annual Yield of 405.3 AFY to accurately reflect the MRAT Water System's leakage. Water loss on the MRAT Water System is significant and should be accounted for in the Safe Annual Yield.

The Commission should maintain the existing Water Requirement Factors for Residential Buildings in the current Tariff Rule 3. Water use in the Hotels/Bed & Breakfast category can be much greater than that of the House category and water allocations to new customers should accordingly be greater.

The Commission should reject the proposed Special Agreement between SCE and SCICo until a value of the Easement has been established. Finally, the Commission should require SCE and SCICo to include Operation and Maintenance Costs in the Contribution Calculation in a future Application or Tier 3 Advice Letter.

APPENDIX A

Qualifications of Witnesses

QUALIFICATIONS AND PREPARED TESTIMONY
OF
ANTHONY ANDRADE

Q.1 Please state your name, business address, and position with the California Public Utilities Commission (“Commission”).

A1. My name is Anthony Andrade, and my business address is 320 West 4th Street, Suite 500, Los Angeles, California 90013. I am a Utilities Engineer in the Water Branch of the Public Advocates Office.

Q2. Please summarize your education background and professional experience.

A2. I received a Bachelor of Science Degree in Mechanical Engineering from the University of California--Riverside in 2018.

I have been with the Public Advocates Office – Water Branch since 2018. As a witness for Cal Advocates, I have previously provided testimony regarding Utility Plant-in-Service, Depreciation, and Rate Base in San Gabriel Valley Water Company (SGVWC)’s 2022 GRC (A.22-01-001) and Liberty Utilities (Apple Valley Ranchos Water Company) and (Park Water Company)’s consolidated 2021 GRC (A.21-07-003 et al). I have also provided testimony regarding Water Quality in SGVWC’s 2019 GRC, and the topic of Storage Capacity in SGVWC’s proposed acquisition of the City of Montebello Water System (A.20-10-004).

Q3. What is your responsibility in this proceeding?

A3. I am responsible for the preparation of Chapter 1 (Safe Annual Yield, Tariff Rule 3, and Proposed Special Agreement) of this testimony.

Q4. Does this conclude your prepared direct testimony?

A4. Yes, it does.

QUALIFICATIONS AND PREPARED TESTIMONY
OF
MEHBOOB ASLAM

Q.1 Please state your name and business address.

A.1 My name is Mehboob Aslam. My business address is 320 West 4th Street, Suite 500, Los Angeles, CA 90013.

Q. 2 By whom are you employed and in what capacity?

A. 2 I am employed by the California Public Utilities Commission as a Public Utilities Regulatory Analyst (PURA)-V.

Q. 3 Please briefly describe your educational background and work experience.

A. 3 I graduated from the University of Engineering & Technology, Lahore, Pakistan, with a Bachelor of Science Degree in Mechanical Engineering, and also graduated from Western Kentucky University with a Master of Science Degree in Business Administration with an emphasis in Accounting and Finance. I have been employed by the CPUC since 2001. From 2001 through 2002, I was a member of the Consumer Protection and Safety Division, where I was responsible for energy utilities' operating practices to enforce the rules and regulations relating to the safe use of the plant and workforce. I performed engineering reviews and conducted incident investigations for both gas and electric utilities. I have also helped resolve customers' complaints. From 2002 through the present, I have been working for the Public Advocates Office in its Water Branch, mostly dealing with Class-A water utilities. I have performed evaluations of public utility plants and properties, regulation of utility tariffs and rates, studies of the cost of service, and studies of the utility's operating practices to enforce the rules and regulations relating to ratemaking. I have presented my findings and recommendations as an expert

1 witness at public hearings before the Commission. I have also been actively
2 involved with a few of Commission's OIR/OII proceedings.

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

4 A. 4 I am a project lead responsible for processing SCE's instant application for
5 authorization of revision of Tariff Schedule Fresh Water Yield (FWY) and the
6 Water Requirement Factors in its existing Tariff Rule 3, and approval of a Special
7 Agreement with Santa Catalina Island Company (SCICo). I am also responsible for
8 preparing Executive Summary.

9 Q. 5 Does this conclude your prepared testimony?

10 A. 5 Yes, it does.

11

APPENDIX B

SUPPORTING ATTACHMENTS

LIST OF ATTACHMENTS FOR CHAPTER 1

Attachment #	Description
1-1	SCE's Response to DR AA9-001
1-2	2025 AWWA Water Audit for SCE Catalina Excerpt
1-3	SCE's Response to DR AA9-002
1-4	US EPA Article "Saving Water in Hotels."
1-5	Catalina Island Water System Drought Contingency Plan Excerpt

Attachment 1-1: SCE's Response to Data Request AA9-001

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET P u b A d v - S C E - 0 0 1 - A A 9

To: Public Advocates Office
Prepared by: Luke A Schaner
Job Title: Senior Project Manager
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 01:

Please refer to Testimony in Support of Application of SCE (Testimony), page 7. In Table II-1, SCE shows the Middle Ranch and Toyon Water System's sources, capacities, and leakage. Table II-2 contains a column titled, "Leakage at 10% of groundwater supply." On page 7, lines 11-12, SCE states, "Applying water leakage as a separate line-item or adjusting the groundwater supply line-items by a consistent leakage factor achieves the same practical result."

On pages 12-13, SCE discusses its proposed revisions to the Fresh Water Yield Tariff (Schedule FWY). On page 12, lines 2-3, SCE states that it is consolidating the leakage amount, and at lines 6-7, SCE proposes to incorporate the 2011-2025 average groundwater yield capacity. In Table II-4, at page 13, SCE shows its proposed water source capacities for Schedule FWY. The Table II-4 total is 569.5 acre-feet per year (AFY). In contrast, SCE's proposed Safe Annual Yield is 558.8 AFY following the list of revisions of its Testimony, at page 5.

Please answer the following:

- a. Does the current Schedule FWY estimate leakage as 10% of the water system's groundwater sources' capacity?
- b. How did the current Schedule FWY determine the 10% leakage amount?
- c. Please explain, in detail, the advantages of SCE's proposed change to consolidate the water system leakage into one total?
- d. Does the Table II-4 total, 569.5 AFY, represent the sum of water source capacities, without accounting for leakage?
- e. Does SCE propose to account for leakage in the Middle Ranch and Toyon Canyon wells as 10% of the capacities on the current Schedule FWY? If yes, please explain why leakage should not be based on the proposed capacities in Table II-4.
- f. Please explain how SCE calculated its proposed yield adjustments at page 5, lines 11 and 16, of its Testimony for:
 - i. Middle Ranch Wells, from 335 AFY to 233.4 AFY; and
 - ii. Toyon Canyon Well, from 14 AFY to 7.9 AFY.

Response to Question 01:

- a. For the system's groundwater sources' capacity, the current Schedule FWY considers a leakage factor of 9.91% for the Middle Ranch-Avalon-Toyon Integrated Subsystem, or 44 AFY. It considers a leakage factor of 8.2% for the Isthmus-West End Integrated Subsystem, or 8 AFY.
- b. Support for the 10% leakage factor is based on:

- Decision 89190 (attached), page 3: There is a net existing [ground]water supply of 382 AF/yr. [Ground]water supply augmentation from four new wells is estimated to be 101 AF/year, with a 10 percent loss, resulting in a net augmented [ground]water supply of 473 AF/yr.
 - Decision 9005033, page 5 (attached): identifies leakage of (52) AF/yr being applied to groundwater supply of 551 AF/yr (or 9.4%).
 - Advice Letter 64-W (attached), page 3: identifies leakage of (52) AFY being applied to 1990 groundwater supply of 567 AFY (9.2%) and (52) AFY being applied to 2008 groundwater supply of 541 AFY (9.6%).
 - Advice Letter 123-W-B (attached), page 4: identifies leakage of (52) AFY being applied to 2021 groundwater supply of 541 (9.6%); split between Middle Ranch-Avalon-Toyon Subsystem (44 AFY, 9.91%) and Isthmus-West End Subsystem (8 AFY, 8.2%)
- c. As stated in testimony (SCE-01, Section II.B, p. 7), applying leakage as a separate line-item or adjusting the groundwater supply line-items by a consistent leakage factor, i.e., consolidating the leakage line-item into individual groundwater supply line items, achieves the same practical result. The primary advantage of consolidating the leakage into individual groundwater supply line-items is a simpler tabulation. For example, if a groundwater source is removed, only one line-item changes. Otherwise, if a groundwater source is removed, it would be removed from the tabulation and an adjustment would need to be made to the Leakage line item. Moreover, If SCE were to add a groundwater source in the future, it would rely on current industry standards and best available information to establish the capacity; current standards do not identify a 10% leakage factor, rather a capacity would be established via a detailed pump test protocol.
- d. The Table II-4 total, 569.5 AFY, considers a 10% leakage factor being applied to individual groundwater supply line-items (Middle Ranch Wells, and Toyon), refer to Table II-3 for additional context. Table II-4 makes further reductions to the groundwater supply capacities to strengthen drought resiliency. The desalination supply line-item does not consider a leakage factor; its capacity is based on the assumptions in Table IV-7. Moreover, in Schedule FWY, SCE considers the water loss in the system when determining if water is available to allocate to new customers.
- e. Yes, refer to 1.d. above for more context. Since a 10% leakage factor is already applied to the groundwater supply line items, it would be redundant to include it in Table II-4 as an additional line item.
- f. There are typos on Page 5, lines 11 and 16; it should read as follows to align with Table II-4:
- Middle Ranch Wells, from 335 AFY to ~~233.4~~ 241 AFY; and
 - Toyon Canyon Well, from 14 AFY to ~~7.9~~ 11 AFY.

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET P u b A d v - S C E - 0 0 1 - A A 9

To: Public Advocates Office
Prepared by: Luke A Schaner
Job Title: Senior Project Manager
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 02:

Please refer to Testimony in Support of Application of SCE, pages 15-17. On page 17, SCE explains that it proposes to revise the Tariff Rule 3's Water Requirement Factors by applying the use factors for Single Family Residences and Duplexes to other Residential Buildings, which include Apartments/Dormitories/Mobile Housing, Condominiums, and Hotels/Bed & Breakfasts. On page 16, lines 22-23, SCE estimates that approximately 23% of current residential water customers operate as short-term vacation rentals. On page 17, lines 1-3, SCE states that hotels have reduced their water usage and incorporate substantive water conservation and outreach efforts.

- a. Indicate whether SCE records the water consumption for the following categories:
 - i. Single Family Residences/Duplexes;
 - ii. Apartments /Dormitories /Mobile Housing;
 - iii. Condominiums; and
 - iv. Hotels/Bed & Breakfasts.
- b. If SCE answers "yes" to any item in Question 2(a), provide in Excel format, the monthly water consumption and number of customers for each category from 2011 to 2025.
- c. Do SCE's proposed Water Requirement Factors apply to all existing developments, or only developments built after the revisions are authorized by the Commission?

Response to Question 02:

- a. No, SCE does not record the water consumption for the categories listed in Question 02.a.i.-iv.
- iv. SCE records water consumption based on the Tariff Rate Schedules, summarized below:

Rate Schedule	Service Type
W-1-GS	Non-Residential
W-3	
W-4	
W-1-R	Residential
W-1-R-CARE	
W-1-RDS	
W-1-RM	
W-10	

- b. N/A
- c. SCE's proposed Water Requirement Factors apply when customers make any new service connections or material change in the size, character or extent of the equipment or

operations for which the Utility's service is utilized.¹ This can be a change to existing facilities or a brand-new development. SCE will formally implement the proposed Water Requirement Factors after the revisions are authorized by the Commission; this will be applied to any project not yet completed.

¹ SCE Water Tariff Rule No. 3, Sections C and D.2.b.

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET P u b A d v - S C E - 0 0 1 - A A 9

To: Public Advocates Office
Prepared by: Richard Fujikawa
Job Title: Land Acquisitions Advisor
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 03:

Please refer to Testimony in Support of Application of SCE, page 4. SCE describes a proposed Special Agreement between SCE and Santa Catalina Island Company (SCICo). On page 4, lines 11-15, SCE states that under the Special Agreement:

In exchange, SCICo is contributing up to \$500,000 towards the capital cost of the Desal Enhancements project and granting SCE certain temporary and permanent easement and access rights (valued at \$1,266,000 under the current Rule 3 Water Requirement Factors, or \$811,000 if the Commission approves SCE's proposed changes to the Rule 3 Water Requirement Factors).

On page 20, lines 3-5, SCE states that the current forecasted SCICo contribution is \$1,726,000, which SCE states is the sum of a \$500,000 cash contribution and \$1,266,000 property rights contribution. On page 21, lines 17-20, SCE states that in Exhibit I of the Easement Agreement, SCE and SCICo estimate the financial contribution to be between \$811,000 and \$1,226,000.

Please answer the following:

a. What is the correct upper limit estimate for SCICo's property rights contribution towards SCE's Desal Enhancements project: \$1,226,000 or \$1,266,000?

Response to Question 03:

- a. The correct value is \$1,226,000. The other value (\$1,266,000) is a typo and should be replaced with \$1,226,000.

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET P u b A d v - S C E - 0 0 1 - A A 9

To: Public Advocates Office
Prepared by: Richard Fujikawa
Job Title: Land Acquisitions Advisor
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 04:

Please refer to Testimony in Support of Application of SCE, page 21, lines 14-18. SCE states the following regarding the easement rights that SCICo would grant SCE under the Special Agreement: SCE and SCICo were unable to reach agreement on the valuation of the Easement, as the parties' respective appraisers disagreed on valuation approaches, assumptions and conclusions. In order to determine the water allocation amount, it was important to agree to a financial value for the Easement. In Exhibit I of the Easement Agreement, SCE and the SCICo estimate the financial contribution of the Easement to the Desal Enhancements project to be between \$811,000 to \$1,226,000, with the lower estimate assuming adoption of the proposed Rule 3 Water Requirement Factors revisions and the higher value assuming no Rule 3 revisions.

Please answer the following:

- a. Please explain how SCE calculated the financial contribution of the Easement to the Desal Enhancements project, which SCE estimates to be between \$811,000 and \$1,226,000. Provide any supporting calculations in Microsoft Excel format.
- b. Provide the separate valuations of the Easement by SCE and SCICo that SCE refers to in its Testimony, page 21.
- c. Please explain why the financial contribution of the Easement, \$811,000 to \$1,226,000, depends on the Rule 3 Water Requirements Factors.
- d. Explain whether the financial contribution of the Easement would be changed if the Commission authorizes a Safe Annual Yield other than that requested by SCE.
- e. In Excel format, please provide SCE's calculations showing how SCE's proposed Rule 3 Water Requirements Factors would reduce the financial contribution of the Easement to the Desal Enhancements project from \$1,226,000 to \$811,000.

Response to Question 04:

- a. As stated in testimony (SCE-01, Section IV.B.3, p 22), based on the parties' appraisals, the Determined Value will likely be within a range of approximately \$115,000 to \$2,403,000 if mediation and arbitration are required. This range does not include the costs to mediate and arbitrate. The parties' appraisals are attached to this response, entitled:
 - 2024-10-24 – SCE Well Appraisal
 - 2024-10-24 – SCE Pipeline Appraisal
 - 2025-01-29 – SCICo Well and Pipeline Appraisal

A separate workbook file entitled "2026-07-28 – Sample Calcs.xlsx" is also attached to this response, illustrating how the variables and calculations impact the Allocation Calculation

based on the existing and proposed Rule 3 Water Requirement Factors.

- b. The separate valuations of the Easement are included and described in Response 4.a above.
- c. The range of financial contribution of the Easement depends on the Rule 3 Water Requirements, including if the proposed changes are approved. This is done so that the value:
 - Is within the range of the parties' appraisals,
 - Is agreed upon by the parties,
 - Results in an allocation that the parties agree on,
 - Results in more water being available for other customers if the proposed changes to the Rule 3 Water Requirement Factors are approved

Refer to Testimony, Sheet 158 of 168 [Special Agreement, Exhibit I – Allocation Calculation] for more information on the impacts of the financial contribution value in SCICo's Allocation. Refer to Testimony, Sheet 67 of 168 [Special Agreement, Exhibit C – SCICo's Mount Ada Expansion] for more information on the water requirement for SCICo's development project, including with the proposed changes to the Rule 3 Water Requirement Factors.

- d. If the Commission authorizes a Safe Annual Yield other than that requested by SCE, the "Desal SAY Increase" variable changes to match the value authorized by the Commission. This would not result in the financial contribution of the Easement variable changing.
- e. The workbook included and described in Response 4.a above illustrates how the variables and calculations impact the Allocation Calculation based on the existing and proposed Rule 3 Water Requirement Factors. Refer to Testimony, Sheet 67 of 168 [Special Agreement, Exhibit C – SCICo's Mount Ada Expansion] for more information on the water requirement for SCICo's development project, including with the proposed changes to the Rule 3 Water Requirement Factors.

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET Pub Adv - SCE - 001 - AA9

To: Public Advocates Office
Prepared by: Luke A Schaner
Job Title: Senior Project Manager
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 05:

What is the expected service life of the Desalination Enhancements project? Provide supporting documentation.

Response to Question 05:

As stated in testimony (SCE-01, Section IV.B.5.b, p. 23), SCE expects the average useful life of the Desal Enhancements project to be between 15 and 30 years. The Desalination Enhancements Project includes different types of assets that have unique average service lives. For example, the enhancements at the Desalination Facility are estimated to have an average service life of 30 years. Likewise, the saltwater well is expected to have an average service life of approximately 15 years. For book depreciation purposes, SCE used an average service life of 30 years for the enhancements at the Desalination Facility. The saltwater well and related facilities are not yet in service.

Support for the 15 to 30 years is based on the American Water Works Association (AWWA) Effective Useful Life (EUL) Estimating Tool and management judgement. Per the estimating tool, the average estimated useful life for assets that make up the Desalination Enhancements project varies between 11 and 30 years, as illustrated in the table below. A copy of the AWWA EUL tool used for this calculation is available at <https://www.awwa.org/resource/asset-management/>.

AWWA EUL Tool Worksheet	Equipment Type	Survey Service Life (Years)		
		High	Low	Average
Group A Buildings	Communication Equipment	20	5	15
Group B Electrical	Conduit/Wiring Low Voltage	20	20	20
	Control Panel/Switchgear	30	10	20
	Control Panel/Switchgear	30	10	20
	Motor	20-25	10	16
Group C Grounds	Handrails/Gratings	30	10	21
Group D Instrumentation	Flowmeters	25	10	14
	Input/Output Panels	20	20	20
	PLC	20	10	12
	SCADA Hardware	25	7	13
	SCADA Software	20	10	11
	Crane	40	10	27
Group E Mech.	Plastic Pipework	50	25	28
Group F Pipework	Regulators/PRVs	15	10	11
	Unspecified/Submersible	20-30	10	15-21

Group G Pumps	Tank - Fiberglass	20	15	16
Group H Tanks & Storage	Tank - Unspecified	30	20	28
	Metal Valves (Other)	50	20	24
Group I Valves & Gates	Plastic Valves	20	15	16
	Unspecified Valves	25	10	23
Group J Wells	Supply	33	25	30

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET Pub Adv - SCE - 001 - A A 9

To: Public Advocates Office
Prepared by: Luke A Schaner
Job Title: Senior Project Manager
Received Date: 7/14/2026

Response Date: 7/28/2026

Question 06:

What is expected annual total of ongoing Operation and Maintenance (O&M) costs for the Desalination Enhancements? Provide a detailed explanation and include supporting documentation.

Response to Question 06:

Upon completing the Desalination Enhancements (Phase 1) project, the annual total O&M cost forecast for the Pebbly Beach Desalination Facility is \$7,692.42/acre foot per year (AFY). Multiplying the O&M cost forecast by the total production forecast of 317.5 AFY is \$2,442,343. Multiplying the O&M cost forecast by the incremental production forecast (Desal SAY Increase) of 88.46 AFY is \$680,471.

The O&M cost forecast is the 2016-2025 average desal cost on a \$ per acre foot per year basis after excluding data from 2020-2021 because of the COVID-19 global pandemic and excluding data from 2025 because of the significant desal outage during partial construction of the Desalination Enhancements (Phase 1) project. This is summarized in the table below and provided in the attachment entitled "2026-07-28 – Desal O&M Forecast.xlsx"

Year	Desal Production (AF)	Desal Costs	\$/AF	
2016	179.7	\$1,146,382	\$6,379	
2017	197.2	\$1,406,325	\$7,130	
2018	160.2	\$1,050,611	\$6,557	
2019	133.1	\$1,346,058	\$10,113	
2020	199.5	\$2,845,296	\$14,261	*exclude
2021	203.8	\$1,532,779	\$7,521	*exclude
2022	229.0	\$1,583,858	\$6,915	
2023	135.3	\$1,090,572	\$8,058	
2024	133.9	\$1,365,400	\$10,196	
2025	17.9	\$900,524	\$50,365	*exclude
2016-2025	1,590	\$14,267,807	\$8,975	
2016-2025*	1,169	\$8,989,208	\$7,692	

Note: The Desal Costs are based on charges that hit SCE's cost center "DESALWAT Desal Water" over the given period.

**Attachment 1-2: 2025 AWWA Water Audit for SCE
Catalina Excerpt**

AWWA Free Water Audit Software

Water Balance

VOLUME in Acre-ft/Yr

Water Audit Report for: SCE Catalina Water

Audit Year: 2025

Data Validity Tier: Tier III (51-70)

Jan 01 2025 - Dec 31 2025

FWAS v6.1
American Water Works Association.
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Volume from Own Sources (VOS) (corrected for known errors)	System Input Volume 545.114	Water Exported (WE) (corrected for known errors) 0.000	Billed Water Exported				Revenue Water (Exported) 0.000
		Authorized Consumption 373.848	Billed Authorized Consumption 383.050	Billed Metered Consumption (BMAC) (water exported is removed) 383.050		Revenue Water	
Unbilled Authorized Consumption 10.798	Unbilled Metered Consumption (UMAC) 0.200		Unbilled Unmetered Consumption (UUAC) 10.598	Non-Revenue Water (NRW) 182.064			
		Water Supplied 545.114			Apparent Losses 40.214	Customer Metering Inaccuracies (CMI) 30.848	Unauthorized Consumption (UC) 8.380
Water Imported (WI) (corrected for known errors) 0.000	Water Losses 171.268	Real Losses 131.054	Target Leakage Reduction 0.000	Leakage Level After Reduction 131.054			

Attachment 1-3: SCE's Response to Data Request AA9-002

Southern California Edison
A.26-04-017 – Catalina SAY

DATA REQUEST SET Pub Adv - SCE - 002 - AA9

To: Public Advocates Office
Prepared by: Luke A Schaner
Job Title: Senior Project Manager
Received Date: 8/11/2026

Response Date: 8/25/2026

Question 01.a-e:

Please refer to SCE's Response to Data Request AA9-001 (Safe Annual Yield and Special Agreement), Items 1(b)-(c). In response to Item 1(b), SCE cites Commission decisions and advice letters that refer to a 10% leakage factor. SCE refers to Decision (D.) 89190, D.90-05-033, Advice Letter 64-W, and Advice Letter 123-W-B. In Item 1(c), SCE states:

If SCE were to add a groundwater source in the future, it would rely on current industry standards and best available information to establish the capacity; current standards do not identify a 10% leakage factor, rather a capacity would be established via a detailed pump test protocol.

- a. Please indicate whether the 10% leakage factor used in D.89190 was based on studies or tests performed on any Middle Ranch, Avalon, and Toyon (MRAT) Water System groundwater sources.
- b. Please indicate whether SCE has performed a detailed pump test protocol on the existing groundwater sources, including the freshwater wells and desalination plant wells, of its Middle Ranch, Avalon, and Toyon (MRAT) Water System.
- c. If SCE has performed a detailed pump test protocol, please provide the most recent source capacity results and the date(s) they were recorded. If SCE has not performed the detailed pump test protocol, please explain why.
- d. If SCE has performed any other test or study to determine the capacity of its groundwater sources of its MRAT Water System, please provide the most recent capacity results and the date(s) they were recorded.
- e. Please provide SCE's recorded annual system water loss for every year from 1978 to 2025 for the MRAT Water System.

Response to Question 01.a-e:

- a. SCE is not presently aware of the studies or tests performed on any Middle Ranch, Avalon, and Toyon (MRAT) Water System groundwater sources as the basis for the 10% leakage factor used in D.89190. This factor is at least over 46 years old (*See, e.g., D.90-05-033, p. 5* that describes how the Commission approved a safe annual yield of 499 AF/yr inclusive of an approximate 10% leakage factor) and SCE has not found any documentation as to its derivation. Notwithstanding this, the main purpose of identifying the 10% leakage factor in this proceeding is to demonstrate how the proposed groundwater system capacities proposed in Testimony (Table II-4) are associated with the prior authorized groundwater capacities.

The current water availability calculation is based on the variables defined in Schedule No. FWY, special condition 2, namely: *source capacity, demand, water loss, and committed allocation*. To illustrate how water loss is considered in calculating the water availability defined in Schedule No. FWY, see the table below.

Average Day	Maximum Day
(+) Source Capacity	(+) Source Capacity
(-) Demand	(-) Demand
(-) Water Loss	(-) Water Loss
(-) Committed Allocations	(-) Committed Allocations
Availability Balance	Availability Balance

- b. For the Middle Ranch wells, SCE conducted an 8-hour pump test on June 6, 2019; this is the basis for its Maximum Day source capacity. SCE is not presently aware of a recent detailed pump test protocol completed for Toyon Well or the two (2) existing desalination plant wells.
- c. The most recent capacity results associated with the 2019 Middle Ranch wells pump test are summarized below. These results were recorded on June 6, 2019.

Production Facility	Pump Rate	
	GPM	MGD
Middle Ranch 1A	271	0.3902
Middle Ranch 5A	265	0.3816
Middle Ranch 6A	Offline	Offline
Total	536	0.7718

SCE has not performed a pump test protocol for Toyon Well since we have not sought to increase its yield beyond its current authorized limit. From operational experience, permits, and report(s), Toyon Well exhibits a yield of approximately 8-15 GPM. SCE uses the 8 GPM capacity for its Average Day and Maximum Day source capacity.

SCE has not performed a pump test protocol for the two (2) desalination plant wells since

we have not sought to increase its yield beyond its current authorized limit. Although, please note that SCE completed a 48-hour pilot test of desalination plant 2 with the two (2) desalination plant wells in 2016; the results of which are summarized below (for the wells). SCE continues to operate the two (2) desalination plant wells and desalination plant to meet water demands. From operational experience, permits, and report(s), the existing two (2) desalination plant wells exhibit a source capacity of roughly 300 GPM each when operating independently and roughly 200 GPM each (400 GPM total) when operating in parallel. The desalination plant capacity considers well capacity of 400 GPM. SCE plans to perform a detailed pump test protocol upon installing the third desalination plant well as part of the Desal Enhancements Phase 1 project.

Production Facility	Pump Rate	
	GPM	MGD
Desalination Plant Well 1	200	0.2880
Desalination Plant Well 2	200	0.2880
Total	400	0.5760

Furthermore, infrastructure constraints challenge SCE's ability to complete a detailed pump test protocol for Toyon Well and the two (2) existing desalination plant wells. For Toyon, its infrastructure has a narrow well pipeline diameter, uneven pipeline route, and lack of a water level transducer. For the two (2) existing desalination plant wells, its infrastructure lacks a water level transducer.

- d. For the groundwater sources in the MRAT Water System, there are no additional tests used to determine the capacity proposed in SCE's testimony [Table II-4]. SCE proposes to make considerable progress towards increasing drought resiliency by reducing the groundwater yields in Schedule FWY to the 2011-2025 average.
- e. SCE initiated the water loss audit beginning in 2014. The results of this are summarized below. Please note that since first implementing the water loss audit, increased experience has improved the data validity score accuracy and a more representative water loss factor in recent periods.

Year	Non-Revenue Water Rate	Year	Non-Revenue Water Rate
2014	15.2%	2020	41.7%
2015	24.1%	2021	35.9%
2016	20.8%	2022	37.4%
2017	27.4%	2023	34.2%
2018	31.7%	2024	36.2%
2019	39.1%	2025	33.4%

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Received Date: 8/11/2026

Response Date: 8/25/2026

Question 02.a-g:

Please refer to SCE's Response to Data Request AA9-001 (Safe Annual Yield and Special Agreement), Item 1(d). In this response, SCE states:

The Table II-4 total, 569.5 AFY, considers a 10% leakage factor being applied to individual groundwater supply line-items (Middle Ranch Wells, and Toyon), refer to Table II-3 for additional context. Table II-4 makes further reductions to the groundwater supply capacities to strengthen drought resiliency. The desalination supply line-item does not consider a leakage factor; its capacity is based on the assumptions in Table IV-7. Moreover, in Schedule FWY, SCE considers the water loss in the system when determining if water is available to allocate to new customers.

a. Please identify all Commission decisions, rulings, or proceedings in which the Commission adopted reductions to groundwater supply capacities specifically for drought resiliency when determining the Safe Annual Yield for SCE's water systems on Catalina Island.

b. Cal Advocates staff met with SCE staff on July 24, 2026. During the meeting, it was discussed that SCE accounts for system water loss in the water demand of the MRAT Water System. Please confirm whether it is SCE's position that system water loss is accounted for in water demand when determining new customer water allocations.

c. If the answer is "yes" to Item 2(b) above, how does SCE incorporate system water loss in the water demand calculation? In Microsoft Excel format, please provide the MRAT Water System's water demand calculation that accounts for water loss.

d. If the answer is "no" to Item 2(b) above, please describe how SCE considers water loss in the MRAT Water System when determining if water is available to allocate to new customers in Schedule Fresh Water Yield (FWY).

e. If SCE considers water demand when determining new customer water allocations, provide the calculation that shows how SCE estimated the water demand of SCICo's proposed Mt. Ada Project, including average day demand, maximum day demand, and 4-hour peak hourly demand.

f. In Microsoft Excel format, please provide the calculations and/or methodologies, including how SCE considers system water loss that SCE uses to determine water availability to allocate to new customers. If SCE also considers water system demand (in addition to system water loss), please include the MRAT Water System's demand and water loss for the following:

i. Based on existing demand before Santa Catalina Island Company (SCICo)'s proposed Mt. Ada Project; and

ii. Based on projected demand after SCICo's proposed Mt. Ada Project.

g. Is the Safe Annual Yield used for other purposes besides determining if water is available to allocate to new customers? If yes, please describe those other purposes.

Response to Question 02.a-g:

- a. SCE objects to this question as overbroad and unduly burdensome. Subject to and without waiving its objection, SCE responds as follows: SCE has reviewed documents since 1990 to respond to this question. Based on this assessment, SCE is not aware of Commission decisions, rulings, or proceedings in which the Commission adopted reductions to groundwater supply capacities specifically for drought resiliency when determining the safe annual yield for SCE's water systems on Catalina Island. Catalina's safe annual yield (Schedule No. FWY) identifies the production facilities that supply the water system and its limit. Commission decisions, rulings or proceedings, in which the Commission adopted Schedule No. FWY and subsequent updates include:
 - (1990) Decision 9005033 authorized safe annual yield totaling 515 AFY (and 600 AFY with the desalination plant)
 - (1990) Advice Letter 43-W established Schedule FWY totaling 515 AFY
 - (2008) Advice Letter 64-W revised the production facilities contributing to the safe annual yield totaling 600 AFY (111 AFY associated with the desalination plant)
 - (2021) Advice Letter 123-W-B increased Safe Annual Yield from 600 AFY to 636.8 AFY and revised Tariff Schedule No. FWY to match the 636.8 AFY total (Schedule FWY totaled 515 AFY previously). Of the 636.8 AFY, 147.8 AFY associated with the desalination plant.
- b. Yes, SCE accounts for water loss in water demand when determining new customer water allocations. Please refer to SCE's response to Question 01.a. and Question 02.c (below) for additional information. When new projects receive a water allocation, that allocation is calculated based on the water requirement factors in Rule 3. SCE's position is that the Rule 3 water requirement factors generally account for water demand of new projects (including water loss). The Rule 3 water requirement factors are generally established to estimate and plan for new developments' water use (including water loss). Customers' actual usage may be different than what Rule 3 calculates; however, it is SCE's intent that the Rule 3 calculations conservatively estimate water usage so that the development would not typically exceed the amount of water allocated pursuant to the Rule 3 water requirement factors.
- c. Please refer to SCE's response to Question 01.a. for how SCE accounts for water loss in determining water availability. Schedule FWY defines the water availability calculation variables below:
 - **Source Capacity:** Total amount of water supply available, expressed as a flow, from all sources permitted for use.
 - **Demand:** Historical average day, maximum day, and 4-hour peak hourly water demand. Demand includes at least 10 years of metered sales, water loss factor, and committed allocations.
 - **Water Loss:** The percent of non-revenue water by volume of water supplied, calculated using the American Water Works Association's

(AWWA) water audit software methodology.

- o **Committed Allocations:** Allocations assigned by SCE that are not fully reflected in the metered sales history.

To demonstrate how the water requirement factors account for water loss, please see the table below for an example of a 2-bedroom single family residence.

Project	Water Requirement (AFY)		
2-Bedroom Single Family Residence with saltwater sanitation	Total	0.18	Metered Usage
			0.12
			Non-Revenue Water [Water Loss]
			0.06

- d. Not applicable.
- e. The water allocation for the Mt. Ada expansion was determined using the water requirement factors in Rule 3. Please see Exhibit C of the Special Agreement located in Appendix B of SCE's testimony that shows the calculation of the water allocation for the Mt. Ada expansion. It is also summarized below with the associated MDD, PHD, and Water Loss considerations.

Mt Ada Project Considerations (Current Rule 3 Water Requirement Factors)

		Annual (AFY)		Maximum Day (MGD)		Peak Hourly (GPH)	
Mt Ada Project		14.38		0.02072		2249	
Total	Metered Use	14.38	9.29	0.02072	0.01338	2249	1452
	Non-Revenue Water [Water Loss]		5.09		0.00734		797

Mt Ada Project Considerations (Proposed Rule 3 Water Requirement Factors)

		Annual (AFY)		Maximum Day (MGD)		Peak Hourly (GPH)	
Mt Ada Project		8.58		0.01236		1342	
Total	Metered Use	8.58	5.54	0.01236	0.00798	1342	867
	Non-Revenue Water [Water Loss]		3.04		0.00438		475

- f. Please refer to SCE's responses to Questions 02.b and 02.c., above.
 - i. Prior to SCICo's proposed Mt Ada Project receiving an allocation, it will not be

- included in the water availability variables.
- ii. After SCICo's proposed Mt Ada Project receives an allocation, it will be included in the "**Committed Allocations**" variable until its actual usage is reflected in the metered sales history; after its actual usage is reflected in the metered sales history, it will become part of the "**Demand**" variable and will be removed from the "**Committed Allocations**" variable.
- g. SCE uses Schedule No. FWY and Safe Annual Yield (SAY) interchangeably. No, in the utility tariffs, it is not used for purposes other than determining if water is available to allocate to new projects.

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Received Date: 8/11/2026

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Question 03.a-c:

Please refer to SCE's Response to Data Request AA9-001 (Safe Annual Yield and Special Agreement), Item 1(f). In this response, SCE states that there are typos in the Testimony in Support of Application of SCE (Testimony) at page 5, lines 11 and 16, and that the Middle Ranch Wells' proposed capacity should be 241 acre-feet per year (AFY) and Toyon Canyon Well's proposed capacity should be 11 AFY.

- a. Is it SCE's position after correcting its Testimony typos, that the Safe Annual Yield that the Commission should adopt in this proceeding is 569.5 AFY? If no, please explain what is the correct Safe Annual Yield that SCE proposes.
- b. Please explain if correcting SCE's Middle Ranch Wells and Toyon Canyon Wells' proposed capacities affects the allocation to Santa Catalina Island Company described in its Testimony at pages 19 to 20.
- c. Please explain if the correction to Middle Ranch Wells and Toyon Canyon Wells' proposed capacities affects any other request in SCE's Application besides the Safe Annual Yield.

Response to Question 03.a-c:

- a. Yes. SCE proposes that the limit of the safe annual yield, set forth in Schedule FWY, for the Middle Ranch, Avalon, and Toyon Water System, increase from 547.8 to 569.5 AFY as summarized in Table II-4 of SCE's testimony.
- b. The corrected yields have no impact on the water allocation to the SCICo.
- c. No, the corrections do not affect any other request in SCE's Application. The corrections align with the Proposed Schedule FWY tabulated in Table II-4 of SCE's testimony.

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Question 04.a-d:

Please refer to Testimony in Support of Application of SCE, pages 15-17. On page 17, SCE explains that it proposes to revise the Tariff Rule 3's Water Requirement Factors by applying the use factors for Single Family Residences and Duplexes to other Residential Buildings, which include Apartments/Dormitories/Mobile Housing, Condominiums, and Hotels/Bed & Breakfasts. In its Response

to Data Request AA9-001 (Safe Annual Yield and Special Agreement), Item 2(a), SCE states that it does not record the water consumption for Single Family Residences/Duplexes and other categories separately.

SCE states that it records water consumption based on Tariff Rate Schedules which include Non-Residential and Residential service types.

- a. Does SCE record and analyze the water consumption of a new development after it begins receiving water service?
- b. Please explain whether a development is prohibited or constrained in any way from consuming more water than was allocated to it by SCE.
- c. Does SCE take any action if a development's annual water consumption exceeds the amount allocated to it?
- d. Does SCE apply Tariff Rate Schedules from the Residential or Non-Residential service type for developments in the Hotels/Bed & Breakfasts category? Would the Tariff Rate Schedule change for the Hotels/Bed & Breakfasts if SCE's Tariff Rule 3 Water Requirement Factors were adopted?

Response to Question 04.a-d:

- a. SCE records the water consumption of a new development after it begins receiving water service as part of the meter reading and billing operations. SCE does not typically analyze water consumption of a new development after it begins receiving water service.
- b. Per SCE's Rule 3 tariff, a customer making any material change in the size, character or extent of the equipment or operations for which the water service SCE provides is utilized shall immediately give SCE written notice of the extent and nature of the change. This tariff also states that the customer shall notify SCE, in writing, whenever a new service connection is planned, or if a change in the customer's existing facilities or fresh water use

is planned. A change that results in a greater fresh water requirement shall not be allowed, except as provided through the fresh water allocation process.

- c. If a development exceeds the amount allocated, SCE may contact the customer to determine if there has been an unauthorized material change in their fresh water use. If a development exceeds the amount allocated, SCE may contact the customer to determine if there has been an unauthorized material change in their fresh water use. If there has, the customer will be required to obtain approval for the greater fresh water requirement through the fresh water allocation process. The Rule 3 water requirement factors are generally established to estimate and plan for new developments' water use. Customers' actual usage may be different than the Rule 3 calculations; however, it is SCE's intent that the Rule 3 calculations conservatively estimate water usage so that the development would not typically exceed the Rule 3 water requirement factors.
- d. Customers identified as Hotels/Bed & Breakfasts are assigned the General Service Rate Schedule, which is a non-residential service. No, the tariff rate schedule will not change for Hotels/Bed & Breakfasts customers based on SCE's proposed revisions to the Rule 3 water requirement factors.

**Attachment 1-4: United States Environmental Protection
Agency Article “Saving Water in Hotels”**



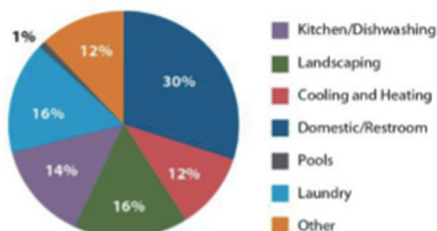
Saving Water in Hotels



Water used in hotels and other lodging facilities accounts for approximately 15 percent of the total water use in commercial and institutional buildings in the United States¹. With so many hospitality facilities, there are great opportunities to conserve water.

The largest uses of water in hotels and lodging facilities are restrooms, laundry operations, landscaping, commercial kitchens, and heating and cooling.

End Uses of Water in Hotels



Created by analyzing data from: New Mexico Office of the State Engineer, American Water Works Association (AWWA), AWWA Research Foundation, and East Bay Municipal Utility District.

THE BUSINESS CASE FOR WATER EFFICIENCY

Over the past 10 years, the costs of water and wastewater services have risen at a rate well above inflation. Business owners can expect these and other utility costs to continue to increase in order to offset the costs of replacing aging water supply systems.

Water use affects a hotel's operating costs and environmental footprint. Industry estimates suggest that implementing water-efficient practices in commercial



buildings can decrease operating costs by approximately 11 percent and energy and water use by 10 and 15 percent, respectively.²

High-performing water-using equipment and WaterSense labeled fixtures often use at least 20 percent less water than standard models. Hotel owners can also benefit by using water-efficient practices to improve operations and upgrading equipment. For example, instituting linen and towel reuse programs in guest rooms can help reduce the loads of laundry washed by 17 percent.³

Most importantly, environmental sustainability is a leading factor in purchasing decisions and customer demand. A TripAdvisor survey found that 79 percent of travelers look for eco-friendly accommodations. Adopting water-efficient practices also helps hotel owners meet local or customer requirements and earn recognition from programs that identify green hotels.

Putting Water Efficiency to Work

After upgrading its restroom fixtures with high-efficiency toilets, showerheads, and faucet aerators, a San Antonio, Texas, hotel is saving 7 million gallons of water and \$35,000 in water and sewer bills each year, with the added benefit of fewer maintenance calls from its 397 guest rooms. Visit www.epa.gov/watersense/commercial/casestudies.html for additional examples.

PHONE (866) WTR-SENS (987-7367) WEBSITE www.epa.gov/watersense EMAIL watersense@epa.gov



EPA-832-F-12-032
March 2016

TOOLS FOR WATER-SAVING SUCCESS

WaterSense offers a number of resources to help hotels save water, energy, and money. These tools include:

- **Water Use and Savings Evaluation (WaterUSE) Tool and Water Assessment Worksheets:** Hotel operators and facility managers can use these tools to identify and prioritize cost-effective water efficiency projects and best practices specific to their hotel.
- **Case Studies:** WaterSense has hotel case studies on water management, sanitary fixtures, mechanical systems, commercial kitchens, outdoor water use, and education and outreach.

- **Technical and Outreach Webinars:** As part of the H₂Otel Challenge, WaterSense hosted a series of training webinars to help hotels assess, change, and track their water use. Each features a case study speaker discussing a water-saving project.
- **WaterSense at Work: Best Management Practices for Commercial Institutions and Facilities** is a compilation of water-saving best practices, many of which apply to hotels.

Below are suggestions from *WaterSense at Work* to save water in hotels. For more WaterSense hotel tools and training, visit

www.epa.gov/watersense/commercial/challenge_tools.

Reduce Restroom and Laundry Water



- Install WaterSense labeled faucets, showerheads, toilets, and flushing urinals where appropriate. These products have been independently certified to be at least 20 percent more water-efficient and perform as well or better than standard models.
- Upgrade or retrofit with water- and energy-efficient laundry equipment.
- Allow guests the option of reusing towels and bed linens to cut down on the amount of water used in laundry equipment.

Water Landscapes Wisely



- Design water-smart landscapes that provide beautiful surroundings while reducing water needed for irrigation.
- Improve irrigation efficiency by hiring a professional certified through a WaterSense labeled program to audit an existing system or design and install a new water-efficient system.
- Cut down on water loss from evaporation, wind, and runoff by replacing existing clock timers with WaterSense labeled irrigation controllers.

Make Kitchen Improvements



- Install WaterSense labeled pre-rinse spray valves. Replacing one with a WaterSense labeled model can save a typical commercial kitchen more than 7,000 gallons of water per year.
- Install ENERGY STAR® certified dishwashers, ice machines, steam cookers, or combination ovens where appropriate to reduce water and energy use by at least 10 percent. Look for efficient food disposal systems, steam kettles, and wash-down sprayers to use significantly less water.
- Consider replacing equipment that discharges water continuously, such as dipper wells or wok stoves, with more efficient models or turning this equipment off when not in use.

¹ Dziegielewski, et al. 2000. *Commercial and Institutional End Uses of Water*. American Water Works Association Research Foundation.

² 2009. *Water Use in Buildings SmartMarket Report*. McGraw-Hill Construction.

³ American Hotel & Lodging Association. Guideline #5. www.ahla.com/Green.aspx?id=24954.

Attachment 1-5: Catalina Island Water System Drought Contingency Plan Excerpt



Catalina Island Water System Drought Contingency Plan

July 2022

Prepared For:
Southern California Edison Company
PO Box 700 | Rosemead, CA 91770
Phone: 626.302.6501

Prepared By:



Catalina Island Water System

Drought Contingency Plan

July 2022

Prepared For:

Southern California Edison Company
PO Box 700 | Rosemead, CA 91770
Phone: 626.302.6501



Under the Supervision of:

C. Shem Hawes

69578
C.E.

Table of Contents

Chapter One – Introduction	1-11
1.1 General Description	1-11
1.2 California Historical Droughts.....	1-11
1.3 Approach	1-12
1.4 Study Area.....	1-12
1.5 Water System.....	1-13
1.6 Climate.....	1-14
1.7 Rainfall	1-15
1.8 Rainfall Trends and Drought Conditions	1-17
1.9 Accumulated Departure of Rainfall.....	1-18
1.10 Sea Level Rise (SLR).....	1-19
1.11 Population Projection Assessment.....	1-21
1.12 Water Demand Assessment.....	1-23
1.12.1 Saltwater Demands	1-28
1.13 Water Supply Assessment.....	1-28
1.13.1 General Geologic Conditions.....	1-29
1.13.2 Groundwater Wells	1-29
1.13.3 Perennial Yield	1-30
1.13.4 Desalination Plant.....	1-31
1.14 Abbreviations	1-33
Chapter Two – Drought Monitoring.....	2-1
2.1 General Description	2-1
2.2 Drought vs. Water Shortage	2-1
2.3 Drought Impacts.....	2-1
2.4 Short-Term Drought Impacts.....	2-1
2.4.1 Long-Term Drought Impacts.....	2-1
2.5 Drought Monitoring and Triggering Mechanisms.....	2-2
2.6 Existing Drought Triggering Mechanism	2-2
2.6.1 CPUC Schedule 14.1 - Staged Mandatory Water Conservation and Rationing.....	2-2
2.7 Potential Drought Triggering Mechanisms	2-5
2.7.1 Drought Indices.....	2-5
2.7.2 Palmer Drought Severity Index (PDSI)	2-5
2.7.3 United States Drought Monitor (USDM)	2-5
2.7.4 Pumping Water Level (PWL) Changes as an Indicator of Drought	2-8
2.7.5 Blackjack Well No. 1A (Figure 2-4).....	2-13
2.7.6 Howlands Landing Well No. 3	2-14
2.7.7 Middle Ranch Well No. 1A	2-15
2.7.8 Sweetwater Well No. 1A.....	2-15
2.7.9 Whites Landing Well (Figure 2-9).....	2-15
2.7.10 Toyon 3 Groundwater Monitoring Well (Figure 2-10).....	2-15
2.7.11 Water Level “Rationing Stages”	2-15
2.7.12 GRACE Groundwater Monitoring	2-20
2.8 Drought Monitoring Summary	2-22
Chapter Three – Vulnerability Assessment.....	3-1
3.1 Purpose	3-1
3.2 Description	3-1

3.3	Climate Change and Drought	3-1
3.3.1	Santa Catalina Island Climate.....	3-1
3.3.2	Climate Change.....	3-1
3.4	Climate Impacts on Sectors.....	3-10
3.4.1	Vegetation	3-10
3.4.2	Wildlife	3-10
3.4.3	Commercial, Industrial, and Institutional Sectors.....	3-11
3.5	Critical Water Resources Vulnerabilities	3-14
3.5.1	Groundwater and Storage	3-16
3.5.2	Desalination Facility	3-16
3.6	Climate Impacts on Critical Resources.....	3-20
3.7	Develop Worst Case Planning Scenario	3-21
3.8	Scenario 1: Five-Year Drought and Local Supply Shortage	3-22
3.8.1	Projected Rationing Level and Middle Ranch Reservoir Storage.....	3-22
3.8.2	Projected Accumulated Departure of Rainfall.....	3-23
3.8.3	Projected SWL/PWL	3-23
3.8.4	Projected Total Supply.....	3-24
3.8.5	Projected Total Demand.....	3-25
3.9	Scenario 2: 30-Year Drought and Local Supply Shortage	3-26
3.9.1	Projected Rationing Level and Middle Ranch Reservoir Storage.....	3-26
3.9.2	Projected Accumulated Departure of Rainfall.....	3-26
3.9.3	Projected SWL/PWL, Supply and Demand.....	3-27
Chapter Four – Mitigation Actions.....		4-1
4.1	Purpose	4-1
4.2	Description	4-1
4.3	Previous Efforts and Current Mitigation Actions	4-1
4.3.1	CPUC Schedule 14.1 Tariffs, Santa Catalina Island Fresh Water Rationing Plan.....	4-2
4.3.2	Desalination Facility Expansion (Plant No. 2):	4-2
4.3.3	Seawater use in fire protection, toilet flushing:	4-3
4.3.4	Avalon Canyon Bedrock Wells.....	4-3
4.3.5	Catalina Groundwater Management and Sustainability Program (CGMSP).....	4-4
4.3.6	Public Awareness	4-4
4.4	Mitigation Goals Planning, Evaluation and Prioritization.....	4-4
4.4.1	Current Portfolio Evaluation	4-5
4.4.2	Water Supply Project Goals and Evaluation	4-6
4.4.3	Drought Resiliency Projects.....	4-6
4.5	Description of Individual Drought Mitigation Projects.....	4-9
4.5.1	Middle Ranch-Avalon	4-10
4.5.2	Blackjack.....	4-19
4.5.3	Whites Landing	4-21
4.5.4	Isthmus-West End.....	4-1
4.5.5	New Technologies.....	4-3
4.5.6	Reclamation Water	4-9
4.5.7	Policy and Conservation.....	4-10
4.5.8	System Redundancy.....	4-13
4.5.9	Imported Water	4-17
4.5.10	Other Projects	4-20
4.6	Core Resources Strategy: Portfolio Evaluation.....	4-25

4.6.1	Project Criteria Evaluation.....	4-26
4.6.2	Goals and Resource Strategy Evaluation.....	4-30
4.6.3	Recommended Water Supply Portfolio and Project Implementation.....	4-33
4.6.4	Project Phasing.....	4-34
4.7	Adaptive Resources Plan	4-36
4.7.1	Long-Term Groundwater Storage	4-36
4.7.2	Drought Management and Response	4-36
4.7.3	Continued Conservation.....	4-36
4.7.4	Acquiring Strategic Water Assets.....	4-36
Chapter Five – Response Action Plan		5-1
5.1	Purpose	5-1
5.2	Description	5-1
5.3	Drought Response Task Force.....	5-1
5.4	Response Action Plan.....	5-2
5.5	Emergency Actions.....	5-3
5.5.1	Triggering Mechanism	5-3
5.5.2	Response.....	5-4
5.5.3	Future Planning	5-4
5.6	Types of Response Actions	5-4
5.6.1	Messaging.....	5-5
5.6.2	Programs	5-5
5.7	Supply Augmentation and Operational Changes	5-8
5.8	Triggers, Targets, and Responses	5-8
5.8.1	General Conservation (Outside of Mandatory Stage Rationing)	5-9
5.8.2	Stage 1.....	5-10
5.8.3	Stage 2.....	5-11
5.8.4	Stage 3.....	5-12
5.8.5	Stage 4.....	5-13
5.9	Recommendation – Water Shortage Contingency Plan (WSCP)	5-14
5.10	Response Action Process and Plan Objectives.....	5-15
5.10.1	Overview and Goals.....	5-15
5.11	Water Conservation Outreach Campaign	5-16
5.11.1	Audiences of Outreach Plan.....	5-16
5.11.2	Key Messages of Outreach Plan.....	5-17
5.11.3	New Strategies and Programming	5-17
5.11.4	Campaign Delivery Methods.....	5-17
5.11.5	Measurement and Evaluation.....	5-18
5.12	Post Drought Evaluation.....	5-18
Chapter Six – Operational Framework and Plan Update Process		6-1
6.1	Operational and Administrative Framework.....	6-1
6.1.1	Description.....	6-1
6.1.2	Content	6-1
6.1.3	Roles and Responsibilities.....	6-2
6.1.4	Drought Response Task Force Procedure	6-4
6.1.5	Matrix.....	6-9
6.1.6	Coordination between Community, Task Force and Stakeholders	6-10
6.2	Plan Update Process	6-11
6.2.1	Purpose	6-11
6.2.2	Plan Evaluation Process	6-11

6.2.3	Measuring Effectiveness.....	6-12
6.2.4	Timing of Updates.....	6-13
6.2.5	Data/Models Used	6-13
6.2.6	Summary of Steps for Planning and Plan Update Process	6-13
6.2.7	Updating the DCP	6-17
6.2.8	Summary and Conclusion	6-17

List of Tables

Table 1-1:	Severity of Extreme Droughts.....	1-11
Table 1-2:	Tidal Datums Explained (NOAA 2020)	1-19
Table 1-3:	City of Avalon Census Records (United States Census Bureau)	1-21
Table 1-4:	Annual Santa Catalina Island Visitors via Various Transportation Methods	1-22
Table 1-5:	Catalina Island Water Customers 2001-2013 (2001-2019 CPUC Reports)	1-23
Table 1-6:	City of Avalon Saltwater Demands (Michael Baker International, 2016).....	1-28
Table 1-7:	Catalina Water Sources Integrated Freshwater Yield (SCE 2008)	1-31
Table 1-8:	Pebbly Beach Desalination Plants No. 1 and No. 2 Operating Scenarios (Greely and Hansen, 2017)	1-31
Table 2-1:	Water Rationing and Mandatory Use Reduction (2013-Current)	2-2
Table 2-2:	PDSI Classification Criteria	2-5
Table 2-3:	Category Descriptors and Comparison of Indices (USDM).....	2-6
Table 2-4:	Well Head Reference Elevations.....	2-9
Table 2-5:	SWL Depths in Santa Catalina Wells	2-17
Table 3-1:	Catalina Fire and Paramedic Stations (Burr, 2004).....	3-4
Table 3-2:	Seven Endemic Species on Catalina Island (Catalina Island Conservancy, 2020).....	3-10
Table 3-3:	Projected Flood Hazard Exposure for Transportation Assets under each SLR Scenario (Moffatt and Nichol, 2019).....	3-19
Table 4-1	- Avalon Canyon Test Wells (Michael Baker International, 2016)	4-3
Table 4-2	- Potential Mitigation Projects Listed by Source	4-7
Table 4-3	- Existing Non-Potable Wells in Avalon Canyon.....	4-15
Table 4-4	- Effectiveness of Evaporation Control for Middle Ranch Reservoir (Lozier, 1984)	4-18
Table 4-5	- Comparison of SCE Real Losses and San Jose Water.....	4-23
Table 4-6	- Mitigation Project Scoring.....	4-26
Table 4-7	- Scenario 8 (Highest Ranked Mitigation Projects)	4-33
Table 4-8	- Scenario 8: Phased Implementation	4-34
Table 5-1:	Task Force Members	5-1
Table 5-2:	Levels of Response Actions (CPUC Sch. 14.1)	5-9
Table 5-3:	Cross-Reference of Proposed WSCP Shortage Levels with Sch. 14.1 Rationing Stages.....	5-15
Table 6-1:	Action Plan for Drought Responses.....	6-4

List of Figures

Figure 1-1: Santa Catalina Island Map of Integrated and Isolated Systems	1-13
Figure 1-2: Santa Catalina Island Historical Average Daily Temperatures (Dakin Peak California Weather Station, Based on Data Collected from 2008-2020, Western Regional Climate Center (WRCC), University of Nevada).....	1-14
Figure 1-3: Santa Catalina Island Average Daily Maximum Temperatures (Dakin Peak California Weather Station, Based on Data Collected from 2008-2020, WRCC, University of Nevada).....	1-15
Figure 1-4: Historical Monthly Averages of Total Precipitation from 1910-2019 (Based on Data Collected from the WRCC, University of Nevada)	1-16
Figure 1-5: Annual Average Precipitation Totals (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	1-17
Figure 1-6: Accumulated Departure of Precipitation Total (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	1-18
Figure 1-7: MSL (feet) vs. Year from 1924 to 2019 from Station 9410660 (NOAA)	1-20
Figure 1-8: Approximate SLR Projections for Three Risk Aversion Levels, Based on the H++ Specific Singular Scenario.....	1-20
Figure 1-9: City of Avalon and Santa Catalina Island Population Trends (State of California Department of Finance, 2020)	1-22
Figure 1-10: 2001-2019 Annual Water Production (AFY) and Consumption (GPD/capita)	1-24
Figure 1-11: Island-Wide Monthly Water Production (AFY)	1-25
Figure 1-12: Middle Ranch Reservoir Water Levels and Annual Aquifer Pumping Amounts.....	1-26
Figure 1-13: City of Avalon Tourism vs. Annual Water Production (Catalina Island Chamber of Commerce and Visitors Bureau, 2001-2019 CPUC Reports)	1-27
Figure 1-14: Santa Catalina Island Monthly Water Sales (2001-2019 CPUC Reports)	1-27
Figure 1-15: Location of Desalination Plant and Seawater Intake Wells (Greeley and Hansen, 2017)	1-32
Figure 1-16: Current Desalination Facility System Summary (Greeley and Hansen, 2017)	1-33
Figure 2-1: Historic [Middle Ranch] Reservoir Water Levels from November 1966 to January 2020 (Oberlander 2016).....	2-4
Figure 2-2: Probability of the Amount of Water in Storage at Middle Ranch (Oberlander, 2016)	2-4
Figure 2-3: Weekly Cumulative Percent Area Drought Classification from 2000-2020 for the City of Avalon (Top), Los Angeles County (Middle) and State of California (Bottom). Figures generated from the USDM Tabular Data Archive	2-7
Figure 2-4: Static and PWLs Compared to Accumulated Departure of Rainfall of Blackjack Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-10
Figure 2-5: Static and PWLs Compared to Accumulated Departure of Rainfall of Cottonwood Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-10
Figure 2-6: Static and PWLs Compared to Accumulated Departure of Rainfall of Howlands Landing Well No. 3* (RCS and Associates LLC Consulting and	

Groundwater Geologists 2020) *Data Comprised of Well No. 1 SWL up to July 2016 after which data transitions to Well No.3	2-11
Figure 2-7: Static and PWLs Compared to Accumulated Departure of Rainfall of Middle Ranch Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-11
Figure 2-8: Static and PWLs Compared to Accumulated Departure of Rainfall of Sweetwater Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-12
Figure 2-9: Static and PWLs Compared to Accumulated Departure of Rainfall of Whites Landing Well (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-12
Figure 2-10: Static and PWLs Compared to Accumulated Departure of Rainfall of Toyon 3 Groundwater Monitoring Well (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-13
Figure 2-11: Cottonwood Well No. 1A Static and PWLs Compared to Accumulated Departure of Rainfall of Cottonwood Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-14
Figure 2-12: Static and PWLs Compared to Accumulated Departure of Rainfall of Cottonwood Well No. 1A (RCS and Associates LLC Consulting and Groundwater Geologists 2020)	2-18
Figure 2-13: Groundwater and Soil Moisture Percentile Map Conditions from GRACE-FO Data Assimilation for the Contiguous United States (CONUS) and Global Land, June 2020	2-20
Figure 2-14: Groundwater and Soil Moisture Percentile 30-day and 90-day Forecasts Initialized from GRACE-FO Data Assimilation, March 2020	2-21
Figure 3-1: Santa Catalina Island Fires 1999-2011 (Catalina Island Conservancy Accidental Wildland Fires)	3-3
Figure 3-2: 2002 Catalina Island Fire and EMS Incidents (Burr, 2004)	3-4
Figure 3-3: Comparison of Fire Department 9-11 Response Times for Santa Catalina Island and Los Angeles County (Burr, 2004)	3-4
Figure 3-4: Comparison of Nearshore Wave Heights Associated with an Extreme Tropical Swell (top) and Santa Ana Wind (bottom) event	3-6
Figure 3-5: Overview of SLR Flood Hazards within the City of Avalon under 100-year Storm Conditions	3-7
Figure 3-6: Overview of SLR Flood Hazards within the City of Avalon under Non-storm Conditions including a H++ Worst Case Scenario	3-8
Figure 3-7: Erosion damage to Pebbly Beach Road, February 1988	3-8
Figure 3-8: Cumulative Areal Proportions of Modelled Water-Table Depths with Higher Sea Levels for 1-km Strip of Mainland Southern California (Befus et. al, 2020)	3-9
Figure 3-9: <u>Top</u> : Total City of Avalon Passenger Arrival Counts vs. Water Production by Month (data from Catalina Island Chamber of Commerce and Visitor Bureau and 2001-2019 CPUC Reports) <u>Bottom</u> : Deviation of the City of Avalon Visitor Counts from Historic Monthly Averages	3-12
Figure 3-10: Statistical Peak vs. Off-season Average Water Demand for the City of Avalon and Hamilton Cove from 2006-2016 (Greeley and Hansen, 2017)	3-13
Figure 3-11: Estimated Overnight vs. Day-Use of Total City of Avalon Average Monthly Visitors (data from Catalina Island Chamber of Commerce and Visitor Bureau and distributions from SMG Consulting, 2017)	3-14

Figure 3-12: City of Avalon Monthly Total Inhabitants vs. Water Production (data from Catalina Island Chamber of Commerce and Visitor Bureau, California Department of Finance and "Well and Piezometer Reads" data spreadsheets provided by SCE)	3-14
Figure 3-13: Outline and Extent of the Deepwater Horizon oil slick (1,430 km ²), April 27 2010 captured by the Terra Satellite	3-17
Figure 3-14: Pacific OCS Region - Federal and State Oil Platforms	3-18
Figure 3-15: Oil Spill Scenario with Similar Magnitude to Deepwater Horizon Event (550 square miles)	3-18
Figure 3-16: 2014 Storm Damage at Pebbly Beach Road Industrial Area (Moffat and Nichol, 2019)	3-19
Figure 3-17: 2040 Projected Water Consumption	3-27
Figure 4-1: Water Trends and Target Deficit for Mitigation Planning	4-5
Figure 4-2: Proposed System for the Desalination Facility to meet Future Demand (Greely and Hansen, 2017)	4-10
Figure 4-3: Desalination Enhancement Plan & Corresponding Mitigation Project Phases	4-11
Figure 4-4: Wrigley Reservoir Bi-Directional Pipeline	4-13
Figure 4-5: Existing Test Well Locations in Avalon Canyon Watershed (Santa Catalina Island Company, October 2015)	4-15
Figure 4-6: Existing Alluvial and Bedrock Aquifer Wells in Avalon Canyon Watershed (Santa Catalina Island Company, October 2015)	4-16
Figure 4-7: Middle Ranch-Avalon Integrated System Interconnection Alternatives with the Blackjack and Whites Landing Systems:	4-1
Figure 4-8: Tsunami Hazard Area Map along Santa Catalina Island Western Coastline	4-4
Figure 4-9: Ocean Currents around Channel Islands National Park	4-5
Figure 4-10: Catalina Island ASBS Nos. 25-28, with Superimposed Coastal Hazards and Potential Desalination Sites	4-6
Figure 4-11: Illustrative Potential Tourism Reduction (SMG Consulting, 2017)	4-12
Figure 4-12: I-WEIS and Middle Ranch-Avalon Integrated System Interconnection Pipeline (Yellow)	4-14
Figure 4-13: Wrigley Reservoir Bi-Directional Pipeline	4-15
Figure 4-14: Barge Liner offloading supplies at Wilson Cove, San Clemente Island (Pacific Maritime Group)	4-18
Figure 4-15: (Left) Rainfall Conversion to Runoff (%), and (Right) Erosion Potential (t/ha) for a Moderate Intensity Storm with 10-Year or Less Recurrence Interval (Mertes, L.A.K., et. Al)	4-21
Figure 4-16: Mitigation Project Scoring Criteria (Max. of 34 Possible Points)	4-25
Figure 4-17: Implementation of Scenario 8 (Highest Scoring Projects)	4-35
Figure 6-1: Drought & Water Shortage Risk Assessment Scoring of Small Water Suppliers & Self-Supported Communities (DWR, March 2021)	6-8

List of Appendices

Appendix A – Plate 1 - Geologic Map of Santa Catalina Island
Appendix B – Plate 2 – Watershed Map of Catalina Island
Appendix C – Summary Tables of Available Construction and Pumping for Each Well
Appendix D – Mitigation Scoring Matrix
Appendix E – Complete List of Mitigation Projects
Appendix F – DWR Proposed WSCP-Components-for-Small-Suppliers
Appendix G – Advice 123-W
Appendix H – Operational and Administrative Framework
Appendix I – Task Force Presentations

The SCE Annual Reports to the CPUC give a summary of water connections categorized by type customer from 2001 to 2013, summarized in Table 1-5. Residential connections make up the large majority of SCE water customers on Santa Catalina Island¹⁹.

Table 1-5: Catalina Island Water Customers 2001-2013 (2001-2019 CPUC Reports)

Year	Residential	Commerical	Public Authorities	Other	Company Use	Total	Private Fire Connections
2001	1610	248	42	1	0	1901	3
2002	1516	340	51	0	1	1908	7
2003	1515	344	51	0	1	1911	10
2004	1513	347	51	0	1	1912	13
2005	1517	349	51	0	1	1918	16
2006	1536	346	51	0	1	1934	17
2007	1558	342	51	0	1	1952	16
2008	1554	338	50	0	1	1943	21
2009	1556	341	49	0	1	1947	71
2010	1548	289	44	0	1	1882	89
2011	1549	288	44	0	1	1882	96
2012	1557	281	44	1	1	1884	96
2013	1550	280	44	2	0	1876	82

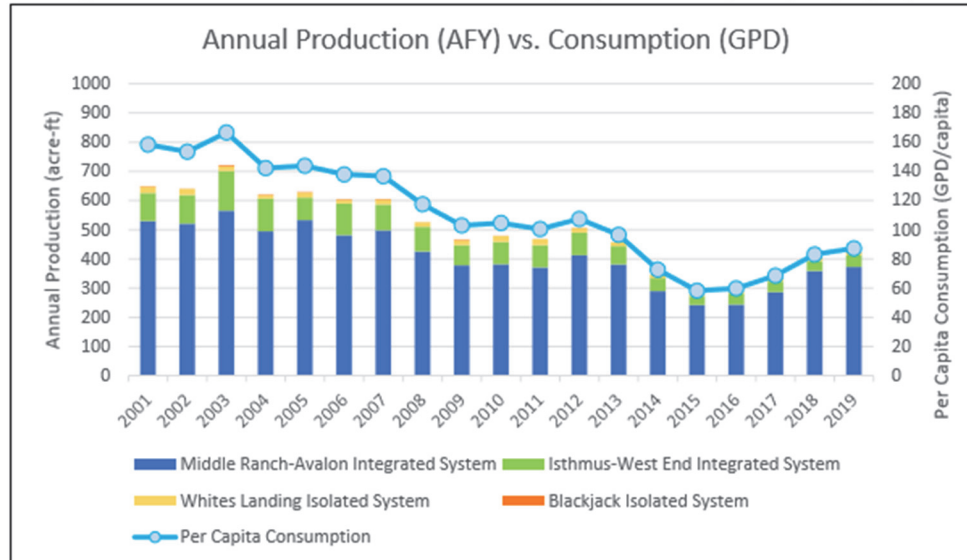
While these permanent residents have steadily increased over the decades as shown in Table 1-3 and Figure 1-9, the total island's consumption per capita has a downward long-term trend as evident in Figure 1-10 (discussed in the next section and in section 3.9.3).

1.12 Water Demand Assessment

Despite continued growth in both tourism and in permanent residents on Santa Catalina Island, water demands have gradually decreased over the last two decades. SCE annual potable water production (AFY) and consumption (gallons per day (GPD)/capita) from the previous 19 years have had a steady downward trend as seen in Figure 1-10, indicating a general reduction island-wide water use (excludes visitor counts from per capita consumption rates). From the figure, the Middle Ranch- Avalon Integrated System is unequivocally the most robust of the island water systems, supporting the highest concentration of island inhabitants. Water consumption on the island is regulated by CPUC rationing policies as they relate to the Middle Ranch Reservoir (see Figure 1-12). It is also clear from Figure 1-10 that water conservation efforts have instilled community-wide responsible water use; schedules and rationing will continue to result in future water consumption trends mirroring the available water (perennial yield).

¹⁹ 2001-2019 CPUC Annual Reports provided by SCE.

Figure 1-10: 2001-2019 Annual Water Production (AFY) and Consumption (GPD/capita)²⁰

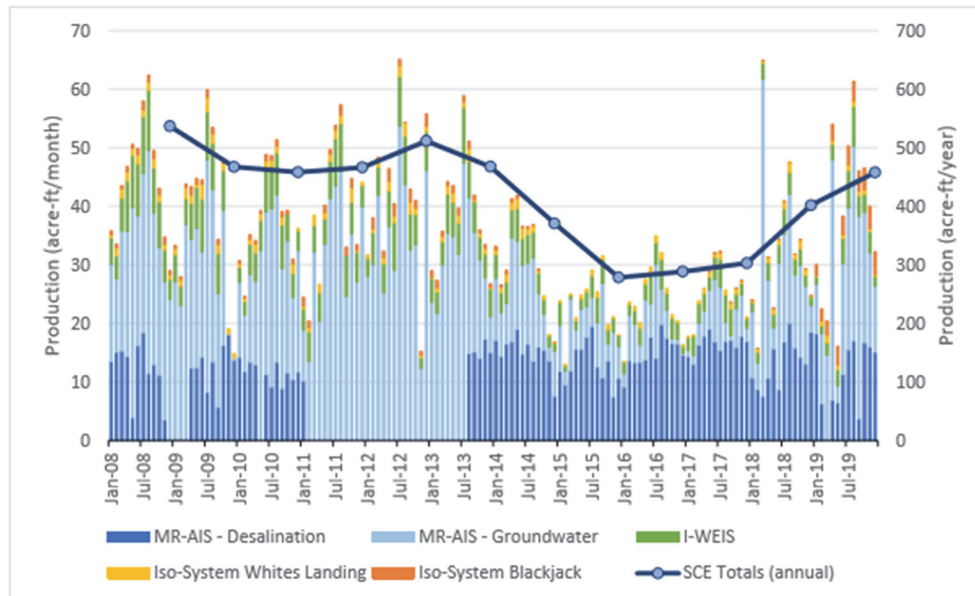


Water demands at Santa Catalina Island have unique monthly patterns as a result of seasonal tourism that are not observable from annual totals alone. Available monthly production data from well and piezometer readings provided by SCE is presented in Figure 1-11 to establish a sense of seasonal trends on Santa Catalina Island. Groundwater pumping of the integrated systems and isolated systems, as well as desalination production, are delineated to show variations between different sources. Annual production totals from Figure 1-10 are also plotted on the secondary axis to compare overall trends for the period of record. SCE's latest assessment for customers within the Middle Ranch-Avalon Integrated System established peaking factors of 1.614 for maximum day demand (MDD) and 2.605 for peak hour demand (PHD)²¹.

²⁰ 2001-2019 CPUC Reports. SCE. September, 2020.

²¹ Luke Schaner, SCE, personal communication, September 23, 2020.

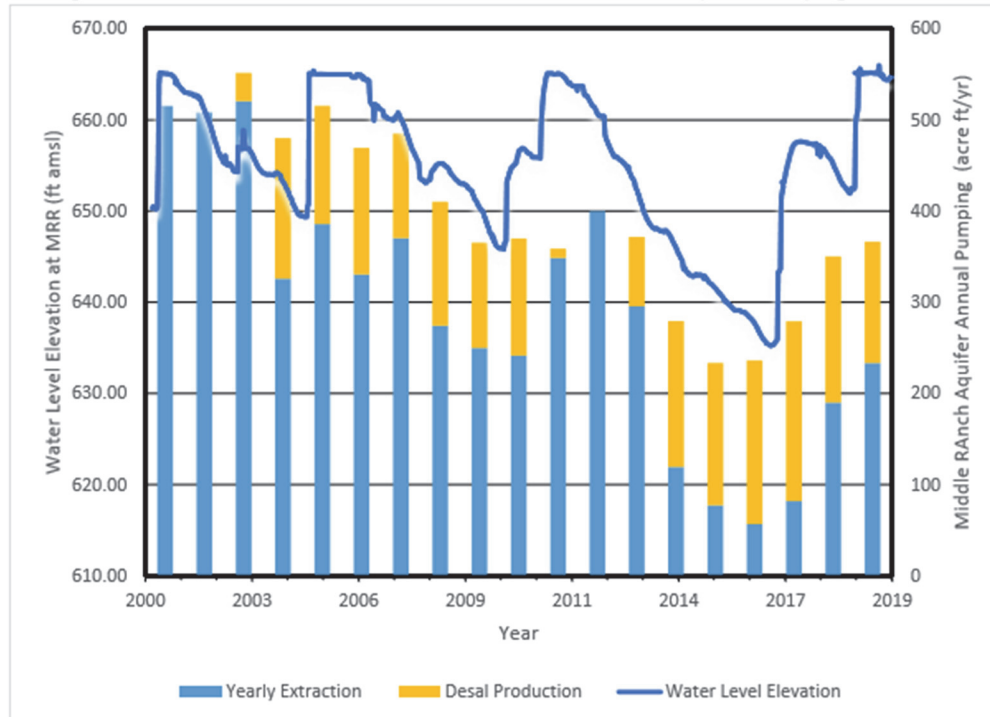
Figure 1-11: Island-Wide Monthly Water Production (AFY)²²



Of the water systems on Catalina Island, the Middle Ranch-Avalon Integrated System serves the largest number of customers and generally merits greater need for discussion. CPUC records of annual pumping data for the Middle Ranch Aquifer (Wells No. 1A, 5A and 6A), combined with production from the Pebbly Beach Desalination plants were evaluated to provide a better understanding of demands specific to the City of Avalon area. Figure 1-12 contrasts yearly extraction, augmented with supply from desalination, against the recorded elevation level of Middle Ranch Reservoir (commonly referred to as Thompson Reservoir). The intent of this figure is to illustrate primary surface water storage as it relates to demand in the Middle Ranch-Avalon Integrated System. This relationship is highlighted because the Middle Ranch Reservoir has served as the sole metric for water rationing policies on Santa Catalina Island and many factors such as precipitation and ETo greatly influence the capacity of both reservoirs and extraction from the alluvial aquifer (to be discussed in greater detail in Chapter 2). Additionally, Figure 1-11 and Figure 1-12 emphasize the importance of the desalination facility in its ability to beneficially augment the system as needed.

²² "Wells and Piezometer Reads" data spreadsheets provided by SCE. February, 2020.

Figure 1-12: Middle Ranch Reservoir Water Levels and Annual Aquifer Pumping Amounts²³



The annual island visitors recorded for the period of record between 2008 and 2019 is in Table 1-4. Figure 1-13, plotted against the total water production data (AFY) from CPUC reports for the period of record. Total visitor counts have a 10-year average increase of 23,893 per year. Typically, water demands are not considered to be significantly affected by demographic of island visitors arriving by cruise ships, due to the both the short duration of the visit (day use) and associated limited freshwater consumption (mostly from restaurant dining). Other demographics, including ferry arrivals, cannot be generalized in this way. Note that a decrease in production starting in 2013. Figure 1-13 marks the eventual implementation of the staged rationing (discussed in Chapter 2), when tourism was approaching its historic peak. The impacts from limited water supply to the island's largest economic sector and the generally greater consumption per capita attributed to visitors is of critical importance to the community and further discussion of these vulnerabilities is covered in Chapter 3.

²³ 2001-2019 CPUC Reports, "Historical Reservoir Levels" data spreadsheets provided by SCE.

Figure 1-13: City of Avalon Tourism vs. Annual Water Production (Catalina Island Chamber of Commerce and Visitors Bureau, 2001-2019 CPUC Reports)

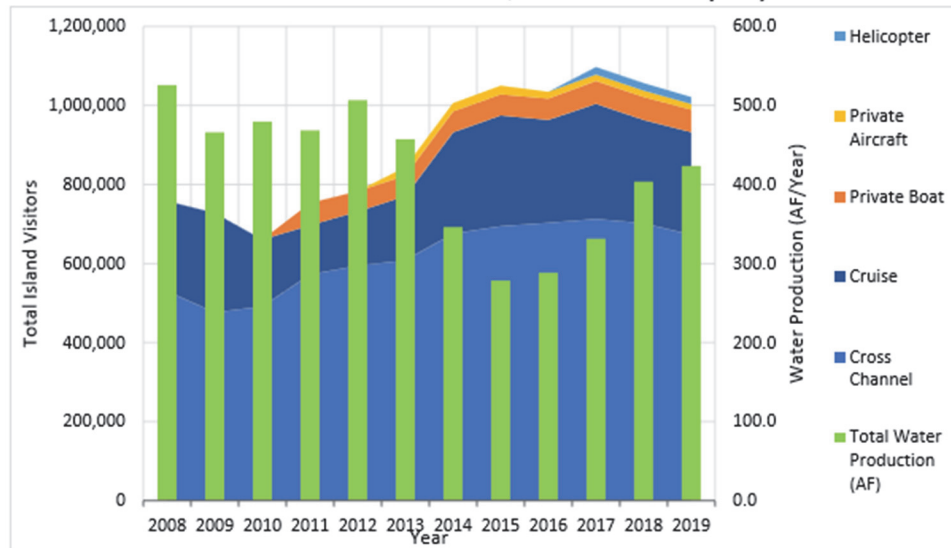
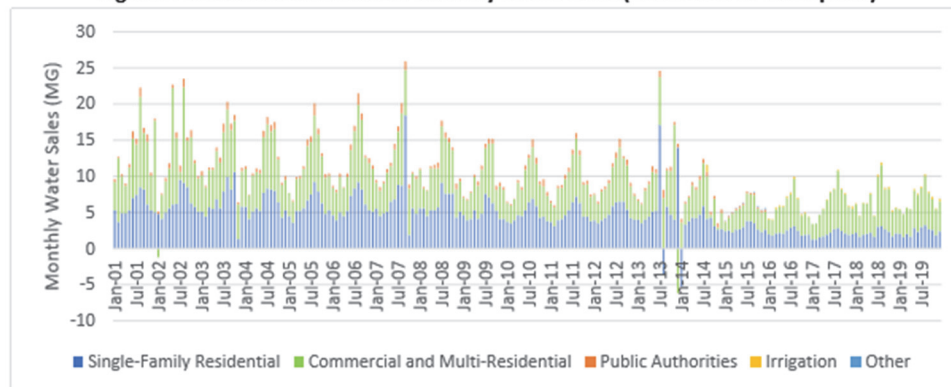


Figure 1-14 gives a monthly depiction of the estimated total water consumption (sales in MG), dating back to 2001. It can be observed that commercial and residential sales are almost identical in both volume and pattern of consumption, with a notable divergence (reduction) in single-family residential sales starting around January 2016.

Figure 1-14: Santa Catalina Island Monthly Water Sales (2001-2019 CPUC Reports)



The effects of tourism are reflected in the commercial/mult-residential sales and it is also assumed that peaks in single-family residential consumption are influenced to some degree by second-home owners that may normally reside on the mainland in during the off-season (Burr Consulting, 2004). In either case, the figure demonstrates the seasonal fluctuations that are attributed to both warmer temperatures and increased island populations during summer months.

1.12.1 Saltwater Demands

The City of Avalon operates a designated saltwater system independent of the potable water system to offset a portion of toilet flushing and fire suppression. Per section § 6-6.09 of the City of Avalon Municipal Code, "Any structure in the City of Avalon utilizing toilets shall be equipped with a separate plumbing system piped to the toilets... and shall connect to the City of Avalon's salt water system..."

Peak daily saltwater demand is 383,000 GPD²⁴, as shown in Table 1-6.

Table 1-6: City of Avalon Saltwater Demands (Michael Baker International, 2016)

Usage	Dwellings or Rooms	Daily Population	Saltwater Allocation Factor (GPD per capita)	Peak Daily Saltwater Demand (GPD)
Permanent	2,289	3,780	15	56,700
Seasonal	600	1,300	15	19,500
Total Dwellings	2,889	5,080	15	76,200
Transient Rental	287	861	15	12,915
Hotels	806	2,015	15	30,225
Moorings	346	1,038	15	10,380
Campgrounds	62	124	15	1,860
Total Visitors Housing	1,501	4,038	13.75	55,600
Cruise Ship		3,680	5	18,400
Passenger Ship		3,500	15	52,500
Total Day-Visitors		7,180	10	72,000
Fire Suppression				180,000
Combined Totals	4,390	16,298		383,800

The saltwater system comprises of roughly 24,000 linear feet (LF) of distribution piping that includes an open ocean intake and booster station within Avalon Bay, with a capacity of 1,800 gallons per minute (gpm) and 200 feet total dynamic head (TDH). Additional booster stations convey saltwater to higher elevations. The Falls Canyon and Mount Ada saltwater storage reservoirs are located on the northwest and southeast edges of the City of Avalon, respectively, with a combined capacity estimated at 720,000 gallons. Recycled water is expected to inevitably replace the saltwater system, as corrosion of both residential plumbing fixtures and distribution piping valves have been cited as problematic. Additionally, high total dissolved solids (TDS) levels has been observed to impact the Avalon Wastewater Treatment Facility (AWFT) (Michael Baker International, 2016).

1.13 Water Supply Assessment

Because the of insular nature of the system and the susceptibility of the groundwater supply to drought conditions, this Plan aims to address the concerns of existing water sources diminishing in future years. Unless effective and preventative mitigation measures are appropriately implemented, the possibility of future water shortage in coming years may result in drastic and costly response measures.

²⁴ City of Avalon Recycled Water / Energy Sustainability Sub-Plan Study. *Michael Baker International*. June 2016.