



**REGULAR MEETING
OF THE
CACHUMA OPERATION AND MAINTENANCE BOARD**

**Monday, March 27, 2023
1:00 P.M.**

HOW TO OBSERVE THE MEETING

Join by Teleconference or Attend in Person

COMB follows Centers for Disease Control and Prevention (CDC), California Department of Public Health (CDPH) and local public health guidelines with respect to COVID-19 protocols and masking requirements, based on local conditions and needs. COMB will have available masks for use during public meetings.

Members of the public may observe the meeting electronically as set forth below.

Join via Video Conference

<https://us02web.zoom.us/j/81496131451?pwd=WVNZVm5JaTN3Z2lwQ0ZDcFlpY3VNZz09>

Passcode: 992901

Join via Teleconference

US: +1 669 900 6833 Webinar ID: 814 9613 1451

Passcode: 992901

HOW TO MAKE A PUBLIC COMMENT

Any member of the public may address the Board on any subject within the jurisdiction of the Board of Directors. The total time for this item will be limited by the President of the Board. The Board is not responsible for the content or accuracy of statements made by members of the public. No action will be taken by the Board on any Public Comment item.

In person: Those observing the meeting in person may make comments during designated public comment periods.

By Video: Those observing the meeting by video may make comments during designated public comment periods using the “raise hand” feature. Commenters will be required to unmute their respective microphone when providing comments.

By Telephone: Those observing the meeting by telephone may make comments during the designated public comment periods by pressing *9 on the key pad to indicate such interest. Commenters will be prompted to press *6 to unmute their respective telephone when called upon to speak.

AMERICANS WITH DISABILITIES ACT

In compliance with the Americans with Disabilities Act, if you need special assistance to review agenda materials or participate in this meeting, please contact the Cachuma Operation and Maintenance Board office at (805) 687-4011 at least 48 hours prior to the meeting to enable the Board to make reasonable arrangements.

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REGULAR MEETING
OF THE CACHUMA OPERATION AND MAINTENANCE BOARD
held at
3301 Laurel Canyon Road
Santa Barbara, CA 93105

Monday, March 27, 2023

1:00 PM

AGENDA

NOTICE: This Meeting shall be conducted in-person and through remote access as authorized and in accordance with Government Code section 54953, AB 361 and AB 2449.

- 1. CALL TO ORDER, ROLL CALL**
- 2. PUBLIC COMMENT** *(Public may address the Board on any subject matter within the Board's jurisdiction. See "Notice to the Public" below.)*
- 3. CONSENT AGENDA** *(All items on the Consent Agenda are considered to be routine and will be approved or rejected in a single motion. Any item placed on the Consent Agenda may be removed and placed on the Regular Agenda for discussion and possible action upon the request of any Board Member.)*
Action: Recommend Approval of Consent Agenda by motion and roll call vote of the Board
 - a. Minutes of February 27, 2023 Regular Board Meeting
 - b. Investment of Funds
 - Financial Reports
 - Investment Reports
 - c. Review of Paid Claims
- 4. PURCHASE OF FLEET VEHICLES**
Action: Recommend approval by motion and roll call vote of the Board
- 5. RESOLUTION NO. 778 – COMB ANNEX TO THE 2022 SANTA BARBARA COUNTY MULTIJURISDICTIONAL HAZARD MITIGATION PLAN**
Action: Recommend adoption by motion and roll call vote of the Board
- 6. GENERAL MANAGER REPORT**
Receive information from the General Manager on topics pertaining to COMB, including but not limited to the following:
 - Administration
 - Personnel
 - Operations Division
- 7. ENGINEER'S REPORT**
Receive information from the COMB Engineer, including but not limited to the following:
 - Climate Conditions
 - Water Quality
 - January Storm Disaster Recovery
 - South Coast Conduit Rehabilitation
 - Infrastructure Improvement Projects Update

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8. OPERATIONS DIVISION REPORT

Receive verbal information regarding the Operations Division, including but not limited to the following:

- Lake Cachuma Operations
- Operation and Maintenance Activities

9. FISHERIES DIVISION REPORT

Receive information from the Fisheries Division Manager, including, but not limited to the following:

- LSYR Steelhead Monitoring Elements
- Tributary Project Updates
- Surcharge Water Accounting
- Reporting/Outreach/Training

10. PROGRESS REPORT ON LAKE CACHUMA OAK TREE PROGRAM

Receive information regarding the Lake Cachuma Oak Tree Program including but not limited to the following:

- Maintenance and Monitoring

11. MONTHLY CACHUMA PROJECT REPORTS

Receive information regarding the Cachuma Project, including but not limited to the following:

- a. Cachuma Water Reports
- b. Cachuma Reservoir Current Conditions
- c. Lake Cachuma Quagga Survey

12. DIRECTORS' REQUESTS FOR AGENDA ITEMS FOR FUTURE MEETING

13. [CLOSED SESSION]: CONFERENCE WITH LEGAL COUNSEL: POTENTIAL LITIGATION

- a. [Government Code Section 54956.9(d)(1)]
Name of matter: *Kimball-Griffith L.P. v. Brenda Wren Burman, et al.*, Case No. 2:20-cv-10647
– Request for Declaratory and Injunctive Relief
- b. [Government Code Section 54956.9(d)(1)]
Name of matter: *Stephen Timothy Buynak, Jr. and Gloria Ann Buynak, as Trustees of the Buynak 1991 Family Revocable Trust v. United States Department of the Interior, et al.*, Case No. 2:22-cv-07271 – Complaint For Injunctive and Declaratory Relief to Enforce Plaintiffs' Riparian Water Rights
- c. [Government Code Section 54956.9(d)(1)]
Potential Litigation: Conference with Legal Counsel

14. RECONVENE INTO OPEN SESSION

[Government Code Section 54957.7]
Disclosure of actions taken in closed session, as applicable
[Government Code Section 54957.1]

- 13a. [Government Code Section 54956.9(d)(1)]
Name of matter: *Kimball-Griffith L.P. v. Brenda Wren Burman, et al.*, Case No. 2:20-cv-10647
– Request for Declaratory and Injunctive Relief

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13b. [Government Code Section 54956.9(d)(1)]
Name of matter: *Stephen Timothy Buynak, Jr. and Gloria Ann Buynak, as Trustees of the Buynak 1991 Family Revocable Trust v. United States Department of the Interior, et al.*, Case No. 2:22-cv-07271 – Complaint For Injunctive and Declaratory Relief to Enforce Plaintiffs’ Riparian Water Rights

13c. Potential Litigation: Conference with Legal Counsel

15. MEETING SCHEDULE

- **Regular Board Meeting – April 24, 2023 at 1:00 PM**
- **Board Packages available on COMB website www.cachuma-board.org**

16. COMB ADJOURNMENT

NOTICE TO PUBLIC

Posting of Agenda: This agenda was posted at COMB’s offices, located at 3301 Laurel Canyon Road, Santa Barbara, California, 93105 and on COMB’s website, in accordance with Government Code Section 54954.2. The agenda contains a brief general description of each item to be considered by the Governing Board. The Board reserves the right to modify the order in which agenda items are heard. Copies of staff reports or other written documents relating to each item of business are on file at the COMB offices and are available for public inspection during normal business hours. A person with a question concerning any of the agenda items may call COMB’s General Manager at (805) 687-4011.

Written materials: In accordance with Government Code Section 54957.5, written materials relating to an item on this agenda which are distributed to the Governing Board less than 72 hours (for a regular meeting) or 24 hours (for a special meeting) will be made available for public inspection at the COMB offices during normal business hours. The written materials may also be posted on COMB’s website subject to staff’s ability to post the documents before the scheduled meeting.

Public Comment: Any member of the public may address the Board on any subject within the jurisdiction of the Board. The total time for this item will be limited by the President of the Board. The Board is not responsible for the content or accuracy of statements made by members of the public. No action will be taken by the Board on any Public Comment item.

Americans with Disabilities Act: In compliance with the Americans with Disabilities Act, if you need special assistance to review agenda materials or participate in this meeting, please contact the Cachuma Operation and Maintenance Board office at (805) 687-4011 at least 48 hours prior to the meeting to enable the Board to make reasonable arrangements.

Note: If you challenge in court any of the Board’s decisions related to the listed agenda items you may be limited to raising only those issues you or someone else raised at any public hearing described in this notice or in written correspondence to the Governing Board prior to the public hearing.

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**MINUTES OF THE REGULAR MEETING
OF THE
CACHUMA OPERATION AND MAINTENANCE BOARD**

**Monday, February 27, 2023
1:00 PM**

1. CALL TO ORDER, ROLL CALL

The regular meeting of the Board of Directors was called to order by President Holcombe at 1:00 PM.

All attendees participated electronically pursuant to California Government Code sections 54953(b)(1), (b)(2), (e)(1) and (e)(3) (AB 361).

Directors Present:

Polly Holcombe, Carpinteria Valley Water District
Kristen Sneddon, City of Santa Barbara
Lauren Hanson, Goleta Water District
Cori Hayman, Montecito Water District

General Counsel Present:

William Carter - Musick, Peeler, Garrett, LLP

Staff Present:

Janet Gingras, General Manager	Elijah Papen, Senior Program Analyst
Edward Lyons, Administrative Manager/CFO	Timothy Robinson, Fisheries Division Manager
Joel Degner, Engineer/Operations Division Manager	Dorothy Turner, Administrative Assistant II
Shane King, Operations Supervisor	

Others Present:

Dakota Corey, City of Santa Barbara	Matthew Scrudato, SBCO Water Agency
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2. PUBLIC COMMENT

There was no public comment.

**3. RESOLUTION NO. 776 – CONFIRMATION OF LOCAL EMERGENCY -
ACKNOWLEDGEMENT OF GOVERNOR NEWSOM’S DECLARED STATE OF
EMERGENCY (HEALTH AND SAFETY)**

Ms. Gingras presented Resolution No. 776 for discussion. Hearing none, President Holcombe called for a motion which was put forth by Director Hanson and seconded by Director Sneddon. The motion carried with a vote of five in favor and one opposed.

Ayes: Sneddon, Hanson, Holcombe

Nays: Hayman

Absent:

Abstain:

4. CONSENT AGENDA

- a. Minutes of January 23, 2023 Regular Board Meeting
- b. Investment of Funds
 - Financial Reports
 - Investment Reports
- c. Review of Paid Claims

Ms. Gingras presented the Consent Agenda items for review and asked Mr. Lyons to comment on the financials. Mr. Lyons briefly reviewed revenues and expenditures of note, including remittances to Engineered Polymer Products, Flowers & Associates, California Department of Tax & Fee Administration, USGS and the Member Agencies for unexpended funds.

Director Sneddon motioned to approve the Consent Agenda, followed by a second from Director Hanson. The motion passed unanimously with a vote of six in favor.

Ayes: Sneddon, Hayman, Hanson, Holcombe

Nays:

Absent:

Abstain:

5. VERBAL REPORTS FROM BOARD COMMITTEES

- Administrative Committee Meeting – February 1, 2023

President Holcombe reviewed the Administrative Committee meeting, noting that members conducted in-depth discussions, particularly regarding the implementation of AB 2449 and the Director compensation. The committee forwards action items to the Board for discussion during this meeting.

6. FINANCIAL REVIEW – 2ND QUARTER FISCAL YEAR 2022-23

Mr. Lyons shared his presentation of the second quarter financial review with the Board. He recapped revenues received during the quarter, including the USBR pass-thru Entitlement Obligation, as well as expenditures by division. Noting overall alignment to the budget, he provided explanation for any variances as compared to the budget. Mr. Lyons reviewed the status of the Administrative Division's deliverables, including work toward FEMA reimbursement for damages resulting from the January Storm Event.

7. STATE OF EMERGENCY ORDER – PUBLIC MEETINGS

Ms. Gingras introduced COMB's plan to return to in-person public meetings in compliance with the Ralph M. Brown Act as modified by AB 2449. She provided a recap of the pandemic-generated actions that enabled public meetings to be held remotely. Noting that those actions expire on February 28, 2023, Ms. Gingras advised that COMB may proceed under the traditional Brown Act requirements or under the modifications allowed under AB 2449. She stated that COMB will purchase equipment to take video of the in-person Board for internet streaming. Staff, stakeholders and public may continue to attend the meetings remotely. Anyone who chooses may attend the meeting in person as well. To protect the health of the Board and public attending in person, COMB plans to implement various safety protocols within the Board room.

8. DIRECTOR COMPENSATION

Ms. Gingras introduced Ordinance No. 4 regarding Director Compensation for discussion, approval and adoption. She advised that the required publications were made in a timely fashion. Following Board discussion and comments justifying the increase to compensation, the Board agreed to the amount proposed.

Director Hanson provided a motion to approve and adopt Ordinance No. 4. Director Hayman seconded the motion which carried unanimously with a vote of six in favor.

Ayes: Sneddon, Hayman, Hanson, Holcombe

Nays:

Absent:

Abstain:

9. RESOLUTION NO. 777 – DESIGNATION OF APPLICANTS’ AGENT – JANUARY 2023 STORMS

Ms. Gingras presented Resolution No. 777 for approval. She noted that it authorizes application to FEMA for reimbursement of expenses undertaken on an emergency basis, as well as designation of an agent, a requirement in order to apply for reimbursement. She fielded questions from the Board.

Director Hayman provided the motion to approve the Resolution, followed by a second from Director Sneddon. The motion passed unanimously with a vote of six in favor.

Ayes: Sneddon, Hayman, Hanson, Holcombe

Nays:

Absent:

Abstain:

10. LAKE CACHUMA EMERGENCY PUMPING FACILITY SECURED PIPELINE PROJECT – FINAL REPORT

Mr. Degner presented the final report for the EPF Secured Pipeline project. He reviewed the project, including the final survey, noting that the primary contractor was off the lake on February 6th. Mr. Degner stated that the Notice of Completion had been provided. There are some final details to complete, such as grant reporting and permit requirements. Mr. Papen shared photos and GIS mapping of the project. Mr. Degner fielded questions from the Board.

11. GENERAL MANAGER REPORT

- Administration
- U.S. Bureau of Reclamation

Ms. Gingras provided the General Manager report, highlighting status of the ongoing FEMA process. FEMA has toured some of the damaged sites and staff has submitted a Request for Public Assistance. At the request of the National Marine Fisheries Service (NMFS), Ms. Gingras reported the NMFS, Reclamation and staff toured some of the South Coast Conduit stream crossings, identified the approximate location of the secured pipeline, viewed various components of the Cachuma Project and Hilton Creek and visited some locations in the Lower Santa Ynez River.

12. ENGINEER'S REPORT

- Climate Conditions
- Lake Elevation Projections
- January Storm Disaster Recovery
- Infrastructure Improvement Projects

Mr. Degner presented the Engineer's Report, with particular emphasis on the status of the Bradbury Dam controlled release, the reservoir having reached full capacity. Mr. Papen shared dramatic photos of the release. Mr. Degner reported that Cachuma Project water allocations were expected to increase to 100%. He provided photos and discussed the various storm damages sustained to COMB infrastructure. Mr. Degner advised that staff would shift gears in work plans, focusing on the March South Reach shutdown and Ortega reservoir cleaning. The Lillingston project will be delayed. Finally, Mr. Degner noted that Phase II water quality sampling would occur in April and is expected to produce results showing changed conditions.

13. OPERATIONS DIVISION REPORT

- Lake Cachuma Operations
- Operation and Maintenance Activities

Mr. King presented the Operations Division Report, advising that rain and debris removal, as well as protection of the conduit, had been staff's focus. He reported that level transducers at Ortega reservoir had been replaced. He touched on the sonar survey at Lake Cachuma and reviewed the routine Operations tasks accomplished. Mr. King noted that staff would be repairing the log boom at the North Portal and fielded questions from the Board.

14. FISHERIES DIVISION REPORT

- LSYR Steelhead Monitoring Elements
- Tributary Project Updates
- Surcharge Water Accounting
- Reporting/Outreach/Training

Mr. Robinson presented the Fisheries Division report with an update on the Lake Cachuma spill. He advised that there was plenty of flow to Hilton Creek and the Highway 154 bridge monitoring sites. Mr. Robinson further stated that trapping had ceased and staff was focusing on the Annual Monitoring Report. Finally, he reported that HDR Engineering would be on site to assess the fish passages for storm damages and potential repairs.

15. PROGRESS REPORT ON LAKE CACHUMA OAK TREE PROGRAM

- Maintenance and Monitoring

Mr. Robinson advised that work on oak tree inventory was progressing but noted two areas of concern, the parking lot at Live Oak Campground and the Mohawk area at Lake Cachuma Park. Storm damage to trees at both sites will be assessed to determine which trees are salvageable, should be relocated or must be replaced.

16. MONTHLY CACHUMA PROJECT REPORTS

- a. Cachuma Water Reports
- b. Cachuma Reservoir Current Conditions
- c. Lake Cachuma Quagga Survey

Ms. Gingras noted that the Cachuma Project Reports did not contain any unusual information. She stated that they would look quite different next month, given the inflow of water to the reservoir.

17. DIRECTORS' REQUESTS FOR AGENDA ITEMS FOR FUTURE MEETING

Director Hayman requested an update regarding any potential changes to planned operations or the Infrastructure Improvement Plan in light of the change in drought conditions.

18. [CLOSED SESSION]: CONFERENCE WITH LEGAL COUNSEL: EXISTING /POTENTIAL LITIGATION

- a. [Government Code Section 54956.9(d)(1)]
Name of matter: *Kimball-Griffith L.P. v. Brenda Wren Burman, et al.*, Case No. 2:20-cv-10647
– Request for Declaratory and Injunctive Relief
- b. [Government Code Section 54956.9(d)(1)]
Name of matter: *Stephen Timothy Buynak, Jr. and Gloria Ann Buynak, as Trustees of the Buynak 1991 Family Revocable Trust v. United States Department of the Interior, et al.*, Case No. 2:22-cv-07271 – Complaint For Injunctive and Declaratory Relief to Enforce Plaintiffs' Riparian Water Rights
- c. [Government Code Section 54956.9(d)(2)]
Potential Litigation: Conference with Legal Counsel
- d. [Government Code Section 54956.9(d)(2)]
Potential Litigation: Conference with Legal Counsel

The Board adjourned to Closed Session at 3:15 PM.

19. RECONVENE INTO OPEN SESSION

[Government Code Section 54957.7]
Disclosure of actions taken in closed session, as applicable
[Government Code Section 54957.1]

- 18a. Name of matter: *Kimball-Griffith L.P. v. Brenda Wren Burman, et al.*, Case No. 2:20-cv-10647
– Request for Declaratory and Injunctive Relief
- 18b. Name of matter: *Stephen Timothy Buynak, Jr. and Gloria Ann Buynak, as Trustees of the Buynak 1991 Family Revocable Trust v. United States Department of the Interior, et al.*, Case No. 2:22-cv-07271 – Complaint For Injunctive and Declaratory Relief to Enforce Plaintiffs' Riparian Water Rights
- 18c. Potential Litigation: Conference with Legal Counsel
- 18d. Potential Litigation: Conference with Legal Counsel

The Board reconvened into Open Session at 5:12 PM. There was no reportable action for any of items 18a., 18b., 18c. or 18d.

20. MEETING SCHEDULE

- **Regular Board Meeting – March 27, 2023 at 1:00 PM**
- **Board Packages available on COMB website www.cachuma-board.org**

21. COMB ADJOURNMENT

There being no further business, the meeting was adjourned at 5:13 PM.

Respectfully submitted,

Janet Gingras, Secretary of the Board

	<i>Approved</i>
√	<i>Unapproved</i>

APPROVED:

Polly Holcombe, President of the Board

Cachuma Operation & Maintenance Board
Statement of Net Position

As of February 28, 2023

UNAUDITED

February 28, 2023

ASSETS

Current Assets

Checking/Savings

Trust Funds

1210 · Warren Act Trust Fund \$ 328,658.66

1220 · Renewal Fund 41,122.33

Total Trust Funds \$ 369,780.99

1050 · General Fund 487,213.34

1100 · Revolving Fund 194,824.09

Total Checking/Savings 1,051,818.42

Accounts Receivable

1301 · Accounts Receivable 1,570.00

Total Accounts Receivable 1,570.00

Other Current Assets

1010 · Petty Cash 500.00

1200 · LAIF 1,358,791.68

1303 · Bradbury SOD Act Assmnts Rec 220,819.00

1304 · Lauro Dam SOD Assesmnt Rec 33,776.14

1305 · Accrued Interest Receivable 2,152.92

1400 · Prepaid Insurance 11,512.72

1900 · Deposits 5,868.34

Total Other Current Assets 1,633,420.80

Total Current Assets 2,686,809.22

Fixed Assets

1500 · Vehicles 514,898.60

1505 · Office Furn & Equipment 258,022.85

1510 · Mobile Offices 424,910.38

1515 · Field Equipment 546,703.62

1525 · Paving 38,351.00

1530 · Construction in Progress 258,766.83

1550 · Accumulated Depreciation (1,084,071.34)

Total Fixed Assets 957,581.94

Other Assets

1910 · LT Bradbury SOD Act Assess Rec 3,836,553.07

1920 · LT Lauro SOD Act Assess Rec 705,536.76

1922 · Deferred O/F of Res (GASB 68) 479,670.00

1923 · Deferred Outflow (GASB 75) 761,719.00

Total Other Assets 5,783,478.83

TOTAL ASSETS \$ **9,427,869.99**

**Cachuma Operation & Maintenance Board
Statement of Net Position**

As of February 28, 2023
UNAUDITED

February 28, 2023

LIABILITIES & NET POSITION

Liabilities

Current Liabilities

Accounts Payable

2200 · Accounts Payable \$ 241,585.60

Total Accounts Payable 241,585.60

Other Current Liabilities

2505 · Accrued Wages 26,770.37

2550 · Vacation/Sick 223,146.58

2561 · Bradbury Dam SOD Act 220,818.99

2563 · Lauro Dam SOD Act 33,776.14

2565 · Accrued Interest SOD Act 40,842.00

2590 · Deferred Revenue 369,780.99

Total Other Current Liabilities 915,135.07

Total Current Liabilities 1,156,720.67

Long Term Liabilities

2602 · LT SOD Act Liability-Bradbury 3,836,543.07

2603 · LT SOD Act Liability - Lauro 705,536.76

2604 · OPEB LT Liability 3,357,104.00

2610 · Net Pension Liability (GASB 68) 1,162,437.00

2611 · Deferred I/F of Res (GASB 68) 1,102,745.00

2612 · Deferred I/F of Res (GASB 75) 1,140,861.00

Total Long Term Liabilities 11,305,226.83

Total Liabilities 12,461,947.50

Net Position

3000 · Opening Balance Net Position (5,296,580.05)

3901 · Retained Net Assets 1,764,686.65

Net Surplus / Deficit 497,815.89

Total Net Position (3,034,077.51)

TOTAL LIABILITIES & NET POSITION \$ **9,427,869.99**

Cachuma Operation & Maintenance Board
Statement of Revenues and Expenditures (Unaudited)
 Budget vs. Actuals July 2022 - June 2023

	Fisheries				Operations				TOTAL			
	Jul '22 - Feb 23	Budget	\$ Over / (Under) Budget	% of Budget	Jul '22 - Feb 23	Budget	\$ Over / (Under) Budget	% of Budget	Jul '22 - Feb 23	Budget	\$ Over / (Under) Budget	% of Budget
Revenue												
3000 REVENUE												
3001 · O&M Budget (Qtrly Assessments)	\$ 795,542.00	\$ 1,153,196.00	\$ (357,654.00)	68.99%	\$ 4,223,329.00	\$ 4,951,331.00	\$ (728,002.00)	85.3%	\$ 5,018,871.00	\$ 6,104,527.00	\$ (1,085,656.00)	82.22%
3006 · Warren Act	52,843.06	118,293.00	-65,449.94	44.67%	0.00				52,843.06	118,293.00	-65,449.94	44.67%
3007 · Renewal Fund	14,162.87	155,723.00	-141,560.13	9.1%	0.00				14,162.87	155,723.00	-141,560.13	9.1%
3010 · Interest Income	0.00				16,230.35	0.00	16,230.35	100.0%	16,230.35	0.00	16,230.35	100.0%
3014 · Non-Member Agency Revenue	30,000.00	0.00	30,000.00	100.0%	0.00				30,000.00	0.00	30,000.00	100.0%
3020 · Misc Income	0.00				16,948.17	0.00	16,948.17	100.0%	16,948.17	0.00	16,948.17	100.0%
3021 · Grant Income	2,690.43	0.00	2,690.43	100.0%	442.00	0.00	442.00	100.0%	3,132.43	0.00	3,132.43	100.0%
3035 · Cachuma Project Betterment Fund	100,000.00	90,000.00	10,000.00	111.11%	0.00				100,000.00	90,000.00	10,000.00	111.11%
3044 · DWR Drought Relief Grant	0.00				1,140,123.40	2,250,000.00	-1,109,876.60	50.67%	1,140,123.40	2,250,000.00	-1,109,876.60	50.67%
3045 · USBR WaterSmart Grant	0.00				743,950.00	750,000.00	-6,050.00	99.19%	743,950.00	750,000.00	-6,050.00	99.19%
3046 · CVWD Cooperative Agrmnt Funding	0.00				0.00	550,000.00	-550,000.00	0.0%	0.00	550,000.00	-550,000.00	0.0%
Total 3000 REVENUE	\$ 995,238.36	\$ 1,517,212.00	\$ (521,973.64)	65.6%	\$ 6,141,022.92	\$ 8,501,331.00	\$ (2,360,308.08)	72.24%	\$ 7,136,261.28	\$ 10,018,543.00	\$ (2,882,281.72)	71.23%
Expense												
3100 · LABOR - OPERATIONS	\$ -	\$ -	\$ -	0.0%	\$ 606,709.53	\$ 1,090,525.00	\$ (483,815.47)	55.64%	\$ 606,709.53	\$ 1,090,525.00	\$ (483,815.47)	55.64%
3200 VEH & EQUIPMENT												
3201 · Vehicle/Equip Mtce	0.00				22,958.92	40,000.00	-17,041.08	57.4%	22,958.92	40,000.00	-17,041.08	57.4%
3202 · Fixed Capital	0.00				0.00	150,000.00	-150,000.00	0.0%	0.00	150,000.00	-150,000.00	0.0%
3203 · Equipment Rental	0.00				0.00	5,000.00	-5,000.00	0.0%	0.00	5,000.00	-5,000.00	0.0%
3204 · Miscellaneous	0.00				6,546.66	10,000.00	-3,453.34	65.47%	6,546.66	10,000.00	-3,453.34	65.47%
Total 3200 VEH & EQUIPMENT	0.00				29,505.58	205,000.00	-175,494.42	14.39%	29,505.58	205,000.00	-175,494.42	14.39%
3300 · CONTRACT LABOR												
3301 · Conduit, Meter, Valve & Misc	0.00				4,160.48	20,000.00	-15,839.52	20.8%	4,160.48	20,000.00	-15,839.52	20.8%
3302 · Buildings & Roads	0.00				3,453.48	20,000.00	-16,546.52	17.27%	3,453.48	20,000.00	-16,546.52	17.27%
3303 · Reservoirs	0.00				16,147.40	60,000.00	-43,852.60	26.91%	16,147.40	60,000.00	-43,852.60	26.91%
3304 · Engineering, Misc Services	0.00				0.00	30,000.00	-30,000.00	0.0%	0.00	30,000.00	-30,000.00	0.0%
Total 3300 · CONTRACT LABOR	0.00				23,761.36	130,000.00	-106,238.64	18.28%	23,761.36	130,000.00	-106,238.64	18.28%
3400 · MATERIALS & SUPPLIES												
3401 · Conduit, Meter, Valve & Misc	0.00				29,754.15	65,000.00	-35,245.85	45.78%	29,754.15	65,000.00	-35,245.85	45.78%
3402 · Buildings & Roads	0.00				693.10	15,000.00	-14,306.90	4.62%	693.10	15,000.00	-14,306.90	4.62%
3403 · Reservoirs	0.00				3,007.11	5,000.00	-1,992.89	60.14%	3,007.11	5,000.00	-1,992.89	60.14%
Total 3400 · MATERIALS & SUPPLIES	0.00				33,454.36	85,000.00	-51,545.64	39.36%	33,454.36	85,000.00	-51,545.64	39.36%
3500 · OTHER EXPENSES												
3501 · Utilities	0.00				4,431.01	7,000.00	-2,568.99	63.3%	4,431.01	7,000.00	-2,568.99	63.3%
3502 · Uniforms	0.00				344.79	5,750.00	-5,405.21	6.0%	344.79	5,750.00	-5,405.21	6.0%
3503 · Communications	0.00				7,075.87	15,800.00	-8,724.13	44.78%	7,075.87	15,800.00	-8,724.13	44.78%
3504 · USA & Other Services	0.00				4,122.10	7,250.00	-3,127.90	56.86%	4,122.10	7,250.00	-3,127.90	56.86%
3505 · Miscellaneous	0.00				6,935.40	12,000.00	-5,064.60	57.8%	6,935.40	12,000.00	-5,064.60	57.8%
3506 · Training	0.00				2,001.93	3,000.00	-998.07	66.73%	2,001.93	3,000.00	-998.07	66.73%
3507 · Permits	0.00				15,572.17	0.00	15,572.17	100.0%	15,572.17	0.00	15,572.17	100.0%
Total 3500 · OTHER EXPENSES	0.00				40,483.27	50,800.00	-10,316.73	79.69%	40,483.27	50,800.00	-10,316.73	79.69%

Cachuma Operation & Maintenance Board
Statement of Revenues and Expenditures (Unaudited)
 Budget vs. Actuals July 2022 - June 2023

	Fisheries				Operations				TOTAL			
	Jul '22 - Feb 23	Budget	\$ Over / (Under)		Jul '22 - Feb 23	Budget	\$ Over / (Under)		Jul '22 - Feb 23	Budget	\$ Over / (Under)	
			Budget	% of Budget			Budget	% of Budget			Budget	% of Budget
4100 · LABOR - FISHERIES	466,405.91	785,564.00	-319,158.09	59.37%	0.00				466,405.91	785,564.00	-319,158.09	59.37%
4200 · VEHICLES & EQUIP - FISHERIES												
4270 · Vehicle/Equip Mtce	18,421.28	30,000.00	-11,578.72	61.4%	0.00				18,421.28	30,000.00	-11,578.72	61.4%
4280 · Fixed Capital	0.00	90,000.00	-90,000.00	0.0%	0.00				0.00	90,000.00	-90,000.00	0.0%
4290 · Miscellaneous	0.00	2,500.00	-2,500.00	0.0%	0.00				0.00	2,500.00	-2,500.00	0.0%
Total 4200 · VEHICLES & EQUIP - FISHERIES	18,421.28	122,500.00	-104,078.72	15.04%	0.00				18,421.28	122,500.00	-104,078.72	15.04%
4220 · CONTRACT LABOR - FISHERIES												
4221 · Meters & Valves	0.00	3,000.00	-3,000.00	0.0%	0.00				0.00	3,000.00	-3,000.00	0.0%
4222 · Fish Projects Maintenance	4,921.00	11,100.00	-6,179.00	44.33%	0.00				4,921.00	11,100.00	-6,179.00	44.33%
Total 4220 · CONTRACT LABOR - FISHERIES	4,921.00	14,100.00	-9,179.00	34.9%	0.00				4,921.00	14,100.00	-9,179.00	34.9%
4300 · MATERIALS/SUPPLIES - FISHERIES												
4390 · Miscellaneous	4,075.69	7,000.00	-2,924.31	58.22%	0.00				4,075.69	7,000.00	-2,924.31	58.22%
Total 4300 · MATERIALS/SUPPLIES - FISHERIES	4,075.69	7,000.00	-2,924.31	58.22%	0.00				4,075.69	7,000.00	-2,924.31	58.22%
4500 · OTHER EXPENSES - FISHERIES												
4502 · Uniforms	810.76	5,000.00	-4,189.24	16.22%	0.00				810.76	5,000.00	-4,189.24	16.22%
Total 4500 · OTHER EXPENSES - FISHERIES	810.76	5,000.00	-4,189.24	16.22%	0.00				810.76	5,000.00	-4,189.24	16.22%
4999 · GENERAL & ADMINISTRATIVE												
5000 · Director Fees	0.00				4,020.90	12,400.00	-8,379.10	32.43%	4,020.90	12,400.00	-8,379.10	32.43%
5001 · Director Mileage	0.00				0.00	600.00	-600.00	0.0%	0.00	600.00	-600.00	0.0%
5100 · Legal	0.00				43,846.09	75,000.00	-31,153.91	58.46%	43,846.09	75,000.00	-31,153.91	58.46%
5101 · Audit	0.00				14,774.51	22,750.00	-7,975.49	64.94%	14,774.51	22,750.00	-7,975.49	64.94%
5150 · Unemployment Tax	0.00				0.00	5,000.00	-5,000.00	0.0%	0.00	5,000.00	-5,000.00	0.0%
5200 · Liability Insurance	0.00				38,021.94	33,326.00	4,695.94	114.09%	38,021.94	33,326.00	4,695.94	114.09%
5310 · Postage/Office Exp	0.00				4,309.34	6,000.00	-1,690.66	71.82%	4,309.34	6,000.00	-1,690.66	71.82%
5311 · Office Equip/Leases	0.00				4,804.43	13,440.00	-8,635.57	35.75%	4,804.43	13,440.00	-8,635.57	35.75%
5312 · Misc Admin Expenses	0.00				10,132.36	14,000.00	-3,867.64	72.37%	10,132.36	14,000.00	-3,867.64	72.37%
5313 · Communications	0.00				5,644.89	9,500.00	-3,855.11	59.42%	5,644.89	9,500.00	-3,855.11	59.42%
5314 · Utilities	0.00				5,224.06	9,737.00	-4,512.94	53.65%	5,224.06	9,737.00	-4,512.94	53.65%
5315 · Membership Dues	0.00				11,613.70	11,450.00	163.70	101.43%	11,613.70	11,450.00	163.70	101.43%
5316 · Admin Fixed Assets	0.00				1,989.29	8,000.00	-6,010.71	24.87%	1,989.29	8,000.00	-6,010.71	24.87%
5318 · Computer Consultant	0.00				12,301.03	25,000.00	-12,698.97	49.2%	12,301.03	25,000.00	-12,698.97	49.2%
5325 · Emp Training/Subscriptions	0.00				0.00	2,000.00	-2,000.00	0.0%	0.00	2,000.00	-2,000.00	0.0%
5330 · Admin Travel/Conferences	0.00				2,815.73	2,000.00	815.73	140.79%	2,815.73	2,000.00	815.73	140.79%
5331 · Public Information	0.00				1,609.38	3,500.00	-1,890.62	45.98%	1,609.38	3,500.00	-1,890.62	45.98%
Total 4999 · GENERAL & ADMINISTRATIVE	0.00				161,107.65	253,703.00	-92,595.35	63.5%	161,107.65	253,703.00	-92,595.35	63.5%
5299 · ADMIN LABOR	0.00				356,682.06	631,303.00	-274,620.94	56.5%	356,682.06	631,303.00	-274,620.94	56.5%
5400 · GENERAL & ADMIN - FISHERIES												
5407 · Legal - FD	3,680.00	25,000.00	-21,320.00	14.72%	0.00				3,680.00	25,000.00	-21,320.00	14.72%
5410 · Postage / Office Supplies	2,216.78	4,000.00	-1,783.22	55.42%	0.00				2,216.78	4,000.00	-1,783.22	55.42%
5411 · Office Equipment / Leases	2,514.94	8,533.00	-6,018.06	29.47%	0.00				2,514.94	8,533.00	-6,018.06	29.47%
5412 · Misc. Admin Expense	3,590.02	7,500.00	-3,909.98	47.87%	0.00				3,590.02	7,500.00	-3,909.98	47.87%
5413 · Communications	3,039.56	4,455.00	-1,415.44	68.23%	0.00				3,039.56	4,455.00	-1,415.44	68.23%
5414 · Utilities	2,812.97	5,243.00	-2,430.03	53.65%	0.00				2,812.97	5,243.00	-2,430.03	53.65%
5415 · Membership Dues	6,491.30	7,200.00	-708.70	90.16%	0.00				6,491.30	7,200.00	-708.70	90.16%
5416 · Admin Fixed Assets	1,071.16	3,000.00	-1,928.84	35.71%	0.00				1,071.16	3,000.00	-1,928.84	35.71%
5418 · Computer Consultant	6,623.62	15,000.00	-8,376.38	44.16%	0.00				6,623.62	15,000.00	-8,376.38	44.16%

Cachuma Operation & Maintenance Board
Statement of Revenues and Expenditures (Unaudited)
 Budget vs. Actuals July 2022 - June 2023

	Fisheries				Operations				TOTAL			
	Jul '22 - Feb 23	Budget	\$ Over / (Under)		Jul '22 - Feb 23	Budget	\$ Over / (Under)		Jul '22 - Feb 23	Budget	\$ Over / (Under)	
			Budget	% of Budget			Budget	% of Budget			Budget	% of Budget
5425 · Employee Education/Subscription	250.00	2,500.00	-2,250.00	10.0%	0.00				250.00	2,500.00	-2,250.00	10.0%
5426 · Director Fees	2,165.10	6,700.00	-4,534.90	32.32%	0.00				2,165.10	6,700.00	-4,534.90	32.32%
5427 · Director Mileage	0.00	300.00	-300.00	0.0%	0.00				0.00	300.00	-300.00	0.0%
5430 · Travel	3,796.32	2,500.00	1,296.32	151.85%	0.00				3,796.32	2,500.00	1,296.32	151.85%
5431 · Public Information	866.59	1,500.00	-633.41	57.77%	0.00				866.59	1,500.00	-633.41	57.77%
5441 · Audit	7,955.49	12,250.00	-4,294.51	64.94%	0.00				7,955.49	12,250.00	-4,294.51	64.94%
5443 · Liab & Property Ins	20,473.34	17,745.00	2,728.34	115.38%	0.00				20,473.34	17,745.00	2,728.34	115.38%
Total 5400 · GENERAL & ADMIN - FISHERIES	67,547.19	123,426.00	-55,878.81	54.73%	0.00				67,547.19	123,426.00	-55,878.81	54.73%
5499 · ADMIN LABOR-FISHERIES	144,739.42	274,622.00	-129,882.58	52.71%	0.00				144,739.42	274,622.00	-129,882.58	52.71%
5510 · Integrated Reg. Water Mgt Plan	0.00				0.00	5,000.00	-5,000.00	0.0%	0.00	5,000.00	-5,000.00	0.0%
6199 · SPECIAL PROJECTS												
6097 · GIS and Mapping	0.00				13,462.96	10,000.00	3,462.96	134.63%	13,462.96	10,000.00	3,462.96	134.63%
6105 · ROW Management Program	0.00				0.00	20,000.00	-20,000.00	0.0%	0.00	20,000.00	-20,000.00	0.0%
6110 · SCADA Improvements & Support	0.00				3,968.65	35,000.00	-31,031.35	11.34%	3,968.65	35,000.00	-31,031.35	11.34%
6115 · COMB Blding Improvemnts & Maint	0.00				20,476.18	45,000.00	-24,523.82	45.5%	20,476.18	45,000.00	-24,523.82	45.5%
6125 · 2023 Winter Storm Repairs	0.00				16,250.00	0.00	16,250.00	100.0%	16,250.00	0.00	16,250.00	100.0%
6138 · Cachuma Watershed Mgmt Study	0.00				7,477.79	50,000.00	-42,522.21	14.96%	7,477.79	50,000.00	-42,522.21	14.96%
Total 6199 · SPECIAL PROJECTS	0.00				61,635.58	160,000.00	-98,364.42	38.52%	61,635.58	160,000.00	-98,364.42	38.52%
6000 · INFRASTRUCTURE IMPROVEMENT PROJ												
6096 · SCC Structure Rehabilitation	0.00				36,319.65	440,000.00	-403,680.35	8.25%	36,319.65	440,000.00	-403,680.35	8.25%
6120 · Lake Cachuma Secured Pipeline	0.00				4,466,856.35	4,400,000.00	66,856.35	101.52%	4,466,856.35	4,400,000.00	66,856.35	101.52%
6136 · SCC Isolation Valve Evaluation	0.00				46,255.50	500,000.00	-453,744.50	9.25%	46,255.50	500,000.00	-453,744.50	9.25%
6137 · SCC Lower Reach Lateral Structu	0.00				0.00	550,000.00	-550,000.00	0.0%	0.00	550,000.00	-550,000.00	0.0%
Total 6000 · INFRASTRUCTURE IMPROVEMENT PROJ	0.00				4,549,431.50	5,890,000.00	-1,340,568.50	77.24%	4,549,431.50	5,890,000.00	-1,340,568.50	77.24%
6200 · PROGRAM SUPPORT SERVICES												
6201 · FMP Implementation	692.10	42,000.00	-41,307.90	1.65%	0.00				692.10	42,000.00	-41,307.90	1.65%
6202 · GIS and Mapping	7,568.51	10,000.00	-2,431.49	75.69%	0.00				7,568.51	10,000.00	-2,431.49	75.69%
6205 · USGS Stream Gauge Program	52,770.00	105,000.00	-52,230.00	50.26%	0.00				52,770.00	105,000.00	-52,230.00	50.26%
6225 · 2023 Winter Storm Repairs	3,432.16	0.00	3,432.16	100.0%	0.00				3,432.16	0.00	3,432.16	100.0%
Total 6200 · PROGRAM SUPPORT SERVICES	64,462.77	157,000.00	-92,537.23	41.06%	0.00				64,462.77	157,000.00	-92,537.23	41.06%
6300 · HABITAT IMPROVEMENT PROJECTS												
6207 · Oak Tree Restoration Program	1,071.48	18,000.00	-16,928.52	5.95%	0.00				1,071.48	18,000.00	-16,928.52	5.95%
6303 · Tributary Projects Support	3,219.00	10,000.00	-6,781.00	32.19%	0.00				3,219.00	10,000.00	-6,781.00	32.19%
Total 6300 · HABITAT IMPROVEMENT PROJECTS	4,290.48	28,000.00	-23,709.52	15.32%	0.00				4,290.48	28,000.00	-23,709.52	15.32%
Total Expense	\$ 775,674.50	\$ 1,517,212.00	\$ (741,537.50)	51.13%	\$ 5,862,770.89	\$ 8,501,331.00	\$ (2,638,560.11)	68.96%	\$ 6,638,445.39	\$ 10,018,543.00	\$ (3,380,097.61)	66.26%
Net Surplus / Deficit	\$ 219,563.86	\$ -	\$ 219,563.86	100.0%	\$ 278,252.03	\$ -	\$ 278,252.03	100.0%	\$ 497,815.89	\$ -	\$ 497,815.89	100.0%

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CACHUMA OPERATION & MAINTENANCE BOARD

BOARD MEMORANDUM

Date:	March 27, 2023
Submitted by:	Janet Gingras

SUBJECT: Investment Report – February 28, 2023

RECOMMENDATION

The Board of Directors receive and file the Cachuma Operation & Maintenance Board Investment Report as of February 28, 2023.

DISCUSSION

Cash and investment programs are maintained in accordance with California Government Code Section 53600 et seq. and COMB's adopted investment policy. These policies ensure proper control and safeguards are maintained throughout the financial transaction process. Pursuant to State law, the COMB Board adopts a detailed investment policy through a Board resolution on an annual basis.

Reports on COMB's investment portfolio and cash position are developed and presented to the COMB Board on a monthly basis, in conformity with the California Government Code.

Unrestricted Cash

Unrestricted cash exceeding current operating needs is invested in LAIF to generate interest income. The average effective yield rate, as of February 2023, is reported at 2.624%.

See Table 1 below for a summary of balances held in unrestricted accounts.

Table 1			
Unrestricted Reserve Funds			
Local Agency Investment Fund (LAIF)			
	1/31/2023	\$	2,458,791.68
(+) Deposits/Credits			-
(-) Checks/Withdrawals			(1,100,000.00)
Statement Balance	2/28/2023	\$	1,358,791.68

Restricted Cash

The Cachuma Project Warren Act Trust Fund (Trust Fund) and Cachuma Project Master Contract Renewal Fund (Renewal Fund) are two separate funds that have been established through contracts with the U.S. Bureau of Reclamation (Reclamation). The Trust Fund and the Renewal Fund require annual and five-year plans which are used to inform the Funds Committee in making decisions on expenditures for betterment of the Cachuma Project.

See Table 2 below for a summary of balances held in restricted accounts.

Table 2			
Restricted Reserve Funds			
American Riviera Bank Renewal Account			
Previous Balance	1/31/2023	\$	41,122.30
(+) Deposits/Credits			-
(-) Checks/Withdrawals			-
Statement Balance	2/28/2023	\$	41,122.30
American Riviera Bank Warren Act Trust Fund			
Previous Balance	1/31/2023	\$	328,658.66
(+) Deposits/Credits			-
(-) Checks/Withdrawals			-
Statement Balance	2/28/2023	\$	328,658.66

STATEMENT

The above statement of investment activity for the month of February 2023, complies with legal requirements for investment policy of government agencies, AB 1073. I hereby certify that it constitutes a complete and accurate summary of all American Riviera Bank and LAIF investments of this agency for the period indicated.



 Secretary

Cachuma Operation & Maintenance Board

Paid Claims

As of February 28, 2023

Date	Num	Name	Memo	Amount
1050 - General Fund				
02/06/2023	29873	Association of Ca Water Agencies/JPIA	March 2023 Health Benefits Premium	-28,096.60
02/06/2023	29874	AT&T	Long Distance Service 12/28/22-01/27/23	-38.83
02/06/2023	29875	Bartlett, Pringle & Wolf, LLP	Audit Services FY 21-22	-6,501.50
02/06/2023	29876	Carpinteria Valley Lumber Company	Supplies (Ops)	-6.71
02/06/2023	29877	City of Santa-Barbara	Trash & Recycling January 2022	-322.23
02/06/2023	29878	Cushman Contracting Corp.	Lake Cachuma Secured Pipeline - Construction Services	-1,122,820.58
02/06/2023	29879	ECHO Communications	Message Service February 2023	-91.60
02/06/2023	29880	Employee Relations, Inc.	Pre-Employment Background Check (Ops & Fisheries)	-752.44
02/06/2023	29881	Federal Express	Shipping (Ops)	-112.71
02/06/2023	29882	Frontier Communications	Phone Service - Main Office Land Lines	-101.59
02/06/2023	29883	Frontier Communications	Phone Service - North Portal	-103.28
02/06/2023	29884	Harrison Hardware	Supplies (Fisheries)	-943.34
02/06/2023	29885	O'Reilly Automotive, Inc.	Automotive Supplies (Ops)	-39.12
02/06/2023	29886	Paychex, Inc. (Payroll)	Payroll & Payroll Tax & Year End Services 1/6/23 1/18/23 2/1/23	-573.20
02/06/2023	29887	Sansum Clinic-Occupational Medicine	Pre-Employment Physical (Fisheries)	-593.00
02/06/2023	29888	Staples Business Credit	Office Supplies (Ops & Fisheries)	-367.46
02/06/2023	29889	SWRCB Fees	Wholesaler Water System Annual Fee 7/1/22-6/30/23	-15,572.17
02/06/2023	29890	Wells Fargo Vendor Fin Serv	Copier Lease - Kyocera Taskalfa 6054ci	-303.41
02/06/2023	29891	Zac Gonzalez Landscaping & Tree Care	Landscape Maintenance January 2022	-480.00
02/06/2023	29892	Payment Stopped - Lost Instrument	Payment Stopped	0.00
02/06/2023	29893	WEX Fleet Universal	Fleet Fuel January 2023	-2,716.31
02/13/2023	29894	American Water Works Association	AWWA Member Dues 4/1/23-3/31/24	-487.00
02/13/2023	29895	Aspect Engineering Group	SCADA Improvements & Support - Server Maintenance	-2,263.75
02/13/2023	29896	Coastal Copy, LP	Copier Maintenance - Kyocera Taskalfas 3253ci & 6054ci	-218.38
02/13/2023	29897	Cox Communications Santa Barbara	Business Internet February 2023	-195.44
02/13/2023	29898	Elijah Papan	Education & Travel (Ops)	-404.74
02/13/2023	29899	Eurofins Eaton Analytical, LLC	Lake Cachuma Water Quality Sampling	-630.00
02/13/2023	29900	Farm Supply Company	Quiota Creek Repair Supplies (Fisheries)	-790.81
02/13/2023	29901	Federal Express	Shipping (Ops)	-305.72
02/13/2023	29902	Home Depot Credit Services	Supplies (Ops & Fisheries)	-989.77
02/13/2023	29903	Impulse Advanced Communications	Phone Service - Main Office	-873.57
02/13/2023	29904	J&C Services	Office Cleaning Service - Weekly 12/30/22-1/20/23	-680.00
02/13/2023	29905	MarBorg Industries	Portable Facilities (Ops)	-423.76
02/13/2023	29906	Milpas Rental	Equipment Rental (Ops)	-182.39
02/13/2023	29907	O'Connor Pest Control	Quarterly Exterminator Services	-175.00
02/13/2023	29908	O'Reilly Automotive, Inc.	Automotive Supplies (Ops)	-283.73
02/13/2023	29909	Pacific Coast Jiffy Lube	2015 Chevy Silverado - Routine Service	-146.48
02/13/2023	29910	Southern California Edison	Electricity - Main Office & Outlying Stations	-1,456.39
02/13/2023	29911	Southern California Edison	Electricity - 1700 Glen Annie Rd Gate	-16.57
02/13/2023	29912	Southern California Edison	Electricity - Outlying Stations (Ops)	-14.06
02/13/2023	29913	Turenchalk Network Services, Inc.	Network Support January 2023 (Ops & Fisheries)	-2,828.20
02/13/2023	29914	Underground Service Alert of So. Calif.	Ticket Charges & Database Fee	-162.25
02/21/2023	29915	Aqua-Flo Supply	Supplies (Ops)	-53.84
02/21/2023	29916	Eurofins Eaton Analytical, LLC	Lake Cachuma Water Quality Sampling	-1,505.00
02/21/2023	29917	Flowers & Associates, Inc.	Lillingston Isolation Valve Projects - Construction Management	-42,432.00
02/21/2023	29918	Geosyntec Consultants	Lake Cachuma Water Quality & Sediment Study - Professional Services	-3,021.76
02/21/2023	29919	Granite Construction	2023 Winter Storm Event - Road Base	-480.71
02/21/2023	29920	HDR Engineering, Inc.	FMP Implementation & Tributary Support - Engineering Services	-8,272.00
02/21/2023	29921	LoopUp, LLC	Conference Calls January 2023	-26.62
02/21/2023	29922	Musick, Peeler & Garrett LLP	General Counsel January 2023 (Ops & Fisheries)	-4,025.00
02/21/2023	29923	Powell Garage	2003 Ford F-150 - Routine Service	-180.23
02/21/2023	29924	Rayne of Santa Barbara Inc	February RO Rental	-32.00
02/21/2023	29925	The Gas Company	Natural Gas - Main Office	-43.14
02/21/2023	29926	Tri-County Locksmiths, Inc	Lock Repair & Key Duplication	-256.98
02/21/2023	29927	Verizon Wireless	Cellular Services - Cells Phones, iPads, Modems (Ops)	-646.24
02/27/2023	29928	Allied Fence Company	Salispuedes Gate Installation	-1,100.00
02/27/2023	29929	American Riviera Bank - Card Service	Acrobat, Storm Repair, GFOA, Website Hosting, Supplies (Ops & Fisheries)	-1,528.11
02/27/2023	29930	Cabela's LLC/Bass Pro LLC	Personal Protective Equipment & Supplies (Fisheries)	-121.00
02/27/2023	29931	Cushman Contracting Corp.	Lake Cachuma Secured Pipeline - Construction Services	-19,336.79
02/27/2023	29932	Eurofins Eaton Analytical, LLC	Lake Cachuma Water Quality Sampling	-2,765.00

Cachuma Operation & Maintenance Board

Paid Claims

As of February 28, 2023

Date	Num	Name	Memo	Amount
02/27/2023	29933	Flowers & Associates, Inc.	EPF Secured Pipeline Project - Construction Management	-5,864.00
02/27/2023	29934	Granite Construction	2023 Winter Storm Event - Road Base	-181.14
02/27/2023	29935	Integra Clear Co	Water Treatment Supplies (Ops)	-3,831.28
02/27/2023	29936	PG&E	Electricity - North Portal	-449.54
02/27/2023	29937	Sparkletts	Operations Safety	-99.87
02/27/2023	29938	Wells Fargo Vendor Fin Serv	Copier Leases - Kyocera Taskalfas 3253ci & 6054ci	-427.39
Total 1050 · General Fund				<u>-1,290,743.73</u>
TOTAL				<u>-1,290,743.73</u>

APPROVALS

CACHUMA OPERATION & MAINTENANCE BOARD

BOARD MEMORANDUM

Date:	March 27, 2023
Submitted by:	Joel Degner and Tim Robinson
Approved by:	Janet Gingras

SUBJECT: Purchase of Fleet Vehicles

RECOMMENDATION:

The Board of Directors receive information on the purchase of two replacement fleet vehicles, specifically one heavy duty fleet vehicle for the Operations Division in an amount not-to-exceed \$117,140; and one electric vehicle for the Fisheries Division in an amount not-to-exceed \$97,400; and authorize the General Manager to execute two separate purchase orders to purchase the fleet vehicles.

SUMMARY:

COMB planned to purchase two fleet vehicles as considered in the capital planning matrix developed for COMB vehicle replacement purchases. The Fiscal Year 2022-23 Operating Budget contains funding for the purchase of a heavy duty dump truck for the Operations Division and an electric truck for the Fisheries Division, which conforms to our Sustainability Plan. Staff has been conducting an ongoing search for the appropriate replacement vehicles that would be most cost effective and best meet our needs. However, the current vehicle market is still experiencing a shortage in obtaining specific vehicles and when found, the vehicles are sold in a few days. Staff recently identified two vehicles that are currently in stock and available for procurement. Both dealerships were able to place a "hold" on the vehicles until the Board authorized purchase orders to be executed.

Staff obtained two comparative quotes for the purchase of a 2023 Ford F-750 dump truck. The lowest purchase price for the heavy duty vehicle was obtained from Commerce Truck and Equipment Sales in Norco, CA in the amount of \$117,140 including taxes, license and doc fees. This dealership offered COMB a \$2,000 discount off MSRP, which is highly unusual during these inflationary times. Staff is seeking approval to purchase the dump truck in an amount not-to-exceed \$117,140.

Last year, staff placed a \$100 deposit with a local Ford dealership to secure a spot in line just to order an electric truck. Since this vehicle is so popular, stock is extremely limited, and wait times are multiple years, Ford has stopped taking orders to build this vehicle for the near term. A few of the local Ford dealerships have obtained these trucks which had been previously special ordered over two years ago by other individuals, but for various reasons, not sold. Two local Ford dealerships have an electric truck in stock. Most dealerships are placing a markup of \$10k to \$20k per vehicle in this market. Santa Maria Ford does not markup over MSRP and offered the lowest price for the equipment package staff recommends at a cost of \$97,400, including tax, license and doc fees. The electric truck purchase includes a charging station. Staff is seeking approval to purchase the electric truck in an amount not-to-exceed \$97,400.

FISCAL IMPACTS:

The current fiscal year operating budget contains funding for the purchase of the replacement fleet vehicles.

LIST OF EXHIBITS:

N/A

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CACHUMA OPERATION & MAINTENANCE BOARD

BOARD MEMORANDUM

Date:	March 27, 2023
Submitted by:	Joel Degner, Elijah Papen
Approved by:	Janet Gingras

SUBJECT: Resolution No. 778 – COMB’s Local Hazard Mitigation Plan (Annex) to 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan

RECOMMENDATION:

The Board of Directors review the COMB Local Hazard Mitigation Plan (Annex) to the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan and adopt Resolution No. 778 approving the Plan.

SUMMARY:

The purpose of a Hazard Mitigation Plan (HMP) is to identify policies and actions that can be implemented to reduce risk and future losses from disasters. HMPs create a framework for risk-based decision making to reduce damage to lives, property and local economies by focusing resources on the greatest risks and vulnerabilities. State, local and tribal governments benefit from HMP adoption in the following ways:

- Creating a more disaster-resistant and resilient community.
- Accruing points under the National Flood Insurance Program's Community Rating System (CRS)
- Gaining access to hazard mitigation assistance programs and funding, including Hazard Mitigation Grant Programs, Pre-Disaster Mitigation, Flood Mitigation Assistance and Severe Repetitive Loss Grant Programs.



The County of Santa Barbara is in the process of updating its 2022 Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The purpose of the MJHMP Update is to improve disaster preparedness and reduce or eliminate risks to community, life, and property. The MJHMP was last updated in 2017 and this 2022 update will apply as soon as approval has been provided by FEMA and CalOES.

The MJHMP Update will address hazard mitigation planning for all participating agencies, including several key components:

- **Capability Assessment:** Provides a detailed overview of the plans and programs that manage and respond to potential hazards.
- **Hazards Assessment:** Compiles the most updated data related to the county's potential hazards, such as fire hazard, coastal erosion, and flooding hazard zones.
- **Vulnerability Assessment:** Identifies areas of the county that are vulnerable to one or more known hazards or lack of protective infrastructure.
- **Mitigation Strategies:** Details and prioritizes plans and projects to reduce the potential impacts of known hazards.

The 2022 Santa Barbara County MJHMP Update includes coordination within the County and with 8 local cities, as well as 6 special districts (Cachuma Operation and Maintenance Board, Carpinteria Valley Water District, Montecito Fire Protection District, Montecito Water District, Goleta Water District, and the Santa Maria Valley Water Conservation District). The MJHMP will also be supported and reviewed by the State of California Governor's Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA).

COMB has prepared an Annex for inclusion in the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan which covers specific hazards and potential mitigation actions within our area of responsibility. One of the eligibility criteria for receiving HMGP funding is that the sub-applicant must have a FEMA approved and adopted Local or Multi-Jurisdictional Hazard Mitigation Plan at the time of the award. COMB's Annex has been submitted to both CalOES and FEMA for approval. The County's MJHMP has also been submitted and is awaiting approval. The County has assured staff that since the County had previously submitted their MJHMP and it is currently in the review process, entities will be eligible for hazard mitigation funding under DR-4683 (January storms).

LIST OF EXHIBITS:

1. Cachuma Operation and Maintenance Board Annex to the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan
2. Resolution No. 778

Cachuma Operation and Maintenance Board **Local Hazard Mitigation Plan**



**An Annex to the Santa Barbara County
Multi-Jurisdictional Hazard Mitigation Plan**

February 2023



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1.0 INTRODUCTION

Natural and human-caused disasters can lead to death, injury, property damage, and interruption of business and government services. When they occur, the time, money, and effort to respond to and recover from these disasters divert public resources and attention from other important programs and activities.

However, the impact of foreseeable yet often unpredictable natural and human-caused events can be reduced through mitigation planning. History has demonstrated that it is less expensive to mitigate against disaster damage than to repeatedly repair damage in the aftermath. A mitigation plan states the aspirations and specific courses of action jurisdictions intend to follow to reduce vulnerability and exposure to future hazard events.

Cachuma Operation and Maintenance Board (COMB) recognizes the consequences of disasters and the need to reduce the impacts of all hazards, natural and human-caused. This annex was prepared in 2022 as part of the update to the County of Santa Barbara (County) Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). This annex serves as the Local Hazard Mitigation Plan (LHMP) for COMB. The LHMP was last comprehensively updated as an annex to the 2017 MJHMP. Since then, COMB has:

- Incorporated the LHMP goals, objectives, and mitigation actions into its operations, management, and infrastructure planning and processes, including the infrastructure improvement and emergency response plans.
- Used the LHMP's assessment of capabilities, hazards, and vulnerabilities to inform planning, infrastructure improvements, and programs, including COMB's risk and resiliency assessment.
- Implemented mitigation actions through COMB's infrastructure improvement program, maintenance programs, grant programming, community outreach, and budget process.
- Reviewed and evaluated mitigation actions before and after disasters, including wildfires within the Lake Cachuma watershed.

This update to the LHMP builds on and refines the MJHMP's assessment of hazards and vulnerabilities countywide to develop a mitigation plan for COMB. COMB participated in the 2022 MJHMP Mitigation Advisory Committee (MAC) and Local Planning Team (LPT), reviewed all portions of the MJHMP pertaining to COMB, and incorporated relevant components into this annex. It contains updated capability assessment information, a current vulnerability assessment, and an updated/revised mitigation strategy. The methodology and process for developing this annex build on approaches employed in the 2022 MJHMP and are explained throughout the following sections.

The 2022 MJHMP update was prepared with input and coordination from each of the county's eight incorporated cities, six special districts, the County, citizen participation, responsible officials, and support from the State of California Governor's Office of Emergency Services (CalOES) and the Federal Emergency Management Agency (FEMA). The process to update the MJHMP and this LHMP included over a year of coordination with representatives from all participating agencies within the County and County representatives who comprised the MAC (described further in Section 3.0 below). COMB is a participating agency in the County's MJHMP update.

COMB's LHMP is used by local emergency management teams, decision-makers, and agency staff to implement needed mitigation to address known hazards. The MJHMP and this annex can also be used as a tool for all stakeholders to increase community awareness of local hazards and risks and provide information about options and resources available to reduce those risks. Informing and educating the public about potential hazards helps all county residents and visitors protect themselves against their effects.

Risk assessments were performed that identified and evaluated priority hazards that could impact COMB. Vulnerability assessments summarize the identified hazards' impact on COMB. Estimates of potential dollar losses to vulnerable structures are presented. The risk and vulnerability assessments were used to determine mitigation goals and objectives to minimize near-term and long-term vulnerabilities to the identified hazards. These goals and objectives are the foundation for a comprehensive range of specific attainable mitigation actions (see Section 7.0, *Mitigation Strategy*).

1.1 BACKGROUND

During the last decade, wildfires, severe drought, and natural disasters within the Lake Cachuma watershed and the South Coast of Santa Barbara County have devastated life, property, and the natural environment. The long-term impacts of these natural disasters on water supply and water quality are still under investigation. Responding and recovering from these natural disasters deplete financial resources that otherwise would be dedicated to other important programs of work within the Cachuma Project. This plan, the COMB LHMP Annex to the Santa Barbara County MJHMP 2022 update, details current hazard mitigation strategies and future projects to improve system resilience against hazards.

FEMA defines hazard mitigation as "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." For this document, hazards include natural hazards, and also select anthropogenic hazards as applicable. FEMA defines a "hazard" as "any event or condition with the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, environmental damage, business interruption, or other losses." Effective mitigation begins with identifying the threats and hazards that could affect a community and determining the associated vulnerabilities and consequences. Understanding risks makes it possible to develop strategies and plans to manage them. The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses.

The Directors of COMB recognize the need to address, prepare, and mitigate natural disasters within the watershed and the Cachuma Project system to protect water conveyance structures and safeguard valuable resources. Emergency preparedness will ensure a prompt response to hazardous scenarios for the protection of public safety and financial stability. In short, COMB is interested in hazard mitigation planning to reduce or eliminate the long-term risk to human safety and property caused by natural and anthropogenic hazards.

This COMB LHMP intends to identify potential hazards within our area of responsibility, assess vulnerability and risk to assets, implement adequate measures to reduce losses from natural and anthropogenic disasters, and ensure that critical services and facilities that sustain the South Coast communities of Santa Barbara County will continue to function after a disaster.

The purpose of developing any Hazard Mitigation Plan (HMP) is to initiate and eventually implement construction projects to achieve the stated goal of hazard mitigation. One of the larger projects currently being considered is the Lake Cachuma Emergency Pumping Facility Secured Pipeline Project, which would provide an alternate intake and restore access to water supplies during prolonged drought. Each proposed project will be designed to mitigate hazards occurring in Santa Barbara County. The COMB LHMP will be reviewed and periodically updated to include additional projects as they are added to approved COMB capital planning documents, described in Section 8.0, *Plan Maintenance* below.

2.0 PLAN PURPOSE AND AUTHORITY

Federal legislation historically provided funding for disaster preparedness, response, recovery, and mitigation. The Disaster Mitigation Act (DMA) of 2000, also commonly known as “The 2000 Stafford Act Amendments” (the Act), constitutes an effort by the federal government to reduce the rising cost of disasters. The legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur.

Section 322 of the DMA requires local governments to develop and submit mitigation plans to qualify for the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) funds. The 2022 MJHMP meets the statutory requirements of DMA 2000 (P.L. 106-390), enacted October 30, 2000, and 44 CFR Part 201 – Mitigation Planning, Interim Final Rule, published February 26, 2002. The HMA grants include the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM) program, and the Flood Mitigation Assistance (FMA) program. Additional FEMA mitigation funds include the HMGP Post Fire funding associated with Fire Management Assistance Grant (FMAG) declarations and the Building Resilient Infrastructure and Communities (BRIC) funding associated with the 2018 Disaster Recovery Reform Act (DRRA).

DMA 2000 specifically addresses mitigation planning at the state and local levels. It identifies requirements that allow HMGP funds to be used for planning activities and increases the amount of HMGP funds available to states that have developed a comprehensive, enhanced mitigation plan before a disaster. State, county, and local jurisdictions must have an approved mitigation plan in place before receiving post-disaster HMGP funds. These mitigation plans must demonstrate that their proposed projects are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities.

Local governments have certain responsibilities for implementing Section 322, including:

- Preparing and submitting a local mitigation plan;
- Reviewing and updating the plan every five years; and
- Monitoring mitigation actions and projects.

To facilitate implementation of the DMA 2000, FEMA created an Interim Final Rule (the Rule), published in the Federal Register in February of 2002 in section 201 of 44 CFR. The Rule spells out the mitigation planning criteria for states and local communities. Specific requirements for local mitigation planning efforts are outlined in section §201.6 of the Rule.

In March 2013, FEMA released The Local Mitigation Planning Handbook (Handbook) as the official guide for local governments to develop, update and implement local mitigation plans. The

Handbook complements and references the October 2011 FEMA Local Mitigation Plan Review Guide (Guide) to help “Federal and State officials assess Local Mitigation Plans in a fair and consistent manner.” Local jurisdictions must demonstrate that proposed mitigation actions are based upon a sound planning process that accounts for the inherent risk and capabilities of the individual communities as stated in section §201.5 of the Rule. The Handbook and Guide were consulted to ensure thoroughness, diligence, and compliance with the DMA 2000 planning requirements.

DMA 2000 is intended to facilitate cooperation between state and local authorities, prompting them to work together. It encourages and rewards local and state pre-disaster planning and promotes sustainability as a strategy for disaster resistance. This enhanced planning network is intended to enable local and state governments to articulate accurate needs for mitigation, resulting in a faster allocation of funding and more effective risk reduction projects.

This LHMP was prepared as an annex to the County’s MJHMP in compliance with DMA 2000 and applicable FEMA guidance. The following pages show the resolutions that adopt COMB’s 2022 LHMP.

[INSERT RESOLUTION(S) ADOPTING PLAN UPDATE]

[INSERT RESOLUTION(S) ADOPTING PLAN UPDATE]

3.0 PLANNING PROCESS

3.1 OVERVIEW

The planning process implemented for the County's 2022 MJHMP update, including COMB's LHMP update, utilized two different planning teams to review progress, inform and guide the update, and directly review and prepare portions of the plan, including each jurisdictional annex. The first team is the MAC and the second is the LPT.

All eight incorporated cities and the six special districts joined the County as participating agencies in the preparation of the MJHMP update, including the cities of Buellton, Carpinteria, Goleta, Guadalupe, Lompoc Santa Barbara, Santa Maria, and Solvang; and special districts Carpinteria Valley Water District (CVWD), Goleta Water District (GWD), Montecito Fire Protection District (MFPD), Montecito Water District (MWD), and Santa Maria Valley Water Conservation District (SMVWCD). Each of the participating agencies had representation on the MAC and was responsible for the administration of their own LPT. In addition, the MAC included representatives from other state and local agencies with an interest in hazard mitigation in Santa Barbara County, including local non-profit organizations, special districts, and state and federal agencies. This composition ensures diverse input from an array of voices representing all communities within Santa Barbara County.

Both the MAC and the LPTs focused on these underlining philosophies, adopted from the FEMA Local Mitigation Plan Review Guide:

- **Focus on the mitigation strategy**

The mitigation strategy is the plan's primary purpose. All other sections contribute to and inform the mitigation strategy and specific hazard mitigation actions.

- **Process is as important as the plan itself**

In mitigation planning, as with most other planning efforts, the plan is only as good as the process and people involved in its development. The plan should also serve as the written record, or documentation, of the planning process.

- **This is the community's plan**

To have value; the plan must represent the current needs and values of the community and be useful for local officials and stakeholders. Develop the mitigation plan in a way that best serves your community's purpose and people.

- **Intent is as important as Compliance**

Plan reviews will focus on whether the mitigation plan meets the intent of the law and regulation; and ultimately that the plan will make the community safer from hazards.

As a result, the planning process incorporated the following steps:

- **Plan Preparation**

- Form/validate planning team members
- Establish common project goals
- Set expectations and timelines
- **Plan Development**
 - Validate and revise the existing conditions/situation within the planning area;
 - Develop and review the risk to hazards (exposure and vulnerability) within the planning area;
 - Review and identify mitigation actions and projects within the planning area;
- **Finalize the Plan**
 - Review and revise the plan
 - Approve the plan locally and with state and federal reviewers
 - Adopt and disseminate the plan

3.2 MITIGATION ADVISORY COMMITTEE (MAC)

COMB participated as a MAC member to prepare this LHMP as an annex to the 2022 MJHMP. COMB was represented by contract staff member Doug Pike, Principal Engineer, on the MAC.

The MAC meetings were designed to discuss each component of the MJHMP with MAC members and coordinate annex updates. Table 3-1 below provides a list and the main purpose and topics of each MAC meeting.

Table 3-1. Mitigation Advisory Committee (MAC) Meetings Summary

Date	Purpose
March 2021	MAC Meeting #1 (virtual) Provided an overview of the project and why the plan is being revised Reviewed FEMA guidance and processes Discussed roles and responsibilities of the participating jurisdictions
September 2021	MAC Meeting #2 (virtual) Reviewed goals of the project, role of the MAC Summarized public outreach results Presented hazards assessment and displayed select draft hazard maps Conducted interactive exercise to rank hazards
October 2021	MAC Meeting #3 (virtual) Provided results of hazard ranking methodology Presented vulnerabilities assessment Discussed mitigation goals, objectives, and strategies Reviewed County goals from 2017 and compared them to new goals Conducted interactive exercise on potential mitigation goals and strategies
October 2021	MAC Meeting #4 (virtual) Collected feedback on 2017 mitigation strategies

Date	Purpose
	Conducted interactive exercise on mitigation strategies for key hazards unaddressed in previous MJHMP Discussed annex updates
January 2022	MAC Meeting #5 (virtual) Presented draft plan Discussed key MAC/LPT review needs and key issues Discussed annex updates to dovetail with plan update
March 2022	MAC Meeting #6 (virtual) Review and discuss public comments received on the draft plan Recommend a revised draft plan to decision-makers Review annex updates for review and approval

3.3 LOCAL PLANNING TEAM (LPT)

Table 3-2 lists COMB's LPT. These individuals collaborated to identify COMB's critical facilities, provide relevant plans, report on the progress of COMB mitigation actions, and provide suggestions for new mitigation actions.

Table 3-2. COMB Local Planning Team 2022

Name	Title
Janet Gingras	General Manager
Edward Lyons	Administrative Manager / CFO
Joel Degner	Operations Division Manager / Engineer
Tim Robinson	Senior Resource Scientist
Shane King	Operations Supervisor
Elijah Papen	Program Analyst

The COMB LPT members worked directly with the County Office of Emergency Management (OEM), the consultant team, and each other to provide data, recommended changes, and continually work on the MJHMP and LHMP updates throughout the planning process. The COMB LPT met virtually as needed during the planning process to discuss data needs and organize data collection. Table 3-3 below outlines a timeline of the LPT's activities throughout the planning process.

Table 3-3. Local Planning Team Activity Summary

Meeting Dates	Summary of Activity
February 2020	LPT kickoff meeting to discuss stakeholder and public involvement and refine the scope of hazard analysis
April 2021 to January 2022	Collated data to share with hazard mitigation planning team, including hazard identification, refreshed data layers for maps, and geographic settings. Completed Plan Update Guides to directly inform hazard priorities and mitigation capabilities Met with County OEM and consultant staff (12/14/21) to discuss LHMP priorities and mitigation approaches.

Meeting Dates	Summary of Activity
January and March 2022	Reviewed new maps and local vulnerabilities. Provided input on the status of LHMP mitigation strategies. Reviewed draft mitigation strategies and provide feedback. Two COMB employees completed FEMA ICS 100 and became certified in the Incident Command System (ICS). COMB staff presented updates to the COMB Board on the LHMP and local annex status, contents, and purpose at the 1/24/22 and 3/28/22 Board Meetings. Reviewed and finalized 2022 LHMP

3.4 PUBLIC OUTREACH AND ENGAGEMENT

As a participating agency in the 2022 MJHMP update, COMB was directly involved in the outreach program undertaken by the County for the 2022 MJHMP update, which involved extensive outreach during 2021 and early 2022. COMB’s MAC and LPT members participated in public outreach efforts for the MJHMP and LHMP update planning process by distributing notices for the 6-month-long community hazards survey (refer to Section 3.4.1 of the 2022 MJHMP) and three public workshops (refer to Section 3.4.4 of the MJHMP). The Public Outreach Plan (POP) employed a diversity of tools to maximize notification and participation. The POP was responsive to limitations presented by the Coronavirus (COVID-19) pandemic and focused on direct bilingual outreach using a variety of digital tools, including a fact sheet, social media posts, emails, and press releases. Multiple platforms and tools were used to publicize opportunities to participate. All public and stakeholder meetings were hosted virtually through Microsoft Teams, and all outreach completed for the project was conducted via electronic communications. Many of the meetings used an interactive tool called Slido to collect feedback during meetings. Slido allows audience members to answer questions during presentations, helping the County collect direct detailed feedback and facilitate discussion. All written notices were made available in English and Spanish.

In April 2022, the LHMP was completed and made available for public review, concurrent with review by FEMA and CalOES. In addition, the opportunity for the community to be heard was permitted during the COMB Board of Directors meeting before the adoption of this plan.

4.0 CAPABILITY ASSESSMENT

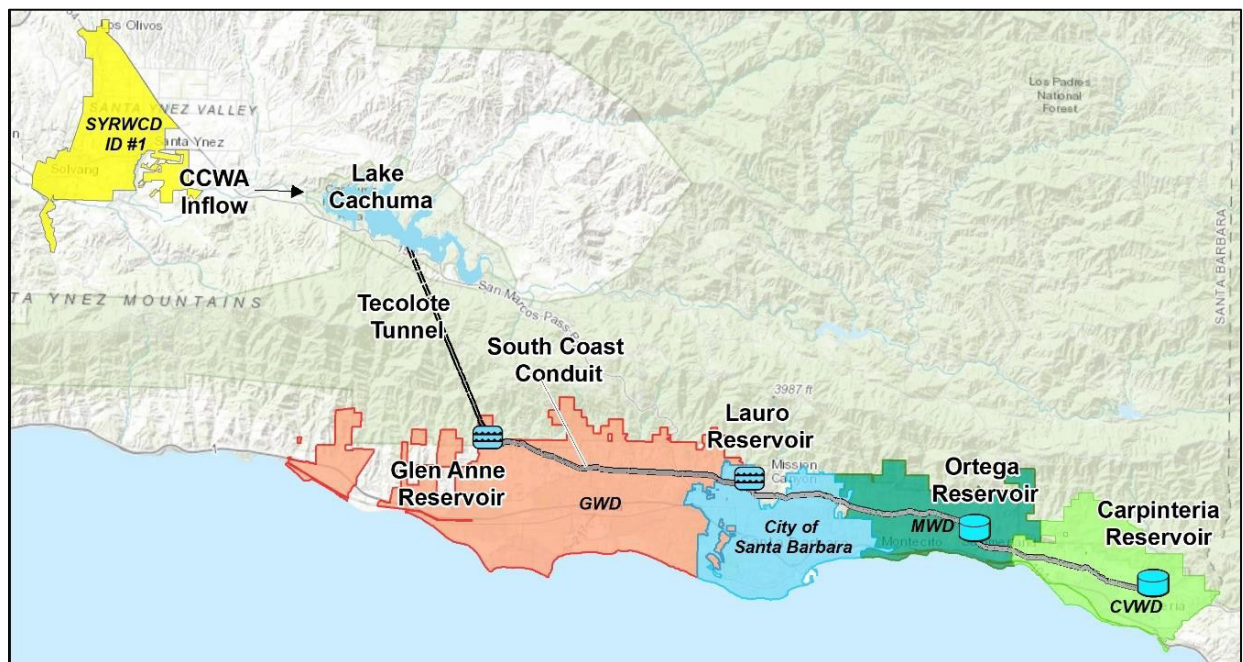
COMB’s LPT identified current capabilities available for implementing hazard mitigation activities, including administrative, technical, legal, and fiscal capabilities. This assessment includes a summary of departments and their responsibilities associated to hazard mitigation planning, as well as codes, ordinances, and plans already in place associated to hazard mitigation planning. The assessment also provides COMB’s fiscal capabilities that may apply to providing financial resources to implement identified mitigation action items. The COMB LHMP annex documents the process used for improving disaster resiliency and for meeting regulatory requirements, including the Disaster Mitigation Act of 2000 (DMA 2000), its amendments, and regulatory implementation. In addition, having an approved plan allows agencies to apply for funding through the Building Resilient Infrastructure and Communities (BRIC) grant, Flood Mitigation Assistance (FMA) grant, and Hazard Mitigation Grant Program (HGMP) should the agency have need.

4.1 STUDY AREA

Lake Cachuma, through the Tecolote Tunnel, serves as the primary source of water for the South Coast of Santa Barbara County (Figure 4-1). Water from the lake is allocated among five water districts; the City of Santa Barbara, Goleta Water District, Montecito Water District, Carpinteria Valley Water District, and the Santa Ynez River Water Conservation District, Improvement District No. 1 (ID No. 1). ID No. 1 receives its lake water through an exchange agreement with the COMB Member Agencies and others who participate in the State Water Project delivered by the Central Coast Water Authority (CCWA). The CCWA pipeline passes through the Santa Ynez Valley and terminates at Lake Cachuma. The South Coast Member Agencies receive their water via the North Portal Intake Tower, which carries water through the Tecolote Tunnel to the South Coast Conduit (SCC) and the Goleta West Conduit. COMB operates and maintains the SCC conveyance system. The water is normally gravity fed from the lake into the Intake Tower, but in years of severe and persistent drought when the lake level recedes below the lowest gates of the Intake Tower, an Emergency Pumping Facility (EPF) is installed.

The COMB LHMP annex service area includes Lake Cachuma, as well as the SCC conveyance system and associated balancing reservoirs located on the South Coast and maintained by COMB. Bradbury Dam, which forms Lake Cachuma, is owned and operated by the U.S. Bureau of Reclamation (Reclamation). Reclamation holds the water permits issued by the State Water Resources Control Board (SWRCB) on behalf of the United States for diverting water from the Santa Ynez River for the Cachuma Project. COMB, as the agency that operates and maintains the Cachuma Project facilities (except Bradbury Dam), participated in MJHMP 2022 Update.

Figure 4-1. COMB Service Area



During the past several years, extensive field investigation and analysis have been performed by external engineering consultants to inform and produce three reliability studies on the SCC. The focus of these investigations was to assess the condition, reliability, and capacity of the SCC and to

identify alternatives to increase the reliability of the asset. Included in these studies were aerial surveying and mapping, field reconnaissance, pipe pressure analysis, hydraulic modeling and surge potential, geotechnical assessments, initial corrosion examination, and an alternatives analysis. In addition to these documents, the Bureau of Reclamation continually updates its Standard Operating Guidelines and Emergency Action Plan for the Cachuma Project facilities, which was also used as a resource. COMB works closely with Reclamation to review, update, and exercise the Emergency Action Plan, including orientation seminars (annually), communications drills (quarterly), tabletop exercises (every three years), functional exercises (every six years), and full-scale exercises (when requested). Since the initial COMB LHMP annex was developed in 2019, COMB has created a Risk and Resilience Assessment and an Emergency Response Plan to satisfy the America's Water Infrastructure Act (AWIA), completed a Water Quality and Sediment Management Study, and updated our Infrastructure Improvement Plan (IIP). Several mitigation projects have been identified in these documents, which have also informed the development of this COMB LHMP annex.

Water from Lake Cachuma is conveyed to the COMB Member Agencies through the Tecolote Tunnel intake tower located at the east end of the reservoir. The Tecolote Tunnel extends from Lake Cachuma 6.4 miles west through the Santa Ynez Mountains to the western terminus (South Coast Conduit) located in the foothills of Goleta. The South Coast Conduit is a concrete-lined, concrete-encased steel pipeline extending 26 miles from Goleta to Carpinteria. This conveyance system is comprised of the North Portal Intake Tower, the Tecolote Tunnel, the South Coast Conduit, the Sheffield Tunnel, four regulating reservoirs, flow control valves, meters, instrumentation at control stations, turnouts, and appurtenant structures within the entire system.

Since the 2017 LHMP, growth within the South Coast Member Agencies has been relatively low and has not substantially changed the demands or capabilities of COMB for South Coast Member Agencies. According to the 2050 Regional Growth Forecast for Santa Barbara County, the Santa Barbara County share of the state population has historically been declining, ranging between 1.25 to 1.10 percent and is forecasted to continue to trend lower with the Santa Barbara County share of state population at 1.05 percent by 2050. The countywide annual average population growth rate has ranged from over two percent between 1980-1990 to between 0.5 and one percent between 1991 and 2020. The annual average is forecast to drop to less than the historical average to 0.5 percent from 2026 onward. The population of Santa Barbara County could grow from approximately 447,200 (2020) to 521,700 by the year 2050. Prolonged periods of drought, coupled with steady population increases, will require proper water resource planning in order to avoid future water shortages. As the water agencies which COMB serves expand their water sources (desalination, groundwater, recycled water, imported water, etc.) and implement water conservation and efficiency measures, COMB is also planning for future drought scenarios. Other operational risks following a population increase include higher tourism and risk for quagga/zebra mussel infestation (risk to infrastructure), and higher risk for anthropogenic wildfires (risk to infrastructure and utility outages).

More specifically, the population served through COMB's wholesale conveyance of water to the receiving community water districts is reported within their individual Urban Water Management Plans and updated every 5 years. These plans support the suppliers' long-term resource planning to ensure that adequate water supplies are available to meet existing and future water needs. Urban Water Management Plans were completed for each of COMB's Member Agencies in 2015

and 2020, and presented the population served at the time the plan was created. Overall, COMB's Member Agencies (Goleta Water District, City of Santa Barbara, Montecito Water District, and Carpinteria Valley Water District) served a population of 202,464 in 2015, 208,254 in 2020, and is estimated to serve 213,707 in 2025 (based on 2020 plans). This equals an increase in population served of 2.9% from 2015 to 2020, and a projected increase of 2.6% from 2020 to 2025. Individually, the increase in population served from 2015 to 2020 was 1,893 persons, or 2.3% (Goleta Water District), 2,495 persons, or 2.7% (City of Santa Barbara), 399 persons, or 3.5% (Montecito Water District), and 1,003 persons, or 6.7% (Carpinteria Valley Water District).

Since the last update of COMB's LHMP in 2017, land use and population have not substantially changed. Modest development has occurred consistent with the adopted Land Use Elements of COMB's member agencies and has primarily comprised infill development and redevelopment within jurisdictional limits. There has been no expansion of urban area boundaries and no comprehensive changes to land use plans that would result in substantial densification. Further, member agency population has not substantially changed. As a result, COMB's level of vulnerability to hazards analyzed in Section 6.0, *Vulnerability Assessment*, has not substantially changed due to land use, development, or population growth since the last update of the LHMP.

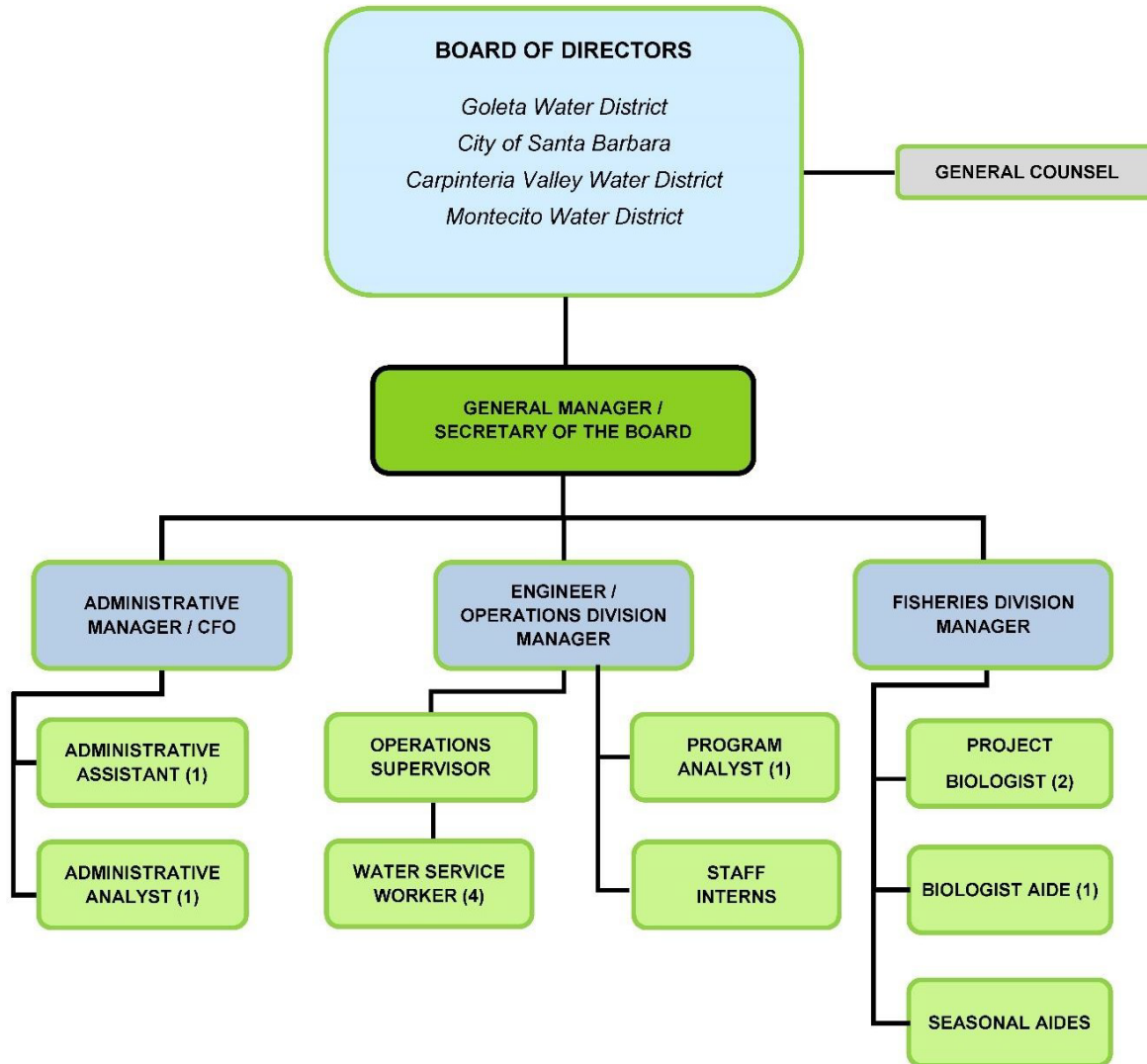
4.2 ADMINISTRATIVE AND TECHNICAL CAPACITY

On January 1, 1957, Cachuma Operation and Maintenance Board (COMB) was formed as a Joint Powers Authority (JPA) through an agreement organized by the Cachuma Member Units under the provisions of Articles 1, 2, and 4 of Chapter 5, Division 7, Title 1 of the California Government Code. The JPA agreement was created to provide for the joint exercise of powers by the Member Agencies for the rights to, the facilities of, and the operation, maintenance, and use of the United States, Department of the Interior, Bureau of Reclamation project known as the Cachuma Project, including storage, treatment, transport, and appurtenant facilities, and all necessary tangible and intangible property and rights. COMB also has the authority for the financing costs for the capture, development, treatment, storage, transport, and delivery of water. The Governing Board is composed of one publicly elected representative member from each of the governing bodies and is appointed by appropriate action of each governing board to serve on the COMB Board. The appointed Board members are authorized to carry out the provisions of the JPA agreement and any other agreements entered into by the Governing Board. The Board of Directors is responsible for setting policy on matters such as financial management and planning, Board administration, infrastructure improvements, and long range planning documents. Day-to-day operations are executed by the General Manager who serves at the pleasure of the Board. The General Manager oversees a staff of full-time employees including division managers, certified distribution operators, senior biology staff, a water resources engineer, program analyst, and administrative personnel. COMB's organizational structure is provided below.

COMB coordinates closely with Reclamation and Member Agency staff to ensure that water supplies meet daily demands. COMB staff reads meters and accounts for Project water deliveries monthly and performs repairs and preventative maintenance on Project facilities and equipment. COMB safeguards Project lands and rights-of-way on the South Coast as the contractor for Reclamation. COMB is responsible for issuing Project water production and use reports, operations reports,

fisheries reports, and financial and investment reports which track operation and maintenance expenditures.

ORGANIZATIONAL CHART



COMB’s internal technical staff consists of an Engineer / Operations Division Manager who is responsible for infrastructure improvement projects, hydrologic modeling, project planning and implementation, GIS resources and production, land use, and right-of-way management. COMB’s Operations Supervisor has SCADA operation and maintenance experience and water resources facility and infrastructure experience. In addition, COMB employs a Senior Resource Scientist who provides environmental documentation review, project planning, sensitive species expertise (steelhead, red-legged frogs, nesting birds, etc.), and hydrologic analysis. COMB provides the financial resources necessary to contract with expert consultants and engineers on an as-needed basis when necessary for the protection of assets. COMB’s administrative resources include an

Administrative Manager / Chief Financial Officer who is responsible for financial reporting requirements related to the operation of the system.

The administrative and technical capabilities of COMB, as shown in Table 4-1, include staff, personnel, and other resources available to implement the actions identified in Section 7.0, *Mitigation Strategy*. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or manmade hazards, and floodplain managers.

Table 4-1. COMB Administrative and Technical Capacity

Personnel Resources	Yes/No	Department/Position
Planner/engineer with knowledge of land development/land management practices		
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Engineer / Operations Division Manager
Planner/engineer/scientist with an understanding of natural hazards		
Personnel skilled in GIS	Yes	Multiple Positions
Full-time building official		
Floodplain manager		
Emergency manager	Yes	Administrative Manager / CFO
Grant writer	Yes	Multiple Positions
Other personnel		
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Operations/Fisheries
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	Operations/Administration
Other		

4.3 LEGAL AND REGULATORY CAPABILITIES

COMB has a range of guidance documents and plans related to operations. Concerning hazard mitigation, the most relevant plans include Reclamations' Standard Operating Procedures and Emergency Action Plan, various phased Reliability Studies for the South Coast Conduit and regulating reservoirs, AWIA Risk and Resilience Assessment, AWIA Emergency Response Plan,

Water Quality and Sediment Management Study, Cybersecurity Response Plan, and an Infrastructure Improvement Planning document. In addition, the Bureau of Reclamation provides oversight involving annual reviews (1- year intervals), periodic facility reviews (3-year intervals), and comprehensive facility reviews (6- year intervals) and provides recommendations for facility improvements.

The legal and regulatory capabilities of COMB are shown in Table 4-2, including existing ordinances and codes that affect the physical or built environment of COMB. Examples of legal and/or regulatory capabilities can include building codes, zoning ordinances, subdivision ordinances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans.

Table 4-2. COMB Regulatory Capability

Regulatory Tool (ordinances, codes, plans)	Yes/No
General Plan	No
Zoning ordinance	No
Subdivision ordinance	No
Growth management ordinance	No
Floodplain ordinance	No
Other special-purpose ordinances (stormwater, steep slope, wildfire)	No
Building code	No
Fire code	No
Fire department ISO rating	No
Erosion or sediment control program	No
Stormwater management program	No
Site plan review requirements	No
Capital improvements plan	Yes
Economic development plan	No
Local emergency operations plan	Yes
Other special plans	Yes
Flood insurance study or other engineering studies for streams	No
Elevation certificates (for floodplain development)	No

4.4 FINANCIAL RESOURCES

COMB’s current fiscal year (FY) 2022 annual budget is \$5,292,34, an increase of ~\$130,531 over FY 2021. Annual debt obligations are \$345,933, the majority of which are costs associated with

financing COMB's United States Safety of Dams Act, and projects associated with COMB's recently completed Capital Improvement Program. COMB reviews and adjust rates on an annual basis.

Table 4-3. COMB Fiscal Capability

Financial Resources	Accessible or Eligible to Use (Yes/No)	Has This Been Used for Mitigation in the Past?	Comments
Community Development Block Grants (CDBG)	No		
Capital improvements project funding	Yes	Yes	Infrastructure Improvement Projects funded through Member Assessments and Grants
Authority to levy taxes for specific purposes	No		
Fees for water and sewer service	No		
Incur debt through general obligation bonds	Yes	Yes	
Incur debt through special tax bonds	No		
Incur debt through private activity bonds	Yes	Yes	A portion of the Emergency Pumping Facility Project was financed through a line of credit and short term loan with a financial institution
Federal Grant Programs (Hazard Mitigation Grant Program)	Yes	Yes	USBR WaterSmart Grant – Secured Pipeline Project CDFW-FRGP – Quiota Creek Crossing Project CalOES/FEMA Hazard Mitigation Grant – Sycamore Canyon Slope Stabilization Project

4.5 EDUCATION AND OUTREACH CAPABILITIES

This type of local capability refers to education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information. Examples include natural disaster or safety-related school programs; participation in community programs such as Firewise or StormReady; and activities conducted as part of hazard awareness campaigns such as an Earthquake Awareness Month (February each year), National Preparedness Month (September), or the Great California ShakeOut (a statewide earthquake drill that happens annually on the third Thursday of October). The District can capitalize on its existing

educational capacities and build new capabilities to educate the larger community on hazard risk and mitigation options.

In addition to the countywide resources described in Section 4.2.5, *County Education and Outreach Capabilities*, this section describes several existing outreach programs that are used to promote community awareness and readiness for natural disasters and hazards in the District.

- Pursuant to California Government Code sections 54953(b)(1), (b)(2), (e)(1) and (e)(3) (AB 361), members of the COMB Board of Directors, COMB staff, and members of the public participate in meetings every month (or more often). This is the primary and most effective way COMB interfaces with the general public for participation, input, and communication.
- COMB maintains a website (<https://www.cachuma-board.org/>) to educate the public on agency information, to openly communicate upcoming meeting information, and to post materials from previous meetings. The website also provides contact information for how best to reach staff.
- COMB's primary document which guides emergency response and communication during natural/anthropogenic hazards is the U.S. Bureau of Reclamation's Emergency Action Plan (EAP), which is annually reviewed and practiced. The EAP provides a comprehensive communications list to facilitate notifications, and contains detailed protocol and incident command roles when responding to events in real-time.
- COMB participates in EAP Tabletop and Functional Exercises, which occur every fourth year and typically include the U.S. Bureau of Reclamation, the County of Santa Barbara, Emergency Services, Emergency Responders, Water Districts, and other community agencies. The purpose of the tabletops/exercises is to practice implementation of the EAP by role-playing hazard event scenarios at high-risk facilities and to practice coordination between various community agencies.
- On September 26, 2016, the COMB Board of Directors approved a Media Relations Policy, which provides communication guidance to the directors, management, and staff. COMB is committed to effective communications with the media which shall be accomplished both responsively and pro-actively in an honest, professional, and transparent manner. Having this policy in place ensures timely and accurate dissemination of information to the media and their broader public audience, and establishes procedures for emergency communications.
- Every Monday, the Operations Division holds a special safety meeting for staff. A wide range of safety topics are discussed based on the meeting materials provided. Previous topics have included driving safety, confined space protocols, herbicide application, etc. Topics also include hazard mitigation issues including how to respond to threats from wildfires, earthquakes, floods, and other natural/anthropogenic disasters.
- Bimonthly meetings are held between technical staff from COMB and the two primary water treatment plants: Corona Del Mar Water Treatment Plant (owned and operated by Goleta Water District), and Cater Water Treatment Plant (owned and operated by the City of Santa Barbara). These operations and sampling meetings are intended to keep open communication

between all local agencies involved in treatment, to encourage the best water quality outcomes for the community, and to mitigate any potential threats to water quality before they occur.

- COMB participates in monthly Santa Barbara County Integrated Regional Water Management (IRWM) meetings. IRWM is a collaborative effort to identify and implement water management solutions on a regional scale that increase regional self-reliance, reduce conflict and manage water to concurrently achieve social, environmental, and economic objectives. IRWM meetings include multiple agencies, non-profit organizations, other groups, and interested individuals.
- Annually, COMB technical staff attends and/or presents at the ESRI User Conference in San Diego, CA. Thousands of GIS users attend this conference every year and benefit from technical workshops, peer-to-peer information sharing, networking, presentation opportunities, and development of problem solving tools, including hazard mitigation mapping and GIS analysis. For example, COMB staff completed a GIS project about large-diameter water supply pipeline safety and land elevation tracking, which was subsequently presented at the 2022 Users Conference.
- The annual Salmonid Restoration Conference offers an opportunity for professionals, academics, and scientists to present their research to a large audience of fisheries restoration enthusiasts. The four-day annual conference highlights regional and topical issues that affect salmonids and their diverse habitats through field tours, technical workshops, panel discussions, and a plenary session on the state of salmonid recovery in California. COMB fisheries staff attends this conference and presents when given the opportunity.
- COMB staff also collaborates with universities and colleges when appropriate. For example, the Senior Resources Scientist has been a guest lecturer at the University of California, Santa Barbara (among others) on several occasions. We have worked with the Bren School of Environmental Science & Management for several student thesis projects, and consider them to be an invaluable community resource. For example, we are currently collaborating with a PhD candidate on a special sampling project to relate aerial images to in-lake samples, with implications for lake metabolism, total organic carbon, harmful algal blooms, and other important topics.

4.6 RELEVANT PLANS, POLICIES, AND ORDINANCES

COMB has a range of guidance documents and plans that help guide COMB operations and facilities. COMB implements the LHMP through existing plans, programs, and procedures, as detailed in Section 8.0, *Plan Maintenance*. The LHMP annex complements these plans and programs, working together to achieve the goal of reducing risk exposure to COMB's customers and assets.

4.6.1 COMB Infrastructure Improvement Plan (IIP)

The IIP formalizes the strategy for implementation of capital projects and programs needed to carry out the goals and policy objectives of the COMB Board. The IIP is organized and structured to identify and prioritize rehabilitation projects necessary to protect, improve, and sustain a reliable source of water conveyed from the Cachuma Project to the COMB Member Agencies. Projects

outlined in the IIP have been identified based on Reclamation inspection recommendations, COMB asset inventory analysis, and other staff observations and recommendations. The identification of a project within the five-year plan does not guarantee construction. The initiation of any project requires Board approval for a project to advance to design and ultimately construction. Additionally, the Board of Directors has the ongoing ability to review and revise projects based upon unforeseen conditions, priorities, and financial resources. The LHMP is used as a guiding document when developing, selecting, and prioritizing projects within the IIP and the 5-year time horizon used for planning purposes within the project implementation schedule.

4.6.2 Integrated Regional Water Management (IRWM) Plan

The IRWM is a collaborative effort created by a group of cooperating partners with mutual interest who have identified and implemented water management solutions to achieve social, environmental, and economic objectives throughout the Central Coast region. COMB has been a part of the group's formation since 2007, participating in monthly discussions to implement sustainable water projects in the area.

COMB's affiliation with IRWM Plan made it possible to apply for and receive grant monies with funding applied to the much-needed infrastructure improvement projects. Participation in IRWM continues to allow COMB to be aware of various funding opportunities which may contribute to the improvement and sustainability of managed infrastructure.

The IRWM Region has undertaken public processes and completed documents as well as implemented various projects to prepare for and adapt to climate change. The 2016 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan was cited in the Santa Barbara County IRWM Plan 2019 Update as a guiding document for planning work related to climate change vulnerabilities and sea level rise in the IRWM region (pg. 180).

4.6.3 Risk and Resiliency Assessment (RRA) / Emergency Response Plan (ERP)

COMB's RRA was performed according to the 2018 America's Water Infrastructure Act (AWIA) guidelines and requirements. AWIA requires community water systems to assess the risks to and resilience of specified assets from both malevolent acts and natural hazards. This assessment utilizes the U.S. Environmental Protection Agency's (EPA) Vulnerability Self-Assessment Tool (VSAT) Web Version 2.0. This tool guides operators in identifying the threats that present the highest risks to their facilities and in evaluating the costs associated with those risks.

The results from the RRA were used to produce the ERP, which considers risk prioritization in the development of resilience strategies, emergency plans/procedures, detection strategies, and implementable mitigation actions. The plan satisfies AWIA requirements and is used for developing hazard mitigation projects to be included within COMB's Infrastructure Improvement Plan.

4.6.4 Lake Cachuma Water Quality and Sediment Management Study (WQ&SM)

The purpose of the WQ&SM is to understand and address issues of water quality and sedimentation at Lake Cachuma, through coordination with a broad range of stakeholders that manage, operate, and use Lake Cachuma. Ultimately, the WQ&MS identifies viable and actionable solutions that can

be incorporated into a long-term program for water quality and sediment management throughout the Upper Santa Ynez River watershed and Cachuma Reservoir. The WQ&SM was completed by consultants in August 2020, and several management actions resulted and are in various stages of planning/implementation, including drought hazard mitigation projects such as the Secured Pipeline Project.

4.7 OPPORTUNITIES FOR MITIGATION CAPABILITY IMPROVEMENTS

COMB continuously strives to mitigate the adverse effects of potential hazards through its existing capabilities while also evaluating the opportunities for improvements. Based on the capability assessment, COMB has existing regulatory, administrative/technical, education/outreach, and fiscal mechanisms in place that help to mitigate hazards. In addition to these existing capabilities, there are opportunities for COMB to expand or improve on these policies and programs to further protect the community. COMB has identified three primary opportunities for mitigation capability improvements, including 1) incorporating existing plans into project development, 2) pursuing hazard mitigation grant money in order to fund resiliency projects, and 3) continuing to foster community interagency relationships to achieve common goals and support mutually beneficial efforts.

- **Regulatory Opportunities:** In alignment with COMB’s purpose, continued assessment of vulnerability and water source sustainability would improve COMB’s capabilities to ensure safe, reliable, and sustainable water sources to agencies. Over the last five years, COMB has worked diligently in updating planning documents. Some of these planning documents, including the IIP and the WQ&SM have identified hazard mitigation projects which need further refinement. Refining those projects through feasibility studies, alternatives studies, cost-benefit analyses, and eventually complete designs will help expand COMB’s pool of projects to implement.
- **Administrative/Technical Opportunities:** As part of this update, COMB aims to improve its resilience to ensure reliability and back-up systems for core infrastructure and facilities. Existing plans, inclusive of the plans aforementioned and this LHMP, will be updated periodically with the best available information. COMB views plan creation as an opportunity to assess current conditions and move project elements forward for later development.
- **Outreach Opportunities:** Agencies outside of COMB are also developing plans/projects which may have synergy with our water supply and water quality objectives. Open communication between federal, state, and local agencies can allow overlapping goals to be realized. Participating in interagency meetings, offering letters of support, or offering financial/staff/other support are ways in which COMB is able to achieve goals more efficiently while helping the community at large. For example, in September 2022, COMB staff under the approval of the Board of Directors, sent a letter of support to the Los Padres National Forest for their Ecological Restoration Project during their scoping process. Although the project’s primary goal is fuel reduction, secondary benefits include water quality improvements to drainages within the watershed (including Lake Cachuma). We believe expanding interagency communication will improve the community’s mitigation capabilities.

- **Fiscal Opportunities:** COMB's hazard mitigation capabilities are constrained by the approved budget each fiscal year. When creating the budget, COMB administrative staff considers long-term infrastructure improvement project categories for hazard mitigation. Outside funding opportunities like grants and loans offer additional financial ability to move projects forward. COMB staff will continue to expand grant awareness and apply for funding as appropriate. Additional funding allows greater opportunity to build resilience against future hazards.

5.0 HAZARD ASSESSMENT

5.1 OVERVIEW

The purpose of this section is to review, update, and/or validate the hazards identified for the 2022 COMB LHMP. The intent is to confirm and update the description, location and extent, and history of hazards facing COMB now and in the future. This assessment also considers the potential exacerbating effects of climate change. The importance of this review is to ensure that decisions and mitigating actions are based on the most up-to-date information available.

Another purpose of this section is to screen the hazards to determine their relative probability and severity to inform the risk posed to various communities and resources. This assessment will provide an understanding of the significance by ranking hazards by their priority in COMB.

In 2021, the MAC reviewed and revised 1) the list of hazards by community or geographic area; 2) the information and material presented for each hazard; and 3) the prioritization of the hazards. The COMB LPT refined the list of hazards applicable to COMB and confirmed the hazard prioritization. The following sections provide the results of this effort.

5.2 HAZARD SCREENING/PRIORITIZATION

The Hazard Assessment presented here reflects COMB's 2022 review and modifications to the updated risk assessment presented in Chapter 5.0, *Hazard Assessment*, and Chapter 6.0, *Vulnerability Assessment* of the 2022 MJHMP. A comprehensive treatment of hazards and their descriptions may be found in Chapter 5.0 of the Santa Barbara County 2022 MJHMP. Applicable hazard information from 2022 MJHMP was incorporated during the development of this section.

The potential extent, probability, frequency, and magnitude of future occurrences were all used to identify and prioritize the list of hazards most relevant in COMB. The COMB LPT completed the Plan Update Guide to rank the hazards and identify key hazards to help inform this assessment (Appendix A). As summarized in Table 5-1, the local priority hazards in COMB are based on the screening of frequency/probability of occurrence, geographic extent, potential magnitude/severity of the hazard, and overall significance. Local experience, MAC/LPT input, and community feedback also informed the assessment of local priority hazards. After reviewing the localized hazard maps and exposure/loss assessment provided in the 2022 MJHMP, the following hazards were identified by the COMB LPT as their top priorities (Appendix A). A brief rationale for each hazard is included below. This assessment and description of key hazards are provided in addition to the 2022

MJHMP’s comprehensive assessment of regional hazards that may affect COMB such as extreme temperatures or dam failure.

Table 5-1. COMB Local Priority Hazards

Hazard Type and Ranking	Planning Consideration Based on Hazard Level
Drought / Water Shortage	Significant
Wildfire	Significant
Flooding / Mud Flow / Debris Flow	Significant
Earthquake	Significant
Landslide / Other Earth Movements	Significant
Pandemic / Public Health Emergency	Moderate
Agricultural Pests / Invasive Species	Moderate
Terrorism / Civil Unrest	Moderate
Power Outage / Energy Shortage	Low
Cyber Threat	Low

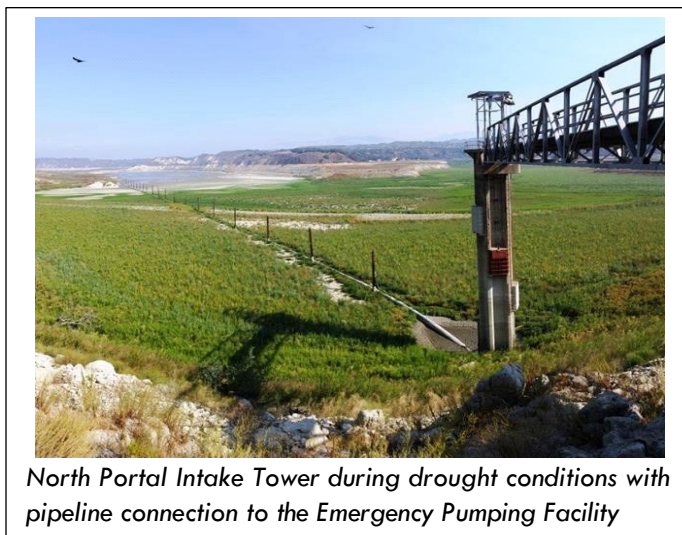
To continue compliance with the DMA of 2000, COMB accepts the County’s natural hazard profiles presented in Chapter 5.0, *Hazard Assessment* with the following notes and refinements or elaborations provided specifically for the COMB in subsections below. COMB’s LPT acknowledged other hazards are either not a threat, are highly unlikely within COMB boundaries, or are adequately addressed by the 2022 MJHMP and do not require additional information to be relevant to the COMB hazard setting; therefore, these hazards are not addressed further in COMB’s LHMP. These additional hazards are being addressed in the more comprehensive 2022 MJHMP.

5.3 HAZARD PROFILES

Based on the revised list of hazards and utilizing the approach described in Section 5.2 above, the hazards were screened (Table 5-1). Hazards identified as “Significant” are discussed in greater detail herein. Chapter 5.0, *Hazard Assessment* of the 2022 MJHMP provides a comprehensive analysis of hazards within Santa Barbara County, including COMB and its member agencies. Refer also to the LHMPs for the City of Santa Barbara, Carpinteria Valley Water District (CVWD), Goleta Water District (GWD), and Montecito Water District (MWD) for an expanded description of vulnerabilities in each jurisdiction (MJHMP Annexes F, J, K, and M, respectively).

5.3.1 Drought & Water Shortage

Drought and water shortages are a gradual phenomenon and generally are not signified by one or two dry years. California's and southern Santa Barbara County's extensive system of water supply infrastructure (reservoirs, groundwater basins, and interregional conveyance facilities) can mitigate the effects of short-term dry periods for most water users. However, drought conditions are present when a region receives below-average precipitation, resulting in prolonged shortages in its water supply. Climate change may impact the duration and severity of drought in the future, decreasing the reliability of continuous surface water supplies.



Vulnerabilities and Potential Impacts of Hazard

Lake Cachuma is the primary source of drinking water for five water agencies and 208,500 people living on the South Coast of Santa Barbara County. The average rainfall in Santa Barbara County is 17.6 inches. Since 2012, Santa Barbara County has experienced significantly less than average rainfall on an annual basis. During periods of sustained drought, lake levels recede causing a direct impact on the water supply. In 2016, Lake Cachuma's elevation receded to 7% of capacity, the lowest elevation on record since the reservoir was built. Drought and the circumstances resulting from prolonged dry conditions, such as water shortages, represent a high-risk hazard.

Prolonged periods of drought can drop lake levels below the inlet gates at the Intake Tower. The Intake Tower design enables water to gravity flow from Lake Cachuma into the Tecolote Tunnel; however, the ability to gravity flow (normal operations) is lost once the lake level falls below the intake gates. This condition impacts both surface water deliveries from the lake, as well as State Water deliveries, which are transported via Lake Cachuma. In addition, Lake Cachuma serves as a critical conveyance facility for all supplemental water purchases.

To maintain access to available water supplies, COMB has requested permission from the Bureau of Reclamation to periodically install a temporary Emergency Pumping Facility (EPF) during drought conditions to allow available water supplies to be pumped from a floating platform (pumping barge) to the Intake Tower until sufficient inflow to the lake occurs and reservoir levels return to normal operating conditions. The 36" high-density polyethylene floating pipeline is connected to the lowest inlet gate, Gate 5, and stretches across the lake 3,500 feet to a floating pumping station, which allows water to be pumped at lower elevations to continue Cachuma Project and State Water Project deliveries to the South Coast communities of Santa Barbara County. If the lake elevation continues to drop, the pipeline can be extended an additional 7,000 feet and the barge relocated to a deeper site to continue conveyance operations.

Although the EPF allows COMB to continue delivering water to the South Coast users during a drought, installing the EPF is an expensive and temporary fix. The cumulative costs of the implementation and operation of the Emergency Pumping Facility Project during the 2014 to 2017 period were approximately \$8.6 million. A repeat of the 2014-2017 drought would cost approximately \$4.3 million under the current terms of a change order for extended operations. If the EPF is not installed once the lake level falls below the lowest intake gate, or if the drought/water shortage lowers lake levels below the minimum pool (643 feet elevation, 12,000 AF storage), lake water deliveries would cease, affecting about 208,500 customers on the South Coast. COMB has currently received 100% designs for installing a more permanent system, comprised of a pipeline secured to the bottom of the lake (Secured Pipeline Project) with concrete collars and extending out into the lake to provide additional water supply during a drought.

Beyond water supply, prolonged periods of drought can also impact water quality at Lake Cachuma. When lake levels are low during a drought, vegetation will begin to colonize previously submerged areas. After subsequent large rain events when lake levels increase again, newly established growth becomes submerged and will begin decaying underwater. Declining lake water quality at Lake Cachuma is a growing concern to the Member Agencies of COMB because increasing levels of organic matter make it more difficult to maintain consistent chlorine residual in the system and meet the drinking water standard for trihalomethanes (THMs). While COMB's Member Agencies are pursuing treatment solutions for their respective systems, there is a shared interest in reducing organic concentrations coming into the treatment plants. A Water Quality and Sediment Management Study was recently completed at COMB, and several potential projects were identified to address water quality issues at the lake including THM precursors.

Droughts increase the chances of catastrophic wildfire risks. Drought is a major determinant of wildfire hazard, in that it creates a greater propensity for fire starts and larger, more prolonged conflagrations fueled by excessively dry vegetation, along with reduced water supply for firefighting purposes (see also, Section 5.3.2, *Wildfire*).

History of Hazard

The construction of Bradbury Dam began in 1951 and was completed in 1953. The lake first filled and spilled in 1958. There have been two major multi-year dry periods (1987-1991 and 2012-2017) in the history of the lake where the lake elevations receded below the limit of gravity flow requiring an emergency pumping facility (Figure 5-1). In addition, the period when the dam was constructed was a multi-year dry (1951-1957) period and it took several years for the lake to fill. Installation of the EPF has occurred in the past during drought conditions (1990-1991 and 2014-2017) and is anticipated to occur in the future during drought conditions.

Currently, Santa Barbara County has been in a state-declared drought since July 8, 2021 when Governor Gavin Newsom proclaimed a drought emergency, which was expanded on October 19, 2021, to include all 58 counties in California. Also on July 13, 2021, the County Board of Supervisors passed a resolution proclaiming a Local Emergency caused by Drought Conditions. The County resolution cites Newsom's drought declaration, as well as below-average rainfall, received last winter, reduced storage in reservoirs, and reduced State Water Project supply. As of April 8, 2022, Lake Cachuma was at 710.12 feet above mean sea level or 45.8% of reservoir capacity.

Probability of Occurrence

Based on the history of the lake elevations, an emergency pumping system is likely required at least once every thirty years and would be required to be utilized for several years. However, increased downstream release requirements, reduced capacity due to sedimentation, and potential climate changes will likely require the implementation of the emergency pumping system more frequently in the future. A drought year has been defined in this plan as any year in which the percent average rainfall at Lake Cachuma is less than 80% of the mean, which has occurred in 18 of the last 41 years. In over 67 years of operation (1954-2021), the need for EPF deployment has been met on 3 occasions (4.5% for any year being an installation year).

Climate Change Considerations

Climate change has the potential to make drought increasingly common along the west coast, including in California and Santa Barbara County. The drought of record for Lake Cachuma began in 2012 and continued with a minor reprieve in 2017. The combined last eight years are the driest eight years on record. A recent study of climate change impacts (Swain et al. 2018, UCLA CCS 2018) found extreme dry years will be 2.4 times more frequent. The drought extremes experienced in the Lake Cachuma watershed in the last decade are likely to continue and potentially worsen due to the effects of climate change. More frequent droughts mean that critical water supplies for the community can be expected to be reduced in the future, that lake deliveries will depend increasingly on an emergency pumping barge, and that water quality issues will likely be more common.

5.3.2 Wildfire

A wildfire is an unplanned fire that is fueled by natural areas or wildlands, such as the Los Padres National Forest, particularly in the Santa Ynez Mountains or San Rafael Mountains. Wildfire can be classified as either a wildland fire or a wildland-urban interface (WUI) fire. The former involves situations where wildfire occurs in a relatively undeveloped area, while the latter can contain elements of human development, undeveloped wildland, and vegetative fuels. Certain conditions must be present for a wildfire hazard to occur; a large source of fuel must be present, the weather must be conducive (generally hot, dry, and windy), and fire suppression sources must not be able to easily suppress and control the fire. The cause of a majority of wildfires is human-induced or lightning.



The 2017 Thomas Fire burned approximately 281,893 acres in Ventura and Santa Barbara counties, including significant portions of the Lake Cachuma watershed.

Vulnerabilities and Potential Impacts of Hazard

One of the primary ways that wildfires impact COMB assets and operations is through water quality hazards, including increased sedimentation. Water quality constituents affected by fires include color, sediment, organic material, suspended material, and turbidity. Subsequent floods and debris flows can entrain large material, which can physically damage infrastructure associated with the beneficial utilization of water (e.g., water conveyance structures; transportation networks). The loss of riparian shading and the sedimentation of channels by floods and debris flows may increase stream temperature. Fire-induced increases in mass wasting along with extensive tree mortality can result in increases in floating material – primarily in the form of large woody debris. Post-fire delivery of organic debris to stream channels can potentially decrease dissolved oxygen concentrations in streams. Fire-derived ash inputs can increase pH, alkalinity, conductivity, and nutrient flux (e.g., ammonium, nitrate, phosphate, and potassium), although these changes are generally short-lived.

The original design capacity for Lake Cachuma was 205,000 acre-feet. Recent fires within the Lake Cachuma watershed have contributed greatly to siltation within the reservoir. Sedimentation has reduced the overall capacity by 11% and has buried the lowest gate of the Intake Tower, reducing the operational capacity of the reservoir. The sedimentation reduces the overall yield of the Cachuma Project and increases the operational costs of delivering water during times of drought. The pumping facility's operation during the drought from 2014 to 2017 increased water delivery costs by \$8.6 million. Lauro and Glen Anne regulating reservoirs are also vulnerable to sedimentation from wildfires.

In addition to causing water quality and sedimentation issues, wildfires can burn critical infrastructure, particularly in difficult-to-reach areas. Vulnerable structures include those associated with the North Portal Intake Tower and the Tecolote Tunnel, appurtenances to the South Coast Conduit which include laterals and turnout structures, structures associated with regulating reservoirs, access roads, and critical equipment/buildings located at organizational headquarters. If any critical structure is destroyed in a wildfire, it could delay operations and may cause complications in delivering water.

History of Hazard

More than half of the Lake Cachuma watershed has been burned by wildfire in the last decade with the Zaca Fire (2007), White Fire (2010), Rey Fire (2016), Whittier Fire (2017), and Thomas Fire (2017). Between the five fires listed, approximately 180,000 acres of the Lake Cachuma watershed have burned. Most recently, the Thomas Fire has destroyed 166 structures, damaged 395 more, and resulted in 21 fatalities due to subsequent debris flow in Santa Barbara County alone.

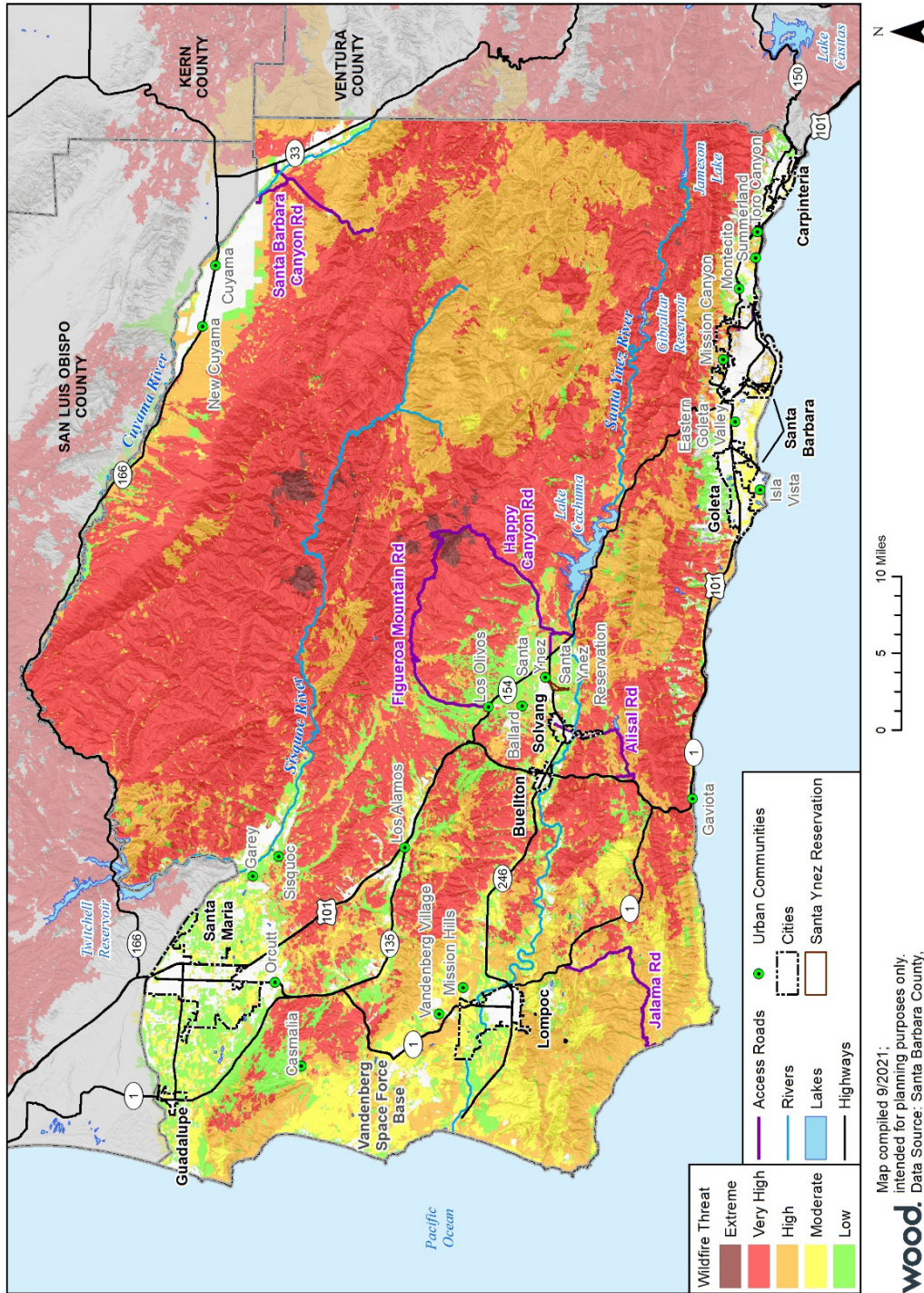
Figure 5-1. Recent Wildfires within the Lake Cachuma Watershed



Probability of Occurrence

Vegetation and topography are significant elements in the identification of fire threat zones. A substantial amount of the vegetation in Santa Barbara is commonly called chaparral, a dense and scrubby bush that has evolved to persist in a fire-prone habitat. Chaparral plants will eventually age and die; however, they will not be replaced by new growth until a fire rejuvenates the area. Chamise, manzanita, and ceanothus are all examples of chaparral which are quite common in Santa Barbara County. Santa Barbara County was subject to 42 major wildfires over 88 years, resulting in a 48 percent chance of occurrence in any given year. In addition, Figure 5-2 shows the threat of fire to Santa Barbara County as mapped by CAL FIRE. Fire threat is a combination of two factors: 1) fire frequency or the likelihood of a given area burning, and 2) potential fire behavior. These two factors are combined to create four threat classes ranging from moderate to extreme.

Figure 5-2. Wildfire Threat in Santa Barbara County



Climate Change Considerations

Climate change plays a significant role in wildfire hazards. Over the past several decades the occurrence of severe autumn wildfires has been increasing. Recent research has found a link between these increasingly severe wildfires and climate change as a result of vegetation drying and a progressively later onset of the start of the rainy season (Swain 2021). In addition, high wind events increase the risk and present challenges during drought conditions which can hinder the ability to contain wildfires. Larger wildfires also have several indirect effects beyond those of a smaller, local fire. These may include air quality and health issues, road closures, business closures, and other forms of losses. Furthermore, large wildfires increase the threat of other disasters such as landslides and flooding. More frequent fires associated with climate change are anticipated to result in increased sedimentation and water quality challenges in the future.

5.3.3 Flood & Mudflow/Debris Flow

A flood is a general and temporary condition of partial or complete inundation on land that is normally dry. Several factors determine the severity of floods, including rainfall intensity and duration, antecedent moisture conditions, surface permeability, and geographic characteristics of the watershed such as shape and slope. Mud flows are defined as flows or rivers of liquid mud down a hillside on the surface of normally dry land. They occur when water saturates the ground, usually following long and heavy rainfalls or rapid snow melt. Mud can form and flows down the slope if there is no ground cover such as brush or trees to hold the soil in place. Debris flow is defined as when water begins to wash material from a slope or when water sheets off of a newly burned stretch of land. Chaparral land is especially susceptible to debris flows after a fire. The flow will pick up speed and debris as it descends the slope. As the system gradually picks up speed it takes on the characteristics of a basic river system, carrying everything in its path along with it.

When flood control infrastructure fails, water builds up and washes into normally dry areas, where it can cause significant harm to buildings, people, infrastructure, and ecosystems. Floods can be caused by heavy rainfall, long periods of moderate rainfall, or blocked-off drainage areas during rainfall. A break in a dam or levee, water pipe, or water tank can also cause flooding in rare instances.

Repetitive Loss Information and NFIP Participation

COMB is not eligible to participate in the NFIP and thus does not have any NFIP repetitive loss properties. Instead, please refer to the 2022 MJHMP.

Vulnerabilities and Potential Impacts of Hazard

Flooding and debris flows are a major risk to COMB assets. In the event of a storm, the South Coast Conduit (SCC) and Secondary Pipeline are at risk of being exposed and damaged. When a section of conduit is exposed, it is vulnerable to pipeline failure resulting from structural damage, corrosion, and or additional erosion material sliding over the conduit. A failed pipeline can quickly cause flood damage to the surrounding area, posing a significant risk.



Damage to SCC vault after 1/9/18 debris flows

Other susceptible areas include creek crossings and locations experiencing elevated flow during a storm surge. In early 2017, the Quiota Creek Crossing Project was damaged by flood events. Damage to the project included: several feet of deposition under the precast arch bridge, bank erosion upstream of the bridge, and minor damage to the rock vanes upstream of the project. There are also examples of the South Coast Conduit becoming exposed at creek crossings. For example, following the winter storm events in 2019, approximately 6 feet of the South Coast Conduit was found exposed in the San Jose Creek bottom. The surface of the pipe was being impacted by stream erosion resulting in the loss of concrete material and aggregate exposure. A break in the SCC at this location would likely be explosive, sudden, and catastrophic. This area was successfully repaired in October 2019.

Flooding and debris flows can be exacerbated by wildfires. After a significant wildfire, bare earth is exposed without significant vegetation to stabilize the soil. During the January 9, 2018 debris flow event in Montecito, nine structures along the SCC were impacted with two structures severely damaged. Because wildfires are becoming more common in the Santa Barbara backcountry near COMB assets, the possibility of damaging debris flows is becoming more likely.

Post-wildfire debris flows can also cause sedimentation and water quality issues within Lake Cachuma. Debris flows can introduce large amounts of organic material into surface waters, as well as increased nutrient loading, dissolved organic carbon, major ions, fire-fighting compounds, turbidity, and other compounds present in the watershed. Debris flows accelerate ongoing sedimentation in the reservoirs, effectively reducing storage capacity. Mono and Big Caliente debris dams, located upstream of Gibraltar Reservoir, were constructed to collect sediment. Both debris dams are now full, and Gibraltar Reservoir is significantly reduced in capacity due to sedimentation. As upstream storage continues to be reduced, the sediment loading on Cachuma could increase.

The EPF infrastructure is especially vulnerable during flood events and rapid lake elevation. During the installation of the EPF, the first step is driving piles into the lake bottom to secure the floating pipe. These anchor piles are 45 to 60-foot tall steel H-beams or pipes and are driven to where the elevation at the top of the piles is 700 ft amsl. The pile driving must begin before the lake reaches an elevation of 695 ft amsl. Once the piles are driven, the working barge must remain on standby during the winter months. During storm events, the reservoir can rise rapidly. In February 2017, the

reservoir rose 23 feet in one day at the peak of the inflow. The reservoir nearly rose above the piles before they could be removed. COMB's contractor worked around the clock in the rain to remove the piles before the lake level overtopped the pilings. Within the current design, the requirement to drive the piles well before the pumping barge is needed results in the Emergency Pumping Facility being placed in standby mode for an extended period (refer also to Section 5.3.4, *Flood* and Section 5.3.5, *Mudflow & Debris Flow* of the 2022 MJHMP).

History of Hazard

Flooding has been a major problem throughout Santa Barbara County's history. The most common flooding in Santa Barbara County is due to riverine flooding, debris flows, and flash flood events. Between 1907 and 2018, Santa Barbara County experienced 20 significant inland flood events. Eight of these floods received Presidential Disaster Declarations.

Probability of Occurrence

By definition, a 100-year flood event has a 1% chance and a 500-year flood event has a 0.2% chance of occurring in a given year based on historical events. Figure 5-3 shows the location of the 100-year flood hazard zones in Santa Barbara County as mapped by FEMA's Flood Insurance Rate Maps (FIRM). Figure 5-4 shows the location of known debris flow hazard zones in Santa Barbara County following the Thomas Fire and recent debris flow events; however, this hazard zone is not applicable countywide. In response to the debris flow disaster in Montecito on January 9, 2018, the Santa Barbara County Office of Emergency Management (OEM) has published a map showing high and extreme risk areas for debris flow. Below is a map showing these boundaries in relation to the South Coast Conduit, the major pipeline maintained by COMB (Figure 5-5). The sections of the South Coast Conduit from Montecito through Carpinteria have the highest risk for debris flow according to OEM findings.

Climate Change Considerations

Climate change is projected to amplify existing flood hazards through increased frequency and strength of El Niño events and rainfall intensity. Extreme weather events have become more frequent over the past 40 to 50 years and this trend is projected to continue. Up to half of California's precipitation comes from a relatively small number of intense winter storms, which are expected to become more intense with climate change. A recent study of climate change impacts in California (Swain et al. 2018, UCLA CCS 2018) found extreme wet years would be 2.5 times more frequent in Southern California. If this is true for Santa Barbara County, more extreme debris flow events can be expected, especially over recently burned areas.

Figure 5-3. Santa Barbara County FEMA Flood Hazard Areas

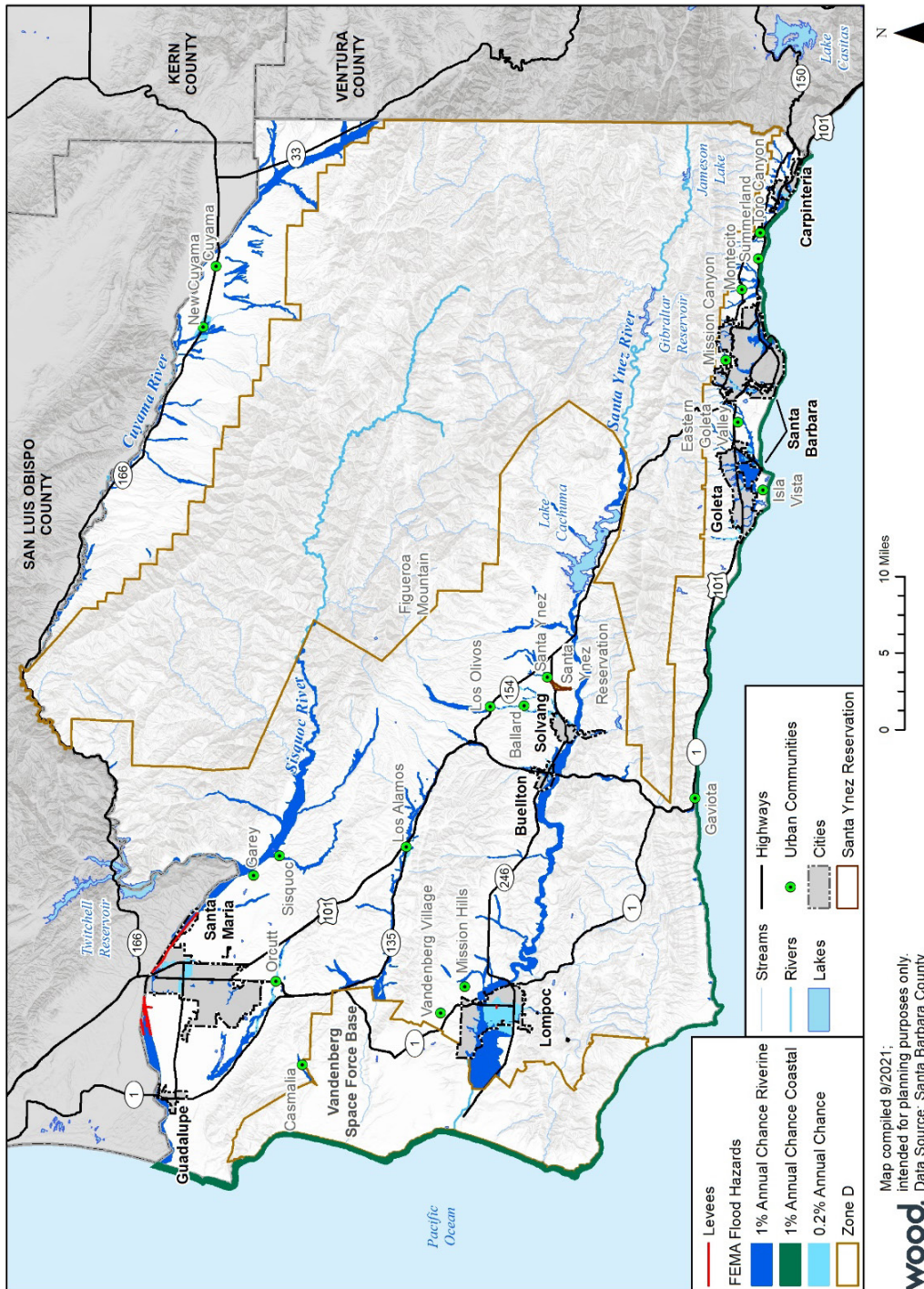


Figure 5-4. Santa Barbara County Known Debris Flow Hazard Areas

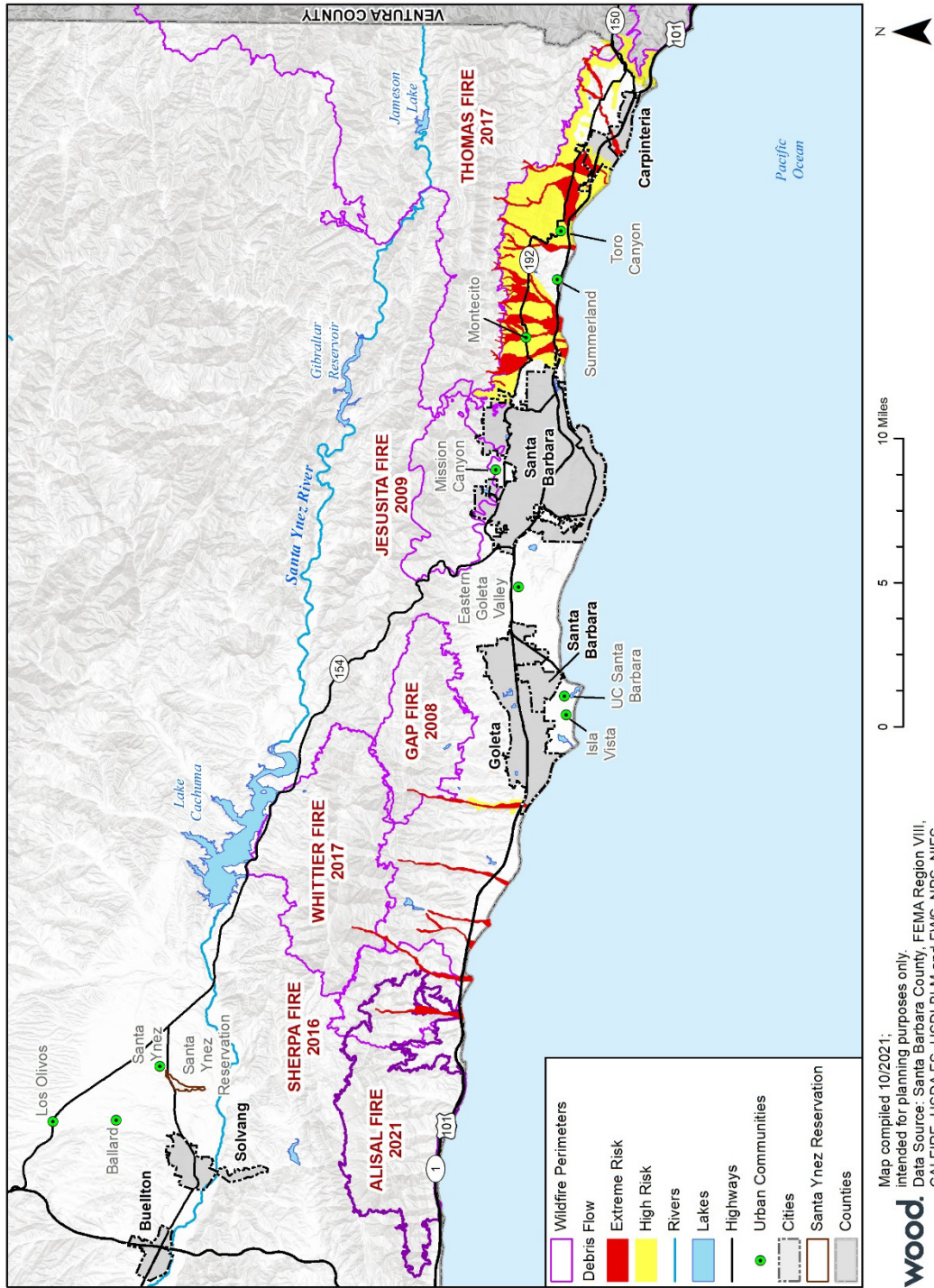


Figure 5-5. Debris Flow Risks for the South Coast Conduit



5.3.4 Earthquake

An earthquake is caused by a release of strain within or along the edge of the Earth's tectonic plates producing ground motion and shaking, surface fault rupture, and secondary hazards, such as ground failure. The severity of the motion increases with the amount of energy released, decreases with distance from the causative fault or epicenter, and is amplified by soft soils. After just a few seconds, earthquakes can cause massive damage and extensive casualties.

The effect of an earthquake on the Earth's surface is called the "intensity." The intensity scale consists of a series of certain key responses such as movement of furniture and facilities, and/or total failure and destruction. The Richter scale currently used in the United States is composed of 12 increasing levels of intensity that range from imperceptible shaking to catastrophic destruction. The Richter scale is logarithmic; each one-point increase corresponds to a 10-fold increase in the amplitude of the seismic shock waves and a 32-fold increase in energy released.

Table 5-2. Richter Scale.

Richter Magnitudes	Earthquake Effects
Less than 3.5	Generally not felt but recorded.
3.5 - 5.9	Often felt, but rarely causes damage.
Under 6.0	Slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across residential areas.
7.0-7.9	Can cause serious damage to larger areas.
8 or greater	Can cause serious damage in areas several hundred kilometers across.

Peak ground acceleration (PGA) is a measure of the strength of ground shaking. Larger peak ground accelerations result in greater damage to structures. PGA is used to depict the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (10, 5, or 2 percent) of being exceeded in a 50-year return period. Figure 5-6 shows fault lines in the county and the probability of areas of the county experiencing 2 percent shaking within the next 50 years. These values are often used for reference in construction design, and in assessing relative hazards when making economic and safety decisions.

Vulnerabilities and Potential Impacts of Hazard

The North Portal of the Tecolote Tunnel is located on the south shore of Lake Cachuma. This critical point in the water delivery system is potentially vulnerable to earthquake damage. The North Portal contains several facilities including the Tecolote Tunnel Intake Tower and access bridge, the North Portal Control Station, and the beginning of the Tecolote Tunnel. Water enters through the 120-foot intake tower, a five-sided structure with 36- by 48-inch slide gates on each side, into the Tecolote Tunnel and is delivered to the South Coast water purveyors. Damage to critical North Portal structures from seismic activity could result in suspended water deliveries to over 200,000 people.



Damage from the 1925 Santa Barbara earthquake

The Tecolote Tunnel is 6.4 miles long and passes through the Santa Ynez Fault in the Santa Ynez Mountains. The entire zone of rock visibly affected by the Santa Ynez fault within Tecolote Tunnel is approximately 1,090 feet wide. Movement along the Santa Ynez Fault zone could cause major damage to the Tecolote Tunnel, taking months to repair and restore water deliveries to the South Coast. In the event of an earthquake resulting in a power outage during a tunnel inspection, a stand-by Caterpillar Diesel generator at the North Portal automatically and instantly starts providing power within seconds for the tunnel ventilation blower, gate chamber sump pump, building lights, and elevator. An earthquake near Lake Cachuma could also result in damage to the Intake Tower. An earthquake with very strong shaking to severe shaking could be strong enough to cause moderate or heavy damage to the integrity of the structure. If the Intake Tower was damaged beyond repair, it would also disrupt deliveries to the South Coast.

Earthquakes have the potential to affect the four regulating reservoirs along the South Coast Conduit. Lauro Reservoir Dam underwent a major seismic retrofit in 2005 to reduce the potential impacts that earthquakes may have on the dam. Glen Anne Dam has also been taken out of service with water no longer being stored in the reservoir due to seismic concerns.

A large earthquake is capable of damaging any existing COMB structure within the buried pipeline network. Seismic failure for large diameter segmented pipelines is primarily due to distress at

pipeline joints. With over 26 miles of segmented conduit within the water delivery system extending from the foothills above Goleta to the Carpinteria valley, a large seismic event could cause pipeline failure and structural damage. If a pipeline failure was to occur, life, property, and the environment in the area immediately downstream of the break could be threatened until a shutoff was established.

In addition to direct damage to COMB structures, other vulnerabilities include damage to access roads that COMB uses to deploy equipment and staff in the field, as well as the potential for utility outages. Currently, COMB has working generators in place at all critical facilities for use in the event of a power outage, but if fuel deliveries are interrupted for significant lengths of time the ability to operate the system would be threatened.

History of Hazard

Seismic events near Santa Barbara County are historically common with multiple minor earth tremors happening every day. For example, in 1978 a series of small earthquakes occurred underneath the northeastern end of the Santa Barbara Channel. In 2003, a 6.5 magnitude earthquake called the “San Simeon Earthquake” had an epicenter just northeast of San Simeon where two fatalities occurred and over forty buildings collapsed, also causing damage to thirty buildings within Santa Barbara County.

Several dam-safety modifications were constructed at Bradbury Dam between 1994 and 2003 to address potential seismic failure modes. The work included the excavation and replacement of foundation materials in the downstream foundation of the dam, along with the construction of a stability berm on the downstream face of the dam to stabilize it, construction of terrace filters on the dam abutments to prevent internal erosion caused by fault rupture in the foundation, reinforcement, and stabilization of the spillway crest structure, and reinforcement of the spillway gates. Lauro Dam also underwent seismic retrofits to prevent liquefaction, including enhancement of the water inflow infrastructure to bring the dam up to federal standards for seismic safety.

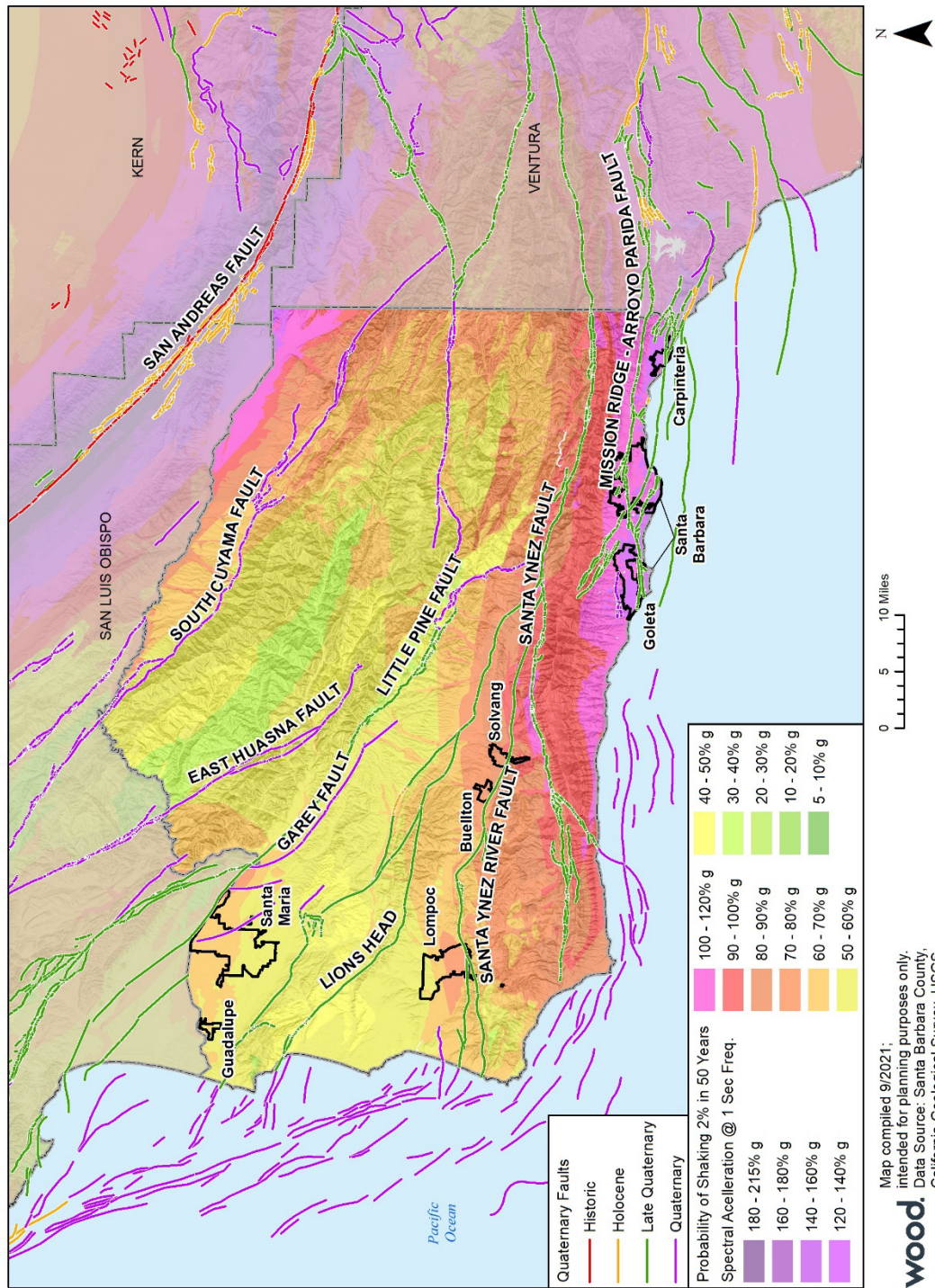
Probability of Occurrence

Santa Barbara County is located in a high seismic activity zone in the Transverse Range geologic province. The movement of continental plates manifests primarily along the San Andreas Fault system. The San Andreas Fault is situated seven miles northeast of Santa Barbara County; active faults in the San Andreas Fault system that fall within Santa Barbara County include the Nacimiento, Ozena, Suey, and Little Pine faults. Other active faults in the region include the Big Pine, Mesa, Santa Ynez, Graveyard-Turkey Trap, More Ranch, Pacifico, Santa Ynez, and Santa Rose Island faults. The U.S. Geological Survey (USGS) and their partners have estimated the chances of having large earthquakes throughout California over the next 30 years. Statewide, the rate of earthquakes around magnitude 6.7 (the size of the 1994 Northridge earthquake) has been estimated to be one per 6.3 years (more than 99 percent likelihood in the next 30 years); in southern California, the rate is one per 12 years (93 percent likelihood in the next 30 years) (refer to Table 5-10 of the MJHMP).

Climate Change Considerations

To date, no credible evidence has been provided that links climate to earthquakes; however, climate and weather do play a significant role in the response and recovery from earthquakes.

Figure 5-6. Santa Barbara County Probability of Shaking 2% in 50 Years



5.3.5 Landslide & Other Earth Movements

Landslides can be defined as the movement of a mass of rock, debris, or earth down an incline. Types of landslides include rock falls, rockslides, deep slope failures, shallow debris flows, and mud flows. Slope failure occurs when there is erosion of slopes by surface-water runoff. The intensity of slope wash is dependent on the discharge and velocity of surface runoff and the resistance of surface materials to erosion. The most common cause of a landslide is an increase in the downslope gravitational stress applied to slope materials, also known as over-steepening. Over-steepening can be caused by natural processes or by man-made activities. Undercutting of a valley wall by stream erosion or a sea cliff by wave erosion are ways in which over-steepening may occur naturally.

Vulnerabilities and Potential Impacts of Hazard

Similar to debris flows, landslides have the potential to damage critical water delivery structures. Existing slope instability has the potential to cover the South Portal configuration on the Modified Upper Reach Reliability Project, adversely affecting access and causing soil infiltration into the South Coast Conduit. In the 1980s, a portion of the South Coast Conduit was re-aligned in Greenwell Canyon due to landslide and earth movement concerns. In 1995, a slide engulfed the former South Portal structure. In 2005 storms exposed the South Coast Conduit in the Goleta reach which required slope stabilization and drainage improvement. The storms in February 2017 resulted in slope failure in the Sycamore Canyon area which exposed the conduit. Additional erosion or slope movement could result in damage to the conduit and surrounding area.

Landslides around Lake Cachuma and COMB's reservoirs can also impact water quality and sedimentation. The hillsides above Lauro Reservoir are highly susceptible to washouts and landslides and numerous landslides and washouts have occurred in the past impacting water quality (1962, 1964, 1967, 1969, 1973, 1978, and 1995). Landslides can be triggered by heavy rainfall, snowmelt, reservoir drawdown, and seismic activity, especially in the mountainous terrain within the Lake Cachuma watershed. Negative impacts of landslide events on Lake Cachuma and COMB's reservoirs include increased suspended sediment, turbidity, organic material, ions of concern, mercury, and other metals of concern found within surrounding soils. Sedimentation within Lake Cachuma has reduced the capacity of Lake Cachuma by 11% and has buried the lowest gate of the Intake Tower, reducing the operational capacity of the reservoir. The Intake Tower and other structures at the North Portal are vulnerable to increased sedimentation resulting from landslides within the watershed.

History of Hazard

The South Coast Conduit has been subject to landslides along the alignment. The original South Coast Conduit in Greenwell Canyon had to be relocated in the 1980s due to landslide concerns. Landslides also exposed the conduit in the Goleta area requiring extensive measures to stabilize the pipeline. More recently a slope failure in 2017 exposed the conduit in the Sycamore Canyon area. The Sycamore slope failure was successfully repaired in 2019. Earth movements have also impacted access roads, such as the access road to the North Portal.

Probability of Occurrence

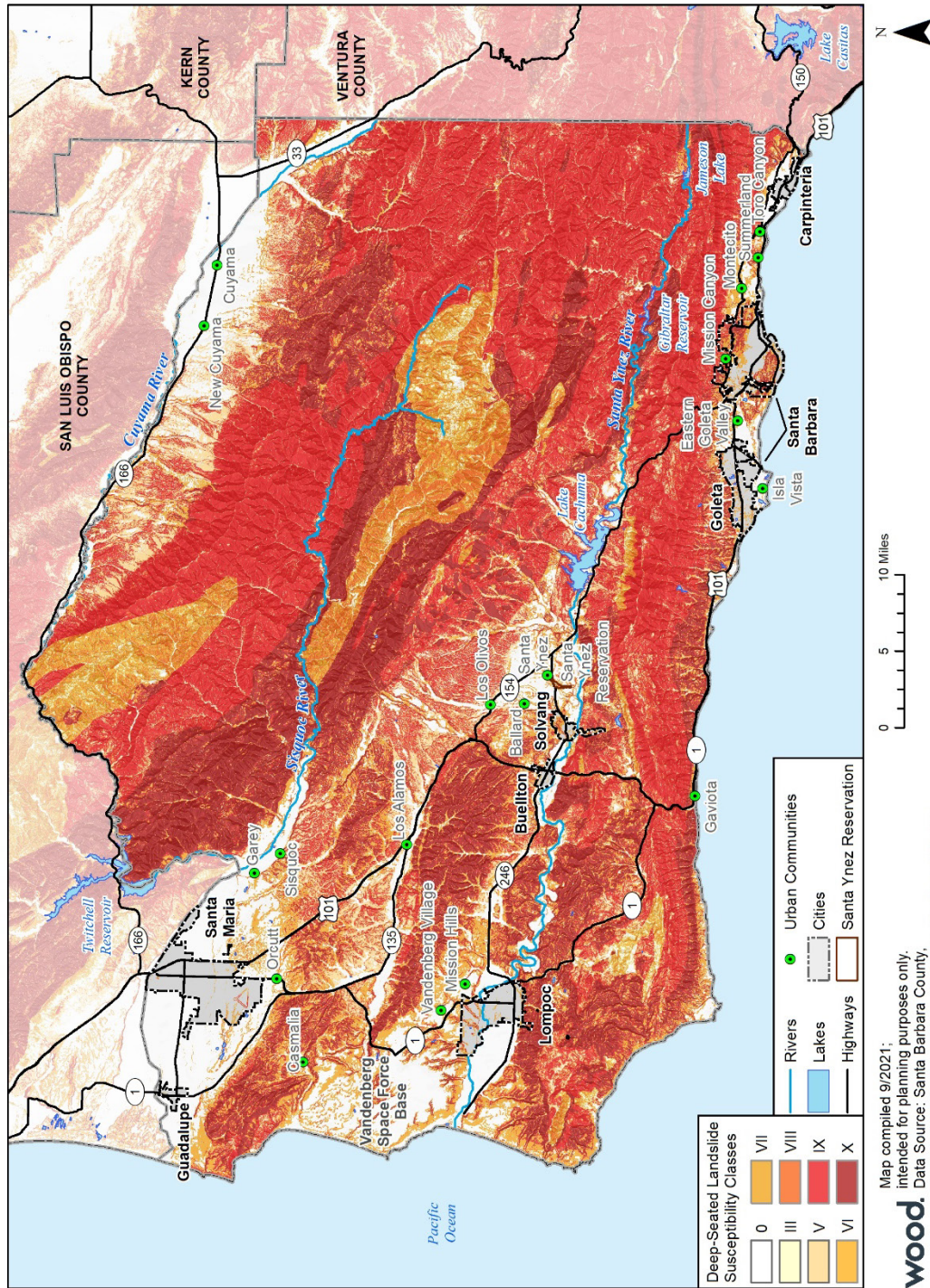
Landslides have the potential to impact the conduit where the pipeline alignment is located along the sides of slopes in the foothills of the Santa Ynez Mountains. Figure 5-7 shows the locations of

deep-seated landslide susceptibility in Santa Barbara County as mapped by the California Geological Survey. This map shows the relative likelihood of deep landslide based on the three site factors that most determine susceptibility: prior failure (from a landslide inventory), regional estimates of rock or soil strength, and steepness of slopes. The areas shaded in darker red in Figure 5-7 are considered to have a higher probability of landslide occurrence than the low landslide risk areas in the county.

Climate Change Considerations

A 2021 study by the USGS finds that Southern California is likely to see increased post-wildfire landslides caused by climate change-induced shifts in the state’s wet and dry seasons. Wildfires make the landscape more susceptible to landslides when rainstorms pass through as the water liquefies unstable, dry soil and burned vegetation. Major landslides capable of damaging 40 or more structures can be expected every 10 to 13 years – about as frequently as magnitude 6.7 earthquakes occur in California. Combined with recent research showing California’s wildfire season is getting longer and the rainy season is getting shorter and more intense, the new findings suggest Californians face a higher risk of wildfires and post-wildfire landslides that can damage property and endanger people’s lives (USGS 2021).

Figure 5-7. Santa Barbara County Landslide Susceptibility Areas



6.0 VULNERABILITY ASSESSMENT

The purpose of this section is to estimate the potential vulnerability (impacts) of hazards on COMB assets. This assessment informs the development of mitigation strategies to avoid or lessen potential impacts through the 2022 LHMP update. To accomplish this, an assessment of COMB assets that may be vulnerable to these hazards is provided as well. A further description of the threats and methodologies used to assess vulnerabilities countywide, including COMB and its member agencies, is provided in Chapter 6.0, *Vulnerability Assessment* of the 2022 MJHMP. Refer also to the LHMPs for the City of Santa Barbara, Carpinteria Valley Water District (CVWD), Goleta Water District (GWD), and Montecito Water District (MWD) for an expanded description of vulnerabilities in each jurisdiction (MJHMP Annexes F, J, K, and M, respectively).

6.1 COMB ASSETS & LOSS ESTIMATE

The loss estimate began with a review of COMB's asset inventory. COMB assets that are vital to the delivery of water to the South Coast communities include over \$572 million of facilities that may be vulnerable to damage or loss from drought, wildfire, flood/debris flow, earthquake, and/or landslide, as described in Section 5.0 (Table 6-1).

Table 6-1. COMB Asset Inventory and Values of the Cachuma Transferred Project Works and Member Unit Projects

Project Components	Construction Cost	Year	2020 Index-Adjusted Cost*
Intake Tower / Tecolote Tunnel	\$14,615,513	1950-1956	\$328,600,000
South Coast Conduit – Goleta Reach	\$2,789,096	1950-1953	\$62,700,000
South Coast Conduit – Carpinteria Reach	\$3,761,224	1950-1953	\$84,600,000
Glen Anne Reservoir	\$1,148,750	1951-1954	\$24,300,000
Upper Reach Secondary Pipeline(MURRP)	\$3,950,000	2011-2012	\$5,000,000
Lauro Reservoir	\$1,195,933	1951-1954	\$25,300,000
Lauro Dam SOD Modification	\$8,000,000	2005	\$12,300,000
Ortega Reservoir	\$960,943	1951-1954	\$20,300,000
Carpinteria Regulating Reservoir	\$464,218	1951-1954	\$9,800,000
Total	\$36,885,677		\$572,900,000

*Index-adjusted costs are estimated by adjusting the construction costs by the ENR historical construction cost index. Replacement costs would likely be greater due to increased design standards and regulatory requirements since the water facilities were completed.

COMB LPT members reviewed each asset and assigned a potential percentage of damage expected due to each identified hazard. In addition, if there were identified reservoir or dam loss of function, values were also included. Table 6-2 identifies each asset category, name, total value, and the percent damage/damage value for each asset. The damages for each asset are totaled for each hazard to obtain the overall loss estimate for each hazard.

Table 6-2. COMB Vulnerability Assessment Calculations

Name	TOTAL	Drought & Water Shortage		Wildfire		Flood/Debris Flow		Earthquake		Landslide	
		% Damage	\$ Loss Estimate	% Damage	\$ Loss Estimate	% Damage	\$ Loss Estimate	% Damage	\$ Loss Estimate	% Damage	\$ Loss Estimate
Intake Tower / Tecolote Tunnel	\$328,600,000	2.6%	\$8,600,000*					7.8%	\$25,700,300†		
SCC – Goleta Reach	\$62,700,000					2.4%	\$1,500,000***	1.7%	\$1,050,000††	2.4%	\$1,500,000†††
SCC – Carpinteria Reach	\$84,600,000					1.4%	\$1,200,000***	1.2%	\$1,000,000††	1.4%	\$1,200,000†††
Glen Anne Reservoir	\$24,300,000										
Upper Reach Secondary Pipeline (MURRP)	\$5,000,000										
Lauro Reservoir	\$25,300,000			1.2%	\$300,000**	1.2%	\$300,000				
Lauro Dam SOD Modification	\$12,300,000										
Ortega Reservoir	\$20,300,000										
Carpinteria Reservoir	\$9,800,000										
Total Vulnerability	\$572,900,000		\$8,600,000		\$300,000		\$2,700,000		\$27,750,300		\$2,700,000

* Cost of EPF installation, operation, maintenance, and demobilization during the last drought

** Estimate for manufacturing and purchase of two new mobile offices totaling 1,680 ft² at Lauro Office site

*** Assumes 500-year flood and 5 breaks (Goleta Reach) or 6 breaks (Carpinteria Reach) at select creek crossings

† Assumes temporary bypass and permanent solutions needed at Intake Tower, and 1,000ft replacement of Tecolote Tunnel

†† Loss estimate for an earthquake with PGA > 0.1 causing 0.4 repairs/kilometer, or 7 repairs (Goleta Reach, 48-inch pipe) and 10 repairs (Carpinteria Reach, 27-36 inch pipe)

††† Duplication of flood/debris flow loss estimate

7.0 MITIGATION STRATEGY

This section contains COMB’s updated and most current mitigation strategy as of 2022.

7.1 MITIGATION GOALS AND OBJECTIVES

As described in Section 3.0, COMB’s MAC participated in the development of the goals and objectives for the 2022 MJHMP update. Subsequently, the COMB LPT refined these goals into unique goals for the COMB LHMP, reflective of the specific hazards and vulnerabilities of COMB-managed facilities. These refined goals and objectives represent a vision of long-term hazard reduction or enhancement of capabilities for COMB; see also, Chapter 7.0, *Mitigation Plan* of the 2022 MJHMP.

The updated goals and objectives of this plan are presented in Table 7-1.

Table 7-1. COMB LHMP Goals and Objectives

Goal 1. Promote Disaster Resiliency for Existing Assets
Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Objective 1.2: Participate in initiatives that provide mutual hazard mitigation benefits for COMB and the Member Agencies
Objective 1.3: Continue to identify, prioritize and implement mitigation actions as directed by the COMB Board
Goal 2. Promote Disaster Resiliency for Future Development Projects
Objective 2.1: Facilitate the rehabilitation of current and development of new critical water infrastructure to make the South Coast Water System more resilient

7.2 MITIGATION PROGRESS

Since the 2017 MJHMP, COMB has incorporated the LHMP goals, objectives, and mitigation actions into its local plans and processes, including the COMB IIP, budget planning, and capital improvement planning. Ongoing monitoring and evaluation of the LHMP by COMB ensured mitigations are implemented and tracked. Key mitigation actions completed include stabilizing the Sycamore Canyon slope and partially completing measures to protect South Coast Conduit creek crossings. The COMB LPT reviewed the mitigation actions listed in the former LHMP to determine the status of each action. Once reviewed, deferred projects were renumbered to reflect 2022 updates (see Table 7-1).

Table 7-1. Status of Previous Mitigation Actions

Mitigation Action No	Mitigation Action Description	Status	Comments	In 2022 Update?
2017-1	Lake Cachuma Emergency Pumping Facility Project	In Progress	COMB has completed engineering designs for a water delivery pipeline secured to the bottom of Lake Cachuma, to provide access	X

Mitigation Action No	Mitigation Action Description	Status	Comments	In 2022 Update?
			to lower reservoir levels during prolonged drought. NEPA/CEQA has been complete, permitting is in process, and construction is scheduled for late summer 2022 for the secured pipeline element.	
2017-2	Sycamore Canyon Slope Stabilization	Completed	In September 2019, the Sycamore Canyon Slope Stabilization project was completed, which involved the installation of three buried caisson walls, slope stabilization measures, and drainage improvements. These mitigation measures are protecting the pipeline in this area by improving surface drainage, stabilizing the slope slip planes, and preventing future streambank erosion from undercutting the slope. This project is complete and functions as designed by stabilizing the slope and keeping cover over the pipeline in the project area.	
2017-3	South Coast Conduit Creek Crossing Protection Measures	Partially Complete	One project is complete, but the category remains open and is included in the 2022 LHMP annex update. The San Jose Creek Emergency Pipeline Repair Project was completed in October 2019, and functions as designed, including pipeline repair and pool-riffle elements. Crossing surveys are completed annually for inclusion in post-project annual reports.	X

7.3 MITIGATION APPROACH

The proposed mitigation actions are shown in Table 7-2 below in order of priority. The priorities are based on the South Coast population that would be impacted by the disruption in water supply if a disaster occurred. A cost-benefit analysis will be performed on a project-by-project basis for grant funding sub-applications utilizing the FEMA Benefit-Cost-Analysis Toolkit.

Table 7-2. 2022 Mitigation Actions

Mitigation Action No.	Project Name/Description	Population Affected
2022-1	Lake Cachuma Emergency Pumping Facility Project	208,500 people with disruption in water supply

7.0. Mitigation Strategy

Mitigation Action No.	Project Name/Description	Population Affected
2022-2	Lake Cachuma Water Quality and Sediment Management Phase II	208,500 people with impacts to water quality and increased surface water treatment costs
2022-3	South Coast Conduit Creek Crossing and Slope Protection Measures	13,000 to 120,000 people with disruption in water supply depending on where a break occurs
2022-4	SCC Line Valves for Emergency Breaks and Repairs	13,000 to 208,500 people with disruption in water supply depending on where a break occurs
2022-5	North Portal Intake Tower Seismic Assessment and Project	208,500 people with disruption in water supply
2022-6	Sheffield Tunnel Evaluation and Repair	Montecito Water District and Carpinteria Valley Water District customers
2022-7	Reservoir Access Road Improvements	150,000 people with impact to water quality

The mitigation actions will be implemented by the COMB Operations Division. The Emergency Pumping Facility Project would be implemented if drought conditions continue. Several creek crossings which are shallow are being actively monitored and may require protection measures if the pipeline becomes exposed. In addition, COMB annually updates its five-year infrastructure improvement planning, which will incorporate components of this plan and provide additional projects which would be included in this COMB LHMP annex in a future update.

7.4 IMPLEMENTATION PLAN

2022-1. Lake Cachuma Emergency Pumping Facility Project

Lake Cachuma serves as the primary water supply for approximately 208,500 people in southern Santa Barbara County. The ability to gravity flow water through the Intake Tower is lost when the lake level falls below the inlet gates. Persistent drought conditions require the installation of an Emergency Pumping Facility Project (EPFP). The EPFP is needed to deliver water from a pumping barge to the Intake Tower until the lake elevation increases and gravity flow is reestablished. Since Bradbury Dam was constructed in the early 1950s, there have been three major multi-year dry periods requiring the installation of pumping facilities that delivered water to the Intake Tower. The first iteration occurred in 1957 when a multi-year dry period delayed lake filling after dam construction. More recently, emergency pumping facilities with a floating conveyance pipeline were utilized from 1990 to 1991 and from 2015 to 2017.

COMB has completed engineering designs for a water delivery pipeline secured to the bottom of Lake Cachuma, to provide access to lower reservoir levels during prolonged drought. The pipeline is designed to be connected to the lowest inlet gate on the existing intake tower and extend into deeper parts of the reservoir. The project will allow access to an additional ~18,000 acre-feet (as allocated per existing agreements) of water for delivery to 208,500 residents on the south coast of Santa Barbara County. Lake Cachuma was recently impacted by seven consecutive years of record drought, reaching a low of 7.2% reservoir capacity in October 2016. When reservoir levels drop below the inlet gates, the gravity system is rendered unusable without pumps and pipes. This

project provides either a temporary floating pipeline or a permanently secured pipeline that can be used when supplies are required from lower reservoir levels.

Mitigation Priority and Performance	
Priority	High
Hazards Mitigated	Drought / Water Shortage, Wildfire (Sedimentation)
Estimated Timeline	The project is dependent on the lake levels and drought conditions. The temporary emergency system has been designed and permitted and the key components are in storage. For the temporary floating pipeline option, pile driving would have to start before the lake reached 695 feet. It would remain on standby for approximately 1 year depending on hydrology before operations at 678 feet. For the permanent secured pipeline option, the pipeline would be installed one time in 2 to 3 months. Then, the facility can be installed and operational in 120 days as it would only involve the construction of the pumping barge and there would not need to start as early for the pile driving installation. The 695' trigger in 2014-2017 resulted in a long standby period between initial deployment and operations. The pipeline component of the system could be weighted to the bottom of the lake to provide long-term storage of the pipeline for the expected higher frequency need of the system. This would reduce the time needed to install the system and reduce the environmental impacts of moving, fusing, floating, and pile driving that is required to install the temporary pipeline.
Estimated Cost/Funding Source	The temporary system cost \$8,600,000 to operate from 2014 to 2017. With the key components in storage, the system could be reinstalled and operated for \$4,300,000 over ~1.5 years of operation. A one-time cost of ~\$4,000,000 would be needed to purchase and install the pipe on the bottom of the lake (secured pipeline). This would reduce the future installation time, reduce environmental impacts, reduce future costs (by ~12,900,000 over 65 years), and mitigate against future impacts from sedimentation reducing operational capacity. COMB was awarded a Reclamation WaterSmart Grant (Drought Response Program: Drought Resiliency Projects for Fiscal Year 2019) for \$750,000, and \$2,250,000 through DWR's Urban and Multibenefit Drought Relief Program Phase II in 2022. Other funding will come from the COMB Operating Budget / Section 404 Funding or other sources.
Responsible Agency/Department	COMB
Relevant Objective	Objective 2.1: Facilitate the rehabilitation of current and development of new critical water infrastructure to make the South Coast Water System more resilient
Comments	This project was adapted from 2017-1 included as part of the former LHMP.

2022-2. Lake Cachuma Water Quality and Sediment Management Phase II

Lake Cachuma is the principal drinking water supply for the South Coast of Santa Barbara County providing surface water supply to the Goleta Water District, City of Santa Barbara, Montecito Water District, and Carpinteria Valley Water District. In addition, Lake Cachuma serves as the conduit for state water deliveries to the South Coast.

The Zaca Fire (2007), White Fire (2013), Rey Fire (2016), Whittier Fire (2017), and Thomas Fire (2017) have impacted the watershed and water quality in Lake Cachuma. Between the five fires listed approximately 180,000 acres of the watershed (two-thirds) burned. Wildfires are known to

have a direct impact on receiving surface water quality by increasing organic carbon, nutrient, and sediment loading. Raw water containing elevated organic carbon increases disinfection byproduct formation potential. Water treatment staff at Corona Del Mar Water Treatment Plant and William B. Cater Water Treatment Plant receiving raw Lake Cachuma have observed elevated disinfection byproducts following wildfire scarring within the watershed. COMB recently completed a two-year study (The Water Quality and Sediment Management Study Phase I) on behalf of, and in coordination with, the COMB Member Agencies for addressing raw surface water quality and sedimentation issues at Lake Cachuma. The report identified Total Organic Carbon (TOC) and algal blooms as priority issues. The consultant also recommended a suite of management actions designed to increase understanding of water quality challenges. Among the management actions were 1) determine predominant source of TOC (i.e. vascular/terrestrial vs. nonvascular/algal) and seasonal variability, and 2) measure mass of phosphorus (P) in sediments and rates of sediment P flux. Phase II management actions include special sediment depth sampling at key lake locations, additional tributary surface water sampling from burned and unburned subwatersheds, and advanced laboratory analysis in order to quantify the magnitude of organic carbon and nutrient contributing sources (Organic Carbon / Phosphorus Sampling and Source Investigation).

Also contained within the Water Quality and Sediment Management Study Phase I, was a recommendation to advocate for improved forest management in the Upper Santa Ynez Watershed. This could include issuing letters of support for watershed projects resulting in improved water quality at Lake Cachuma, such as road maintenance, fuelbreak maintenance, thinning, prescribed burning, and other techniques for fuel reduction. Strategic management of the forest will help prevent future large-scale wildfires like the Zaca Fire and Thomas Fire, and resultant water quality concerns. A large portion of the upper watershed land is located within the Los Padres National Forest, managed by the Forest Service. Part of Lake Cachuma Water Quality and Sediment Management Phase II is engagement and support of Forest Service actions within the watershed as applicable and with direction from the COMB Board of Directors. For example, a letter of support was issued to the Forest Service in August 2022 in support of the Los Padres National Forest’s (LPNF) Proposed Ecological Restoration Project, to restore fire-adapted ecosystems, reduce fuels, and selectively reintroduce prescribed burning on Los Padres National Forest lands near Lake Cachuma.

Mitigation Priority and Performance	
Priority	High
Hazards Mitigated	Wildfire
Estimated Timeline	Organic Carbon / Phosphorus Sampling and Source Investigation is expected to be completed by June 2024.
Estimated Cost/Funding Source	\$100,000 (environmental consultant)/ COMB Operating Budget/Section 404 Funding.
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.2: Participate in initiatives that provide mutual hazard mitigation benefits for COMB and the Member Agencies
Comments	

2022-3. South Coast Conduit Creek Crossing and Slope Protection Measures

Over time the creek crossings for the South Coast conduit erode resulting in exposure of the pipeline in some locations. This project would involve mitigating the risks to the conduit by either protecting it in place (concrete encasement and/or channel stabilization) or lowering the conduit. In addition, the conduit has been exposed on hillslope requiring slope stabilization measures such as buried reinforced caisson walls and rock slope protection.

Mitigation Priority and Performance	
Priority	High
Hazards Mitigated	Flooding / Mud Flow / Debris Flow, Landslide / Other Earth Movements
Estimated Timeline	Creek crossing protection measures would typically be performed during the late summer when there is minimal to no flow in the creeks. These projects would require additional engineering and permitting (6 to 12 months). Construction of concrete encasement and channel stabilization measures would take 1 month. Pipeline relocation by lowering the conduit would take approximately 2 to 3 months. Slope stabilization measures would occur in the summertime period. Engineering and permitting may require 6 to 12 months and construction 2 to 3 months.
Estimated Cost/Funding Source	100,000 (in-stream protection in place) to \$1,500,000 (pipeline relocation) for affected crossings/ COMB Operating Budget/Section 404 Funding.
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Comments	This project was adapted from 2017-3 included as part of the former LHMP.

2022-4. SCC Line Valves for Emergency Breaks and Repairs

A large earthquake near the South Coast Conduit (SCC) could be capable of damaging the existing buried pipeline network. Seismic failure for large diameter segmented pipelines typically occurs in distressed pipeline joints. With over 26 miles of segmented conduit within the water delivery system maintained by COMB, there exists the possibility of structural damage during a large earthquake.

Flooding and debris flows are also risks to buried pipelines. In the event of a storm, the SCC and laterals are at risk of being exposed and damaged. This project type would allow the installation of line valves within the SCC, to isolate smaller sections of the pipeline in the event of a main break. Overall, the installation of additional line valves would promote disaster resiliency and increase operational flexibility. A secondary benefit is that rehabilitation work would be easier to perform, and water would be conserved during future projects with additional line valves in place.

Line stops would be installed and the segment would be removed. Port plugs with a bypass line would be installed on either side of the removed segment to avoid the need for a service outage. A new segment with a valve would be inserted and the pipeline would be disinfected, tested, and put back in service.

Mitigation Priority and Performance	
Priority	Medium
Hazards Mitigated	Flooding / Mud Flow / Debris Flow, Landslide / Other Earth Movements, Earthquake, Terrorism

Mitigation Priority and Performance	
Estimated Timeline	This project could be completed in under a month
Estimated Cost/Funding Source	\$500,000 (construction) /COMB Operating Budget/Section 404 Funding
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Comments	

2022-5. North Portal Intake Tower Seismic Assessment and Repair

Water diversions from Lake Cachuma occur at the North Portal Intake Tower, which flows into the Tecolote Tunnel and SCC for water delivery to the Cachuma Project Member Agencies. The vertical tower is located approximately mid-reservoir and has slide gates at varying levels to draw in water. This project would include the examination of structural elements on the Intake Tower to determine the reliability of the tower, and recommendations for upgrades and retrofit projects if appropriate. Of particular interest is how the tower would perform under various earthquake scenarios. A retrofit project of the North Portal Intake Tower may result from assessment recommendations.

Mitigation Priority and Performance	
Priority	Medium
Hazards Mitigated	Earthquake
Estimated Timeline	A condition assessment of the North Portal Intake Tower is ideally completed when the lake level is low and exposed for examination
Estimated Cost/Funding Source	\$100,000 (assessment) plus the cost of a retrofit from assessment recommendations COMB Operating Budget/Section 404 Funding
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Comments	

2022-6. Sheffield Tunnel Evaluation and Repair

The Sheffield Tunnel is a concrete tunnel housing the 30” South Coast Conduit (SCC) that extends 6,100 feet between the Mission Creek area and Parma Park. Within the tunnel, sections of concrete pipe are connected and joined with steel bands and mortar joints to maintain the integrity of the pipe collar connections. This project would include the examination of structural elements of the tunnel to determine the reliability of the tunnel elements, and recommendations for upgrades and retrofit projects if appropriate. Of particular interest is how the tunnel would perform under various earthquake scenarios. A retrofit project of Sheffield Tunnel may result from assessment recommendations.

Mitigation Priority and Performance	
Priority	Medium
Hazards Mitigated	Earthquake

Mitigation Priority and Performance	
Estimated Timeline	This project would require engineering (~1 year). Total time including construction to complete this project (1 to 2 years).
Estimated Cost/Funding Source	\$200,000 (engineering) and ~\$200,000 (construction) COMB Operating Budget/Section 404 Funding
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Comments	

2022-7. Reservoir Access Road Improvements

Improvements to reservoir access roads to prevent impacts from landslides and from poor water quality entering the reservoir. Lauro Reservoir has had numerous landslides in the past and has been the reservoir access road has had partial improvements to prevent issues with landslides and poor water quality entering the reservoir. In addition, access roads at the North Portal to Lake Cachuma and at Glen Annie Reservoir have a history of landslides and damage in storm events. The project at Lauro Reservoir would include the completion of approximately 800 feet of road that acts as an access, retaining wall for landslides, and overflow spillway for the debris basin.

Mitigation Priority and Performance	
Priority	Medium
Hazards Mitigated	Flood and Landslides
Estimated Timeline	A condition assessment of the North Portal Intake Tower is ideally completed when the lake level is low and exposed for examination
Estimated Cost/Funding Source	\$900,000 (construction) from assessment recommendations COMB Operating Budget/Section 404 Funding
Responsible Agency/Department	COMB
Relevant Objective	Objective 1.1: Mitigate the long-term vulnerability of structures and critical water infrastructure to reduce impacts from hazards
Comments	

8.0 PLAN MAINTENANCE

8.1 MONITORING, EVALUATING, AND UPDATING THE PLAN

Since the last LHMP in 2017, the LPT has monitored, evaluated, and updated the plan on a continuing and as-needed basis. COMB was very successful in implementing the 2017 mitigation actions as noted in Table 7-1. The remaining mitigation actions outlined in the 2017 LHMP are ongoing at the time of this 2022 update.

COMB will be responsible for ensuring that this LHMP annex is monitored on an ongoing basis. COMB will continue to participate in the countywide MAC and attend the annual meeting organized by the County OEM to discuss items to be updated/added in future revisions of this plan. The MJHMP is evaluated by the MAC annually to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. This includes

re-evaluation of goals, objectives, and mitigation actions for each jurisdiction by the MAC. The MAC also reviews the goals and mitigation actions to determine their relevance to changing situations in the county, as well as changes in State or Federal regulations and policy. The MAC reviews the risk assessment portion of the MJHMP and its annexes to determine if this information should be updated or modified, given any new available data. The responsible parties for the mitigation actions report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised. Any updates or changes necessary for COMB's LHMP will be forwarded to the County Office of Emergency Management for inclusion in further updates to the MJHMP.

Major disasters affecting COMB, legal changes, notices from Santa Barbara County OEM (lead agency for the MJHMP), and other significant events may trigger revisions to this plan or the convening of the LPT. COMB LPT, in collaboration with the Santa Barbara County OEM, and the other communities of the County, will determine how often and when the plan should be updated.

To remain eligible for mitigation grant funding from FEMA, COMB is committed to revising the plan a minimum of every five years. COMB's designee will contact the county four years after this plan is approved to ensure that the county plans to undertake the plan update process. The jurisdictions within Santa Barbara County should continue to work together on updating this multi-jurisdictional plan.

8.2 IMPLEMENTATION THROUGH EXISTING PLANS AND PROGRAMS

COMB implements the LHMP through existing plans, programs, and procedures, as detailed in Section 4.0, *Capability Assessment*. This LHMP provides a baseline of information on the hazards impacting COMB and the existing institutions, plans, and policies that help to implement the LHMP (e.g., IIP, IRWM, RRA, ERP, WQ&SM). The LHMP annex complements these plans and programs, working together to achieve the goal of reducing risk exposure to COMB's customers and assets. An update to COMB's operating documents may trigger an update to the hazard mitigation plan. Implementation responsibilities of mitigation actions is integrated into the operational functions of the responsibility parties identified, including responsibility for seeking funding needed for implementation. The LHMP has also been prepared to support the IIP and ERP to implement infrastructure improvements to reduce earthquake, drought, and flooding hazards.

The information contained within this LHMP, including results from the Vulnerability Assessment and the Mitigation Strategy, is used by COMB to help inform updates and the development of plans, programs, and policies. COMB may utilize the hazard information when developing and implementing the infrastructure improvement programs and coordinating with other agencies on implementation of improvements.

8.3 ONGOING PUBLIC OUTREACH AND ENGAGEMENT

The public will continue to be involved whenever the plan is updated and as appropriate during the monitoring and evaluation process. Before the adoption of updates, COMB will provide the opportunity for the public to comment on the updates. A public notice will be published before the meeting to announce the comment period and meeting logistics. Moreover, COMB will engage

stakeholders in community emergency planning. As described in Section 3.4, *Public Outreach and Engagement*, the public outreach strategy used during development of the current update will provide a framework for public engagement through the plan maintenance process. It can be adapted for ongoing public outreach as determined to be feasible by the MAC and the LPT.

8.4 POINT OF CONTACT

Comments or suggestions regarding this plan may be submitted at any time to Janet Gingras, General Manager, using the following information:

Janet Gingras, General Manager
Cachuma Operation and Maintenance Board
3301 Laurel Canyon Road, Santa Barbara, CA 93110
JGingras@cachuma-board.org
805-687-4011

9.0 REFERENCES

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RESOLUTION NO. 778

**RESOLUTION OF THE GOVERNING BOARD OF THE
CACHUMA OPERATION & MAINTENANCE BOARD ADOPTING THE
COMB LOCAL HAZARD MITIGATION PLAN AS AN ANNEX TO THE
2022 SANTA BARBARA COUNTY MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN**

WHEREAS, the Cachuma Operation & Maintenance Board (“COMB”) is a joint powers authority and public entity, organized and existing in the County of Santa Barbara in accordance with Government Code Section 6500 *et seq.*, and operating pursuant to the 1996 Amended and Restated Agreement for the Establishment of a Board of Control to Operate and Maintain the Cachuma Project - Cachuma Operation And Maintenance Board, dated May 23, 1996 (“Amended and Restated Agreement”), as amended by an Amendment to the Amended and Restated Agreement made effective September 16, 2003; and as amended by the Second Amendment to the 1996 Amended and Restated Agreement made effective November 20, 2018 (collectively the “Joint Powers Agreement”); and

WHEREAS, the Member Agencies of COMB are the Goleta Water District, the City of Santa Barbara, the Montecito Water District, and the Carpinteria Valley Water District; and

WHEREAS, COMB operates and maintains Cachuma Project facilities pursuant to a Transfer of Operation and Maintenance Contract with the United States Bureau of Reclamation, including the South Coast Conduit (“SCC”) and appurtenances. The SCC is a critical piece of infrastructure that provides for the conveyance of Cachuma Project water and State Project water to 250,000 residents on the South Coast of Santa Barbara County; and

WHEREAS, the Federal Disaster Mitigation Act of 2000 (“Act”), as described in 44 CFR Section 201.6 mandates local governments to submit and maintain a Federal Emergency Management Agency (“FEMA”)-approved local hazard mitigation plan; and

WHEREAS, identification of hazards within COMB’s operational boundaries assists other agencies with response planning, exercise development, public education and awareness, and other emergency management functions; and

WHEREAS, the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan identifies local risk assessment and mitigation strategies to reduce the impacts of natural, technological or intentional disasters on the public and local government; and

WHEREAS, COMB’s Local Hazard Mitigation Plan (“LHMP”) will be adopted as an Annex to the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan; and

WHEREAS, FEMA is in the process of approving the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan, into which COMB’s LHMP will be incorporated (collectively referred to as the “Plan”); and

WHEREAS, adopting the COMB LHMP and amending the General Plan to incorporate the LHMP by reference is exempt from environmental review pursuant to the California Environmental Quality Act ("CEQA") through the use of the "General Rule" Section 15061(b)(3) of the CEQA Guidelines, as adoption of the Amendment will have no potential adverse impact upon the environment because the LHMP will act a guidebook for hazard mitigation strategies, and does not implement any specific project, action or funding; and

WHEREAS, the "Act" requires the Plan to be formally adopted by the Governing Board of the Cachuma Operation and Maintenance Board.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BOARD OF COMB AS FOLLOWS:

1. The Governing Board finds and determines that the facts set forth in the above recitals and in the documents referenced herein are true and correct.
2. The Governing Board adopts by reference the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan.
3. The Governing Board approves and adopts the COMB Local Hazard Mitigation Plan as an Annex to the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan.
4. While content related to the 2022 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan may require revisions to meet FEMA plan approval requirements, changes occurring after COMB adoption will not require COMB to re-adopt any further iterations of the Plan. Subsequent Plan updates following the FEMA approval period for the Plan will require separate adoption resolutions.
5. This Resolution shall take effect immediately.

PASSED, APPROVED AND ADOPTED by the Governing Board of the Cachuma Operation and Maintenance Board, this 27th day of March 2023, by the following roll call vote:

Ayes:
Nays:
Abstain:
Absent:

APPROVED:

President of the Governing Board

ATTEST:

Secretary of the Governing Board



Mission Statement:

“To provide a reliable source of water to our member agencies in an efficient and cost effective manner for the betterment of life in our communities.”

March 27, 2023

General Manager Report

The following summary provides the Board with information and an overview of progress on current COMB activities.

Administration

- **USBR 2nd Period Water Rates Invoice**

Staff submitted the 2nd period water rates invoicing to the Cachuma Project Member Agencies for payment to Reclamation which is due early April. The 2023-24 water rates are calculated using the Member Agencies projected deliveries for the water year in addition to projected Cachuma Project O&M reimbursable costs for the same period. The revised allocation affects the internal cost per acre-foot in the calculation but does not affect the overall 1st period and 2nd period billing collected for the water year.

- **Mid-Year 2023 Cachuma Project Allocation and Surplus Water**

On February 26th, Reclamation notified the Santa Barbara County Water Agency and the Cachuma Project Member Agencies that their mid-year allocation request of 100% was available. The balance of carryover water was depleted during this same time period. In addition, Reclamation has declared the availability of surplus water since the aforementioned date. Surplus water does not reduce Cachuma Project water balances.

- **Cachuma Project Estimated Costs – Fiscal Year 2023-24 Budget Planning**

Annually during the budget planning process, COMB administrative staff provides the Member Agencies a draft preliminary Cachuma Project Estimated Costs worksheet for planning purposes. The schedule includes not only the COMB estimated net operating budget but also USBR projected water rates, the renewal fund obligation, the Bradbury and Lauro SOD act payments, the SWRCB water rights fee, and now the COMB DDW D3 permit fee. These estimates are intended to assist the Member Agencies in formulating their operating budgets for the upcoming fiscal year.

- **FEMA Public Assistance Process**

Staff attended the Recovery Scoping meeting as hosted by FEMA representatives and CalOES participants. The purpose of the meeting was to continue development, review, and refinement of the draft damage inventory schedule for all projects affected by the storms. The inventory schedule outlines damages with locations, categories, and projected costs including potential mitigation efforts. CalOES has presented the Notice of Funding Opportunity (NOFO) for FEMA's Hazard Mitigation Grant Program as a result of the Presidential major disaster declaration. COMB will apply to the program with a notice of interest (NOI) prior to the deadline of May 20, 2023.

Administrative staff has provided necessary documents for upload to the FEMA grant portal including Board adopted resolutions, required CalOES forms, insurance requirements, and COMB's procurement and personnel policies. The site inspection schedule is currently being arranged. COMB's program delivery manager assigned by FEMA is hosting weekly meetings until all projects are validated and submitted appropriately. COMB has 60 days (from March 9th) to report all disaster related damage, 6 months to complete any emergency work and 18 months to complete all permanent work.

Personnel

- **Staff Licenses and Certifications**

David deBernardi, Director of Finance with ACWA JPIA, informed Edward Lyons that he was selected to be a member of the Finance and Audit Committee for the JPIA. The Finance & Audit Committee is composed of nine (9) representatives, two from the ACWA JPIA Executive Committee and seven chosen from JPIA Members, each of whom is a finance officer of their respective District. The primary responsibility of the Committee is to put forward recommendations for approval to the Executive Committee with respect to audit, budget and investment policy. Edward will provide exceptional input as part of the Finance and Audit Committee and represent COMB in an extremely professional manner.

I am also pleased to inform the Board that Mr. Kevin Johnson, COMB Operations Division crew member, passed the California Division of Drinking Water Distribution level 3 examination to become the fifth COMB certified D3 operator. Kevin has been employed by COMB for over 4 years and is a valuable member of our staff.

In addition Jake Gooding, COMB Operations Division crew member, obtained his California Class A commercial driver's license which enables him to operate heavy duty or towed vehicles and vehicles with air brakes. Justin Waller and Elijah Papen both passed the licensing examination to operate a commercial drone. I am extremely proud of our staff at COMB and their deliberate dedication in expanding their professional knowledge within their respective positions at COMB.

Operations Division

- **Lower Reach Shutdown**

The Operations Division successfully performed the South Coast Conduit (SCC) shutdown in Carpinteria during mid-March which allowed the contractor to replace and raise the two remaining category 1 subgrade air vents along the SCC. This type of shutdown hasn't been performed in over 40 years and it has never been accomplished with the ability to keep all customers in water service. This shutdown was extremely complicated and took several years of planning including the installation of the isolation valve on the SCC at LaMirada Drive along highway 192. The Carpinteria Valley Water District operations staff, in particular Mr. Brian King, were instrumental in assisting the coordinated effort lead by the COMB Engineer and assisted by Operations Division personnel.

Respectfully Submitted,

Janet Gingras

General Manager

CACHUMA OPERATION AND MAINTENANCE BOARD

MEMORANDUM

DATE: March 27, 2023
TO: Janet Gingras, General Manager
FROM: Joel Degner, Engineer/Operations Division Manager
RE: MONTHLY ENGINEERING REPORT

The following summary provides the Board with information and an overview of progress by engineering staff related to on-going studies and infrastructure improvement projects.

CLIMATE CONDITIONS

Storms continued through February and into March. Reclamation has been making spillway releases for the entire month of March. Water Year 2023 has had 338,903 acre-feet of computed inflow as of March 21, 2023. Cachuma Reservoir has filled and an additional full volume of the lake has been released downstream. Water Year 2023 is the sixth highest inflow year since Bradbury Dam was constructed (Table 1). Compared to other wet water years, water year 2023 has had a high runoff to rainfall ratio (steeper slope in Figure 1). This is largely due to the atmospheric rivers on January 9th and February 25th generating high daily rainfall totals which result in higher runoff rates. Water year 2023 will likely move up the ranking before the water year is over (see Figure 2) and will likely exceed 1995 due to the recession inflow from rain that has already occurred.

Table 1. Highest Water Year Inflows since Bradbury Dam was constructed

Rank	Water Year	Computed Inflow (acre-feet)	Gibraltar Dam Rainfall (inches)
1	1969	525,364	58.37
2	1998	475,177	73.12
3	1983	428,471	64.99
4	2005	401,756	69.11
5	1995	365,096	58.92
6	2023	338,903*	53.63

*As of March 20, 2023

The water years with higher computed inflow than Water Year 2023 (1969, 1983, 1995, 1998, and 2005) all occurred during El Nino Conditions. Water Year 2023 started out with La Nina and transitioned to neutral conditions. The U.S. Drought Monitor re-classified Santa Barbara County as having no drought conditions in March 2023.

WATER QUALITY

COMB has been sampling the tributary water coming in from Santa Cruz Creek, Santa Ynez River, and Tequippis River. In past years, the higher inflow years generally provide water in the lake with lower organic content and lower mineral content. Based on the specific conductivity measurements – the mineral content of the water has been reduced by twenty percent. The initial storm on January 9th increased the total organic carbon content slightly to 6 mg/L. However, the subsequent tributary inflow has been approximately 1.0 to 3.5 mg/L and total organic carbon has been decreasing and likely to continue to decrease.

JANUARY STORM DISASTER RECOVERY

A winter storm system occurring on January 9th and 10th caused widespread flooding, erosion, landslides, and damage across Santa Barbara County. This included access roads, facilities, and infrastructure operated and maintained by COMB. Damage occurred in various locations including a washout of the Lauro Reservoir access road, mudslides and debris impacting the Glen Anne access, large boulders and debris along the Sheffield Control Station access road, displacement and burial of several South Coast Conduit appurtenant structures, failure of

the rock slope protection at Sycamore Canyon, and several other minor damages which were observed and documented. COMB has removed debris in several areas – North Portal, Glen Anne, South Portal, Sycamore Canyon, and Sheffield access road. Repairs to the Lauro Reservoir access road and Toro Canyon blowoff will require engineering work and likely need to be completed during the summer months outside of the rainy season. COMB had its scoping meeting with FEMA on March 9th and has 60-days to identify the damages associated with the Disaster 4683DR (by May 8th).

Figure 1. Cachuma Computed Inflow compared to Gibraltar Dam Rainfall

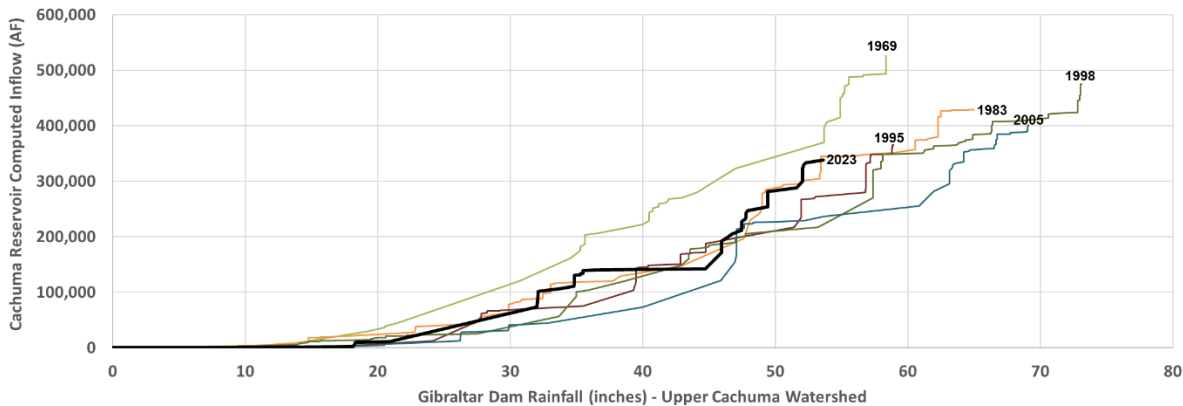
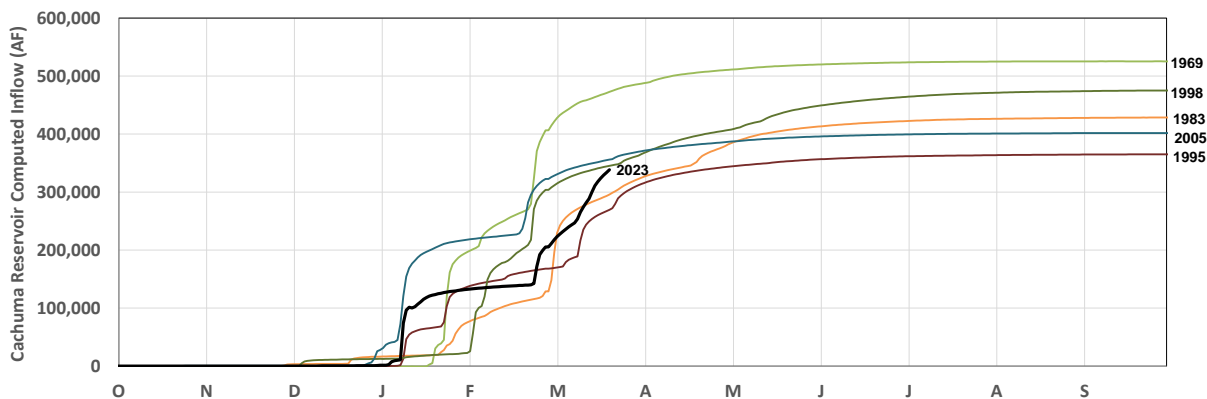


Figure 2. Cachuma Computed Inflow over time for Wettest Years



SOUTH COAST CONDUIT REHABILITATION

COMB has been working on replacing the original piping and valves on the appurtenant structures on the South Coast Conduit since the early 2000s based on maintenance recommendations provided during Reclamation inspections. COMB has worked progressively from the western end of the system in Goleta to the eastern end in Carpinteria. In 2012, Reclamation provided COMB with a Category 1 recommendation (involve correction of severe deficiency) to retrofit all subgrade air valve vaults along the South Coast Conduit from Cater Water Treatment Plant to Carpinteria Dam. There are a total of 27 air valve structures in this section of the South Coast Conduit. COMB raised the air valves they could without shutdowns from 2012 to 2017 without dewatering the South Coast Conduit. Starting in 2018, COMB performed shutdowns of the South Coast Conduit to rehabilitate both the air valves and the blowoff structures working from the City of Santa Barbara to Carpinteria. As of early 2023, only two subgrade air valves remained. COMB, with the assistance from its member agencies (City of Santa Barbara, MWD, and CVWD) conducted a shutdown of the South Coast Conduit from Toro Canyon Isolation Valve to La Mirada Isolation valve from March 13 to March 18. During the shutdown, 8 structures were remediated including the Boundary Meter Vault, two blowoff vaults, two lateral structures, and three air valve structures. Two of these air valves were subgrade beneath manholes under Highway 192. Prior to the shutdown, CVWD installed a bypass system utilizing over 4,000 feet of temporary flexible piping to maintain water service to its customers. During the shutdown the access lids were removed and replaced and the first isolation valve installed. Following

the shutdown, the contractor (Cushman) is raising the air valves above grade. COMB should be able to report to Reclamation in April 2023 that all subgrade air valve vaults have been remedied and that they can close the Category 1 recommendation for COMB (before and after photos of the structures are provided in the Operations Report). There still are three blowoffs that will require shutdowns of the South Coast Conduit in the Carpinteria section in the future to be rehabilitated.

INFRASTRUCTURE IMPROVEMENT PROJECTS

Table 2 provides the status of Fiscal Year 2022-23 infrastructure improvement and special projects.

Table 2. Fiscal Year 2022-2023 Infrastructure Improvement Projects

Infrastructure Improvement Projects	Status / Phase	Complexity / Challenges	Estimated Completion Date
Infrastructure Improvement Projects			
SCC Line Valves for Shutdown	Contractor has been engaged to perform design on Lillingston Line valve and provided preliminary design exhibit for its proposed location to COMB. Potholing will be required to locate the joints on the SCC to finalize the design and locate other utilities.	Additional line valve(s) are needed in Carpinteria to facilitate shutdown work. A Cooperative Agreement between CVWD and COMB has been approved by COMB and CVWD to facilitate the work.	Postponed to Fall 2023
SCC Structure Rehabilitation : Lower Reach Laterals	CVWD contractor successfully completed rehabilitated Laterals 1R,1L, 2R, 3L,4L in August and Laterals 17L and 19R in December and Laterals 5R and 6R in March which completes Phase 1 of the Cooperative Agreement.	In order to facilitate shutdowns on the Lower Reach of the SCC, lateral valves need replacement. COMB is collaborating with CVWD on this project.	CVWD construction on Phase 1 was completed in March 2023. Phase 2 may be initiated in FY 2023-24.
SCC Structure Rehabilitation : AVAR/BO Valves	A shutdown from Toro Canyon Isolation Valve to La Mirada isolation valve was conducted in March 2023. This rehabilitation work allows completion the USBR Category 1 recommendation regarding the SCC AVAR. The shutdown was the most complicated yet requiring CVWD to temporarily install an extensive bypass system, involved two contractors, and numerous land closures on Highway 192.	The remaining structures to be rehabilitated are the most difficult access-wise (with several in Highway 192) and with difficult shutdowns to schedule in the Carpinteria area.	Shutdown and construction was completed in March 2023.
Special Projects			
Emergency Pumping Facility - Secured Pipeline Project	The contractor completed installation of the Secured Pipeline Project and has demobilized from the lake. Sonar of the installation confirmed its correct alignment and placement on the lake bottom, and a flow test of the screened gravity intake and system confirmed proper functioning of the components and system.	Storms and unprecedented inflow into the lake in early January 2023 necessitated accelerated installation by the contractor and staff. The additional debris load into the reservoir buried the connection of the system at the Intake Tower and deposited some material onto the screened gravity intake. Sonar, flow testing, and underwater drone video confirmed proper functioning of all components.	Construction was completed in February 2023. COMB staff is working on issuing completion notifications and reports to appropriate grant and permitting agencies.
Lake Cachuma Water Quality and Sediment Management Study	COMB awarded the contract for the Phase 2 phosphorous/TOC source study in October 2022. A kickoff meeting was conducted in December and a work plan was provided in March with sampling tentatively schedule for May 2023.	COMB staff has taken additional tributary samples through winter months to supplement the study. The rise in lake level complicates sediment sampling procedures at the deepest part of the lake. In addition, with the high amounts of inflow and sedimentation - the entire volume of the lake has been exchanged with new water and the bottom is likely covered with an extensive layer of new sediment.	A focused phosphorous and TOC sourcing study by COMB is planned for FY 2022/2023 and FY 2023/24. The Phase 2 phosphorous/TOC source study is scheduled for completion in December 2023 upon receiving the final report

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CACHUMA OPERATION AND MAINTENANCE BOARD

DATE: March 27, 2023
TO: Janet Gingras, General Manager
FROM: Shane King, Operations Supervisor
RE: **MONTHLY REPORT OF OPERATIONS – February 2023**

The total flow from Lake Cachuma into the Tecolote Tunnel for February was 1,323.04 acre-feet, for an average daily flow of 47.25 acre-feet. Lake elevation was 752.50 feet at the beginning of February and 752.12 feet at the end of February. Lake storage decreased by 777.10 acre-feet. There was no inflow from CCWA into Cachuma Project facilities this month. The City of Santa Barbara wheeled 187.27 acre-feet of water from the Gibraltar Penstock through Lauro Reservoir. The Hilton Creek Watering System was utilized and delivered 176.42 acre-feet of water to Hilton Creek for the month of February.

The Operations Division of the Cachuma Operation and Maintenance Board has the responsibility to operate, repair and maintain all Cachuma Project facilities from the Intake Tower at Lake Cachuma to the Carpinteria Reservoir. The Annual Work Plan sets forth all activities necessary to ensure system reliability. Consistent with the Plan, Operation and Maintenance staff performs routine maintenance on the distribution and storage system. Staff continues to improve the system, address deficiencies and identify items to be included in the Infrastructure Improvement Program of work. Operations Division is responsible for:

- Adequately regulating and maintaining the diversion of water from Lake Cachuma to the South Coast via the Tecolote Tunnel as the primary water source for 5 communities.
- Operation and maintenance of the South Coast Conduit pipeline, which consist of 26.5 miles of pipeline with a combined 124 blow off and air vent structures, 43 turnout structures and 20 meters.
- Operation and maintenance of four regulating reservoirs.

South Coast Conduit - Structure Inventory													
Reach	Endpoints	Linear Length (ft)	Pipe Diameter	Regulating Storage Reservoirs	Meters	Air Vents	Blow-Offs	Turnouts	Open Air Vents	Valves	Valve Size	Slide Gates	Capacity / Volume (gal)
Upper	Glen Annie Turnout (S. Portal) - Cater Water Treatment Plant	64,050	48"	2	5	32	35	18	2	115	4" - 48"	7	6,017,421
Lower	Cater Water Treatment Plant - Carpinteria Reservoir	90,910	27" - 36"	2	15	26	31	42	4	144	4" - 36"	-	3,190,171

Routine operation and maintenance completed during the month of February were as follows:

- Staff has been on site monitoring several ongoing projects throughout the area, working closely with the construction and engineering contractors to ensure that:
 - Pipeline easements and the right-of-way remain accessible to Operations staff for possible emergencies and ongoing facility maintenance.
 - All projects are following the COMB and USBR approved plans.
 - No damage occurs to the SCC during the construction process.

Ongoing Monthly Operations Items:

- Conducted several flow changes at the North Portal during the month
- Reviewed several projects for conflicts within the SCC right of way
- Received and responded to 72 USA Dig alerts
- Performed weekly inspections of major facilities, safety meetings, rodent bait (all reservoirs), toe drain and piezometer reads at Ortega (L23)
- Performed dam inspection and instrumentation reports (all reservoirs)
- Performed equipment and yard maintenance
- Performed monthly North Portal elevator maintenance with Otis
- Performed monthly water quality sampling
- Read and document anodes and rectifier data

In addition regular activities described above, Operations staff performed the following:

- Staff visited all of COMB's sites for pre and post storm checks. These sites include: The North Portal site, South Portal site, Glen Anne site and reservoir, Lauro reservoir and valve pits, Sheffield valve pits, Ortega reservoir and valve pits, and Carpinteria reservoir and valve pits.
- Staff continued to gather parts for the upcoming SCC shutdown air vent/blow off work and delivered them to Cushman Contracting Corporation's storage yard.
- Operations crew delivered 8 SCC manway access lids to Superior Machine for final machining to accommodate flange connection layouts. Once machining was complete, Ops personnel picked up the access lids and delivered them to Cushman's storage yard.
- Operations crew set up each blow off structure to be used during the SCC shutdown air vent/ Blow off rehab. work with discharge piping, de-chlorification methods, and anti-erosion materials. This was in preparation of dewatering the SCC and compliance for COMB's planned release discharge permit.
- COMB staff monitored and worked closely with Cushman personnel during the SCC shutdown to complete the rehab. work on several structures in the Carpinteria section of the SCC. These structures include: 643+92 AV, 664+35 BO, 676+67 AV, 679+80 BO, 682+11 AV, Lateral 5R, and Lateral 6R. The work included removal of all old manway access lids, valves and piping, and replace with new. This work also includes the relocation of the AVAR to an above ground location. All access manways and valves have been replaced, now Cushman is completing the piping and AVAR installation. (see photos)
- Operations staff replaced the two 8 inch gate valves/blind flanges and installed new plumbing for the pressure transmitter located at the boundary meter site during the SCC shutdown air vent/ blow off rehab. project. (see photos)
- Staff temporarily installed an insertion meter near the station 729+60 location in the Carpinteria section of the SCC. This meter was installed to assist in the recharge of the isolated section where construction took place. This meter allowed COMB to measure the fill rate in GPM during the SCC recharge and conduct operations within COMB's standard operating procedures set forth by the Bureau of Reclamation.

Shutdown Preparations – CVWD Bypass and Materials Staging



Boundary meter rehab. work



AVAR 643+92



Blowoff 664+35



AVAR 676+76



Blowoff 679+80



AVAR 682+11/Lateral 6L



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CACHUMA OPERATION AND MAINTENANCE BOARD
BOARD MEMORANDUM

DATE: March 27, 2023
TO: Janet Gingras, General Manager
FROM: Tim Robinson, Fisheries Division Manager
RE: MONTHLY FISHERIES DIVISION REPORT

HIGHLIGHTS:

- USBR delivered 2000 Biological Opinion (BiOp) target flows to Hilton Creek by gravity through the Hilton Creek Watering System (HCWS) to the Upper Release Point (URP) and to a smaller degree through the Lower Release Point (LRP), which has been sustaining the *O. mykiss* population in the creek since the last Board meeting.
- The floating pipeline of the Hilton Creek Emergency Backup System (HCEBS) has been disconnected on the north side and has floated over to the south bank.
- As of 2/15/23, Order WR 2019-048 Table 2 flows are now being operated for a Wet year classification (specifically reservoir inflow > 117,842 af).
- Lake Cachuma has been spilling since the last Board meeting. The 2000 BiOp and Order WR 2019-0148 Table 2 target flows to the Hwy 154 Bridge / Alisal Bridge (10 cfs with a spill exceeding 20,000 af and 48 cfs, respectively) were met by USBR.

In compliance with the 2000 Cachuma Project Biological Opinion (BiOp) (NMFS, 2000) and WR Order 2019-0148, and as described in the 2000 Lower Santa Ynez River Fish Management Plan (SYRTAC, 2000) and the Monitoring Program in the 2000 Revised Biological Assessment (BA), the COMB-FD staff conducts routine monitoring of the steelhead/rainbow trout population and their habitat on the Lower Santa Ynez River (LSYR) below Bradbury Dam. The following is a list of activities carried out by COMB-FD staff since the last COMB Board Fisheries Division Report and has been broken out by categories.

LSYR Steelhead Monitoring Elements:

Lake Profiles: Lake Cachuma water quality measurements (temperature, dissolved oxygen concentration, pH, and turbidity) at one meter intervals from the surface to the bottom of the lake (Lake Profile) are taken once a month at the Hilton Creek Watering System (HCWS) Intake Barge. This is considered to be near the deepest point in the lake and allows for monitoring of lake stratification, water quality conditions at the intake level for the HCWS, and lake-turnover. Due to the drought and the need to carefully monitor Lake Cachuma, lake profiles are being taken monthly throughout the year and are reported in the Annual Monitoring Summary/Report.

Redd Surveys: Redd surveys are conducted approximately every two weeks from mid-December through May (depending on streamflow conditions). Surveys are conducted within the LSYR mainstem in the Highway 154, Refugio, and Alisal reaches where access is permitted, and certain sections of Hilton, Quiota, and Salsipuedes/El Jaro creeks. The number of redds is reported in the Annual Monitoring Report/Summary.

Migrant Trapping: The 2023 Migrant Trapping Plan was provided to Reclamation in December who then submitted it to NMFS at the beginning of January. This monitoring effort normally begins in January and continues through May depending on streamflow rates. The results are presented in the Annual Monitoring Summary. The Hilton Creek and Salsipuedes Creek traps were installed on 1/31/23. The LSYR Mainstem Trap was not installed due to high stormflow conditions. The traps were removed in association with the 2/25/23 storm and have not be redeployed due to CESA (California Endangered Species Act) compliance issues. Staff is in the process of obtaining permits to be CESA compliant. The Santa Ynez River Lagoon currently is open and its status is routinely monitored. Results of the trapping program are presented in the Annual Monitoring Report.

Monitoring Target Flows: Monitoring for the required 2000 BiOp and WR 2019-0148 target flows are conducted by USGS and USBR for Hilton Creek, and COMB-FD, USBR and USGS for the LSYR at the Hwy 154 Bridge.

The minimum target flow of 2 cfs to Hilton Creek was met throughout February with HCWS gravity flow to the URP and the LRP (approximately 4.2 cfs) (USGS reported well over 8 cfs that includes substantial upper basin flow).

Releases from Bradbury Dam have been well above target flows at the Hwy 154 Bridge and above what can be safely measured by USBR and COMB, hence we are relying on the new stream USGS gage at the Hwy 154 Bridge to document compliance which is operating as designed and contracted. USBR is working with the State Board to modify Term 18 and Term 25 to move the target flow compliance point to the new USGS gage site.

State and Federal Compliance Permitting:

Staff is in the process of obtaining both State (CESA) and Federal (NMFS) permits specifically for take of the endangered Southern California steelhead in association with all required monitoring tasks. This effort was triggered due to the recent State listing of steelhead and the limitations with the 2000 BiOp coverage. A Federal 10(a)1(A) permit and a State 2081(a) MOU and a Scientific Collection Permit applications have been submitted for the needed take coverage. We are working closely and expediently with the resource agencies to secure these permits as quickly as possible and hope all will be in place by the end of the spring.

Tributary Project Updates:

HDR engineers recently surveyed all projects, a technical memo is being prepared with descriptions of the damages at each site and the recommended repairs to return to design standards and the As-Built condition with cost estimates for each. This documentation is needed for grant funding applications. Staff is seeking emergency funding through FEMA and the NRCS (Natural Resources Conservation Service) for the required repairs. Most fixes are small and all sites are stable but if left as is they could worsen with further significant stormflow events. The objective is to fix all during the late summer or early fall this year pending funding and permits.

Hilton Creek Watering System (HCWS) and Emergency Backup System (HCEBS) Operation and Repairs:

HCWS and HCEBS: The HCWS and HCEBS are owned, operated, and maintained by USBR. USBR technical staff continues to consider improvement options for the HCWS and HCEBS. The HCWS was initially constructed in 1999 then modified to its current configuration in 2004. The HCEBS was completed at the end of January 2016. The HCEBS delivery floating pipeline across the Stilling Basin was removed on 2/5/20 and then reinstalled

between 3/2/21 and 3/4/21. USBR successfully replaced two malfunctioning valves associated with the HCEBS on 5/12/21. After observing water leaking out of the HCEBS floating pipeline, USBR with assistance from COMB-FD on 9/30/21 and 11/18/21 tightened the flanges on all pipe segment connections and the leaking appeared to stop.

On 6/8/21, USBR activated the HCEBS on gravity flow to the URP. For a time, both the HCWS and HCEBS provided gravity flow to the URP. As the lake level dropped, more water came from the HCEBS until the HCWS stopped flowing water approximately at the end of July that year. Then all release water to Hilton Creek came through the HCEBS by gravity flow to the URP and LRP.

After several discussions between USBR and NMFS, USBR decided to activate the HCWS pump on 8/2/22 to deliver water to Hilton Creek with the objective of setting the HCEBS to standby mode in the event that the pump turned off. Late that day the programmed linkages for that automated transfer of flow from the HCWS to the HCEBS were found to be inoperable, so USBR reconfigured part of the system for HCEBS gravity flow with HCWS pumped flow from the lake based system. That night an unplanned PG&E power outage occurred that caused a flow interruption to the creek of approximately 2 hours requiring fish rescue and relocation. USBR activated the HCEBS diesel pumps to provide water to Hilton Creek. NMFS, CDFW and USBR determined that it would be best for the fishery to rescue and relocate fish from the reach between the LRP and the URP (Reach 5) to sustainable downstream habitats. The effort was conducted by CDFW with assistance from COMB-FD on 8/8/22 through 8/10/22. On 8/11/22, USBR turned off the HCEBS pump, reestablished HCEBS gravity flow to the LRP and activated the HCWS pump to the URP. The parallel delivery systems (gravity and pump) have been functioning until the 1/9/23 storm.

On 10/19/22 and 10/20/22, USBR conducted required repairs on one of the two HCWS pumps. That pump is operational and is in standby mode. No further work has been done on the pumping barge.

The 1/9/23 storm damaged the HCWS pumping barge and all of the electrical systems on that barge went under water and now need to be replaced. Lake water is currently flowing by gravity from the Intake Barge to Hilton Creek and will continue to do so for the unforeseen future given that the lake is full.

The HCEBS floating pipeline across the Stilling Basin was disconnected on the north side by USBR on 2/7/23 just prior to exercising all four of the spillway gates on 2/8/23. During the 2/25/23 spill event, that floating pipeline moved to the south bank and is now out of harm's way from the current spill event. It has not been determined if the pipeline got damaged upon moving to its current location. USBR has no plans yet to assess damages or reconnect the pipeline.

Surcharge Water Accounting:

The following table summarizes the amount of surcharge water (defined as the amount of storage added to the lake by installing the flashboards to the top of the four radial gates to take the maximum lake elevation from 750 ft to 753 ft) used to date from each of the three accounts (Fish Passage Supplementation, Adaptive Management, and Fish Rearing) plus Unallocated Project Water at the end of last month (Table 1). All numbers are from the USBR's Daily Operations Report. The start time for the use of the Surcharge Water Accounts and Project Yield is the day following the last day of full surcharge and the end of the last spill event (prior to this wet year it

was 5/27/11). With the magnitude of this year’s ongoing spill, all Surcharge Water Accounts are once again full and are reflected in Table 1 using the 2021 bathymetric survey values.

Table 1: Summary of the surcharge water accounting and use of Project Yield as of 3/27/23; using the 2021 bathymetric survey data.

Accounts*	Allocation	Amount Used**	Amount Remaining
Units:	(acre-feet)	(acre-feet)	(acre-feet)
Fish Passage Supplementation			
WY2021	3,200	0	3,200
Adaptive Management	500	0	500
Fish Rearing***	5,527	0	5,527
Unallocated Project Water		0	
Total:	9,227	0	9,227
* Originally was 9,200 af, 8,942 af in 2008, 9,184 af in 2013, and 9,227 af in 2021.			
** Values as of 2/28/23.			
*** This water is for meeting required target flows. This is not an official account and is what remains after subtracting the other two accounts.			

Reporting / Outreach / Training:

Reporting: Staff has been assisting USBR upon request in reviewing draft sections and conducting data analyses for their preparation of the new draft Biological Assessment and WR 2019-0148 required Plans.

Staff, as time permits, continues to work on the WY2022 Annual Monitoring Report and WY2022 Annual Monitoring Summary, specifically data entry and analyses.

Outreach and Training: Outreach continues with Lower Santa Ynez River landowners (specifically in the Quiota Creek and Salsipuedes Creek watersheds), interested parties within the Santa Ynez Valley, and the County on a variety of fisheries related issues.

Consultant Activity Summary:

HDR Fisheries Design Center (Mike Garello and Shaun Bevan) – HDR has been assisting in damage assessment at all fish passage enhancement projects.

Kenneth A. Knight Consulting (Ken Knight) – No work was performed during this period on the established SOW tasks.

CACHUMA OPERATION & MAINTENANCE BOARD

BOARD MEMORANDUM

Date:	March 27, 2023
Submitted by:	Tim Robinson and Scott Volan
Approved by:	Janet Gingras

SUBJECT: **Progress Report on the Lake Cachuma Oak Tree Restoration Program**

RECOMMENDATION:

For Board information only.

SUMMARY:

This memorandum on the Lake Cachuma Oak Tree Restoration Program reflects maintenance completed since March 27, 2022 to the present (3/1/22 – 3/27/23, Table 1). Labor and expenses for the entire fiscal year (July 2022 - June 2023) as well as water usage are tracked separately and reported as necessary as recommended by the Lake Cachuma Oak Tree Committee. COMB staff continues to rely on the Fisheries Division (FD) seasonal employees whenever possible to conduct the majority of oak tree work in the field. The 2015 Lakeshore Inventory was completed and reviewed by the Lake Cachuma Oak Tree Committee on 2/25/16, which set the mitigation numbers for the Program. The 2021 Annual Report with the annual inventory and Fiscal Year 2021-22 financials was completed and reviewed by the Lake Cachuma Oak Tree Committee on 9/16/22 and provided to the COMB Board on 9/26/22 that recommended going forward with replacing 50 dead oak trees during the wet season of this water year. The COMB Board was in agreement with that directive.

Table 1: Cachuma Oak Tree Program completed maintenance tasks since March, 2022.

	Mar 2022 ¹	Apr 2022 ¹	May 2022 ¹	June 2022 ¹	July 2022 ¹	August 2022	Sept 2022	Oct 2022	Nov 2022	Dec 2022 ¹	Jan 2023 ¹	Feb 2023 ¹	March 2023 ¹
Year 13 Oaks (2021-2022)	Irrigated Weeded	Irrigated Weeded		Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded				Assess Clean-up	
Year 12 Oaks (2020-2021)	Irrigated Weeded		Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded	Irrigated Weeded			
Year 11 Oaks (2019-2020)		Irrigated Weeded	Irrigated Weeded		Irrigated Weeded						Irrigated Weeded		
Year 10 Oaks (2018-2019)													
Year 9 Oaks (2016-2017)													
Year 8 Oaks (2015-2016)													Infrastructure Repair
Year 7 Oaks (2014-2015)													
Year 6 Oaks (2005-2011)													

¹ Oak tree inventory.

Maintenance

On March 7th, COMB-FD staff observed that infrastructure (stakes and cages) had blown down on many of the Year 8 trees at the Long Pool Secondary Flat (Exhibit 1). It appeared that a localized wind event had recently impacted the area. Loose soils from heavy winter rains likely contributed to the infrastructure being more easily toppled. Staff reinstalled cages and stakes and righted any trees that had been bent over. Several of the trees needed horizontal bamboo stays installed to keep them vertical.

Annual Inventory

The 2022 Annual Inventory of all year classes (COMB planted trees 2005 through 2022 and Dam Tender trees) continues (Exhibit 2).

LIST OF EXHIBITS:



Exhibit 1: Long Pool Secondary Flat wind damage showing (a) & (b) toppled infrastructure and trees.



Exhibit 2: 2022 Annual Inventory showing (a) a mature Year 5 tree below Bradbury Dam, and (b) a Year 12 tree at Santa Barbara County Park.

WATER YEAR 22-23 CACHUMA PROJECT ALLOCATION
CACHUMA OPERATION AND MAINTENANCE BOARD
WATER PRODUCTION AND WATER USE REPORT
FOR THE MONTH OF FEBRUARY 2023 AND THE WATER YEAR TO DATE (WYTD) ⁽¹⁾

(All in rounded Acre Feet)

CACHUMA PROJECT		
WATER PRODUCTION:	MONTH	WYTD
Cachuma Lake (Tec. Diversion)	1,323.0	5,663.7
Tecolote Tunnel Infiltration	81.3	416.6
Cachuma Lake (County Park)	0.0	4.6
Subtotal - Water Production	1,404.3	6,084.9
WATER DELIVERIES:		
State Water Diversion	40.4	480.0
Cachuma Diversion	1,351.7	5,734.6
Storage gain/(loss) ⁽²⁾	27.8	(2.2)
Subtotal - Water Deliveries	1,419.8	6,212.4
Total Water Production	1,404.3	6,084.9
Total Water Deliveries	1,419.8	6,212.4
Difference = Apparent Water Loss	(15.5)	(127.5)
% Apparent Water Loss	-1.11%	-2.10%

SCC APPARENT WATER LOSS ALLOCATION (AWL) ⁽³⁾

	GWD	SB CITY	MWD	CVWD	TOTAL
CURRENT MONTH CHARGE / (ADJUSTMENT)					
M&I	0.0	0.0	0.0	0.0	0.0
Agriculture	0.0	0.0	0.0	0.0	0.0
Subtotal Cachuma Project	0.0	0.0	0.0	0.0	0.0
(+) State Water Project	0.0	0.0	0.0	0.0	0.0
Total Current Month	0.0	0.0	0.0	0.0	0.0
WATER YEAR-TO-DATE CHARGE / (ADJUSTMENT)					
M&I	0.0	0.0	0.0	0.0	0.0
Agriculture	0.0	0.0	0.0	0.0	0.0
Subtotal Cachuma Project	0.0	0.0	0.0	0.0	0.0
(+) State Water Project	0.0	0.0	0.0	0.0	0.0
Total AWL Charged (WYTD)	0.0	0.0	0.0	0.0	0.0
Total AWL Not Charged (WYTD)					(127.5)
Total AWL Incurred (WYTD)					(127.5)

CACHUMA PROJECT WATER CHARGE

	GWD	SB CITY	MWD	CVWD	SYRID #1	TOTAL
CURRENT MONTH						
Water Usage						
M&I	569.3	542.1	30.2	89.5	0.0	1,231.1
Agricultural	64.7	0.0	1.1	54.8	N/A	120.7
Subtotal Project Water Use	634.0	542.1	31.3	144.3	0.0	1,351.7
(+) Apparent Water Loss	0.0	0.0	0.0	0.0	N/A	0.0
(+) Evaporative Loss ⁽⁴⁾	14.9	45.5	4.9	6.6	8.6	80.5
Total Project Water Charge	649.0	587.7	36.1	150.9	8.6	1,432.2
WATER YEAR-TO-DATE						
Water Usage						
M&I	2,122.6	2,327.3	230.6	316.5	4.6	5,001.6
Agricultural	429.1	0.0	18.2	285.6	N/A	733.0
Subtotal Project Water Use	2,551.7	2,327.3	248.8	602.2	4.6	5,734.6
(+) Apparent Water Loss	0.0	0.0	0.0	0.0	N/A	0.0
(+) Evaporative Loss ⁽⁴⁾	175.3	461.9	47.9	69.5	82.5	837.1
Total Project Water Charge (*)	2,727.0	2,789.2	296.7	671.7	87.1	6,571.7

(*) Project Water Charge is applied first to Carryover Water balance and then to Current Year Water Allocation

WATER YEAR 22-23 CACHUMA PROJECT ALLOCATION

**CACHUMA OPERATION AND MAINTENANCE BOARD
WATER PRODUCTION AND WATER USE REPORT
FOR THE MONTH OF FEBRUARY 2023 AND THE WATER YEAR TO DATE (WYTD) ⁽¹⁾**

(All in rounded Acre Feet)

CACHUMA PROJECT WATER BALANCE

	GWD	SB CITY	MWD	CVWD	SYRID #1	TOTAL
Project Water Carryover - 10/1/2022	7,890.4	19,239.8	2,067.3	3,035.0	3,353.8	35,586.3
(-) Project Water Charge (WYTD)	2,727.0	2,789.2	296.7	671.7	87.1	6,571.7
Carryover Available Before Adjustments	5,163.4	16,450.6	1,770.6	2,363.3	3,266.7	29,014.6
Adjustments to Carryover (WYTD)						
State Water Exchange ⁽⁵⁾	0.0	0.0	0.0	0.0	(126.0)	(126.0)
Surplus ⁽⁶⁾	69.5	63.0	3.9	16.2	0.9	153.5
Carryover Spilled ⁽⁷⁾	(5,232.9)	(16,513.6)	(1,774.5)	(2,379.5)	(3,141.6)	(29,042.1)
Balance Project Water Carryover	0.0	0.0	0.0	0.0	0.0	0.0
Current Year Allocation ⁽⁸⁾	9,322.0	8,277.0	2,651.0	2,813.0	2,651.0	25,714.0
(-) Balance of Project Water Charge (WYTD)	0.0	0.0	0.0	0.0	0.0	0.0
Allocation Available Before Adjustments	9,322.0	8,277.0	2,651.0	2,813.0	2,651.0	25,714.0
Adjustments to Allocation (WYTD)						
State Water Exchange ⁽⁵⁾	46.0	30.0	30.0	20.0	0.0	126.0
Surplus	0.0	0.0	0.0	0.0	0.0	0.0
Transfers/Adjustment - SB/La Cumbre	0.0	0.0	0.0	0.0	0.0	0.0
Transfers/Adjustment - Bishop Ranch	0.0	0.0	0.0	0.0	0.0	0.0
Transfers/Adjustment - Juncal Transfer	0.0	0.0	0.0	0.0	0.0	0.0
Transfers/Adjustment - GWD/SB Overlap	0.0	0.0	0.0	0.0	0.0	0.0
Balance Current Year Allocation	9,368.0	8,307.0	2,681.0	2,833.0	2,651.0	25,840.0
Total Cachuma Project Water Available	9,368.0	8,307.0	2,681.0	2,833.0	2,651.0	25,840.0

ACCUMULATED DROUGHT WATER CREDIT (ADWC) BALANCE

	GWD	SB CITY	MWD	CVWD	SYRID #1	TOTAL
ADWC Balance - 10/1/2022 ⁽⁹⁾	543.8	482.8	154.6	164.1	154.6	1,500.0
(-) ADWC Water Charge (WYTD)	0.0	0.0	0.0	0.0	0.0	0.0
Adjustments to ADWC (WYTD)						
ADWC Spilled ⁽⁷⁾	(543.8)	(482.8)	(154.6)	(164.1)	(154.6)	(1,500.0)
Balance ADWC	0.0	0.0	0.0	0.0	0.0	0.0
Total Cachuma Project + ADWC Available	9,368.0	8,307.0	2,681.0	2,833.0	2,651.0	25,840.0

Footnotes

- (1) Water Year = October 1 through September 30; WYTD = Water Year to Date
- (2) Includes Lauro and Ortega Reservoirs only
- (3) Based on correspondence from Michael Jackson, dated 09/15/17, which revised the approach to the assessment for unaccounted for water loss based on lake conditions
- (4) Per USBR, evaporation is applied to Cachuma Carryover and SWP water through standard contract formula effective April 1, 2017
- (5) Per SWP Exchange Agrmt GWD received 0 AF; City of SB received 0 AF; MWD received 0 AF; and CVWD received 0 AF from ID#1 in February 2023
- (6) Per USBR, surplus water became available to Member Units beginning 2/26/23 and continuing for the remainder of the month
- (7) Spill releases from Bradbury Dam in February 2023 (69,977 AF) reduced SWP, Carryover, and ADWC accounts
- (8) Per USBR, 100% mid-year allocation to Member Units, effective 2/28/23
- (9) Correspondence from Michael Jackson to the Member Units (MU's) dated 9/14/2022 revised the Downstream Users Accounting Reports effective August 2022 as produced by Reclamation. A credit of 1,500 acre-feet of water from the Below Narrows Account was transferred to the MU's based on provisions of the September 17, 2002 Settlement Agreement.
- (10) Memo only - State Water Deliveries to Lake Cachuma for February 2023 was 0 AF
- (11) Memo only - MWD has received 904.22 AF under the City of SB / MWD WSA ("Desal") for this Contract Year (July 1 - June 30)

CACHUMA OPERATION AND MAINTENANCE BOARD

WATER STORAGE REPORT

MONTH: **FEBRUARY 2023**

GLEN ANNIE RESERVOIR ⁽¹⁾

Capacity at 385' elevation:	335	AF
Capacity at sill of intake at 334' elevation:	21	AF
Stage of Reservoir Elevation	348.0	Feet
Water in Storage	94.74	AF

LAURO RESERVOIR

Capacity at 549' elevation:	503	AF
Capacity at top of intake screen, 520' elevation:	106.05	AF
Stage of Reservoir Elevation	544.9	Feet
Water in Storage	425.37	AF

ORTEGA RESERVOIR

Capacity at 460' elevation:	65	AF
Capacity at outlet at elevation 440':	0	AF
Stage of Reservoir Elevation	447.3	Feet
Water in Storage	20.47	AF

CARPINTERIA RESERVOIR

Capacity at 384' elevation:	45	AF
Capacity at outlet elevation 362':	0	AF
Stage of Reservoir Elevation	379.9	Feet
Water in Storage	34.82	AF

TOTAL STORAGE IN RESERVOIRS ⁽¹⁾

Change in Storage	480.66	AF
	37.76	AF

CACHUMA RESERVOIR ⁽²⁾

Capacity at 750' elevation: ⁽³⁾	183,751	AF
Capacity at sill of tunnel 660' elevation:	23,642	AF

Stage of Reservoir Elevation	752.12	Feet
Water in Storage	190,243	AF
Surface Area	3,096	Acres
Evaporation	458.4	AF
Inflow	73,591.1	AF
Downstream Release WR8918	0.0	AF
Fish Release (Hilton Creek)	176.4	AF
Outlet	5687.7	AF
Spill/Seismic Release	69,102	AF
State Water Project Water	0.0	AF
Change in Storage	-777	AF
Tecolote Diversion	1,323.0	AF

Rainfall: **Month:** 9.09 **Year:** 32.21 inches

(1) Glen Annie Reservoir is currently offline and excluded from Total Storage in Reservoirs amount.

(2) Lake Cachuma reservoir storage volume based on 2021 bathymetric survey (NGVD29)

(3) In 2004, flashboard installation raised Cachuma Reservoir max elevation to 753' (192,978 AF); surcharge

SUMMARY OF WATER USED
CACHUMA PROJECT - CONTRACT #175R-1802

Contract Year: 10/1/22 to: 9/30/23

Contract Entity: **Carpinteria Valley Water District**
 Update by COMB 2/28/2023

Month	Carryover Balance Prior Yr	Approved Allocation Curr Yr	TOTAL WATER USED			WATER USE CHARGED			WATER USE CHARGED				
			Acre-feet			Evap	Used	Total	Allocation		Allocation		Total
			M & I	Agr	Total				M & I	Agr	M & I	Agr	
Oct	3,035.0	-	114.2	155.2	269.3	33.5	269.3	302.8	132.2	170.7	-	-	-
Nov	-	-	38.5	44.6	83.2	17.7	83.2	100.9	48.3	52.6	-	-	-
Dec	-	-	13.0	8.0	21.0	7.4	21.0	28.5	17.1	11.4	-	-	-
Jan	-	-	61.3	23.0	84.3	4.2	84.3	88.6	63.6	24.9	-	-	-
Feb	-	2,813.0	89.5	54.8	144.3	6.6	144.3	150.9	93.1	57.8	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	3,035.0	2,813.0	316.5	285.6	602.2	69.5	602.2	671.7	354.3	317.4	-	-	-

Month	CONVERSIONS (M&I AND AG SPLIT)			
	CARRYOVER WATER		CURR YR ALLOCATION	
	M & I	Agr	M & I	Agr
Oct	-	-	-	-
Nov	-	-	-	-
Dec	-	-	-	-
Jan	-	-	-	-
Feb	-	-	-	-
Mar	-	-	-	-
Apr	-	-	-	-
May	-	-	-	-
Jun	-	-	-	-
Jul	-	-	-	-
Aug	-	-	-	-
Sep	-	-	-	-

Month	SCHEDULE AND REVISIONS			SCHEDULE AND REVISIONS		
	Total	Allocation		Allocation		Total
		M & I	Agr	M & I	Agr	
Oct	3,035.0	1,631.7	1,403.3	-	-	-
Oct	-	-	-	11.4	8.6	20.0
Nov	-	-	-	-	-	-
Dec	-	-	-	-	-	-
Jan	-	-	-	-	-	-
Feb	(2,363.3)	(1,277.4)	(1,085.9)	1,406.5	1,406.5	2,813.0
Mar	-	-	-	-	-	-
Apr	-	-	-	-	-	-
May	-	-	-	-	-	-
Jun	-	-	-	-	-	-
Jul	-	-	-	-	-	-
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-

Month	BALANCE - CARRYOVER WATER			BALANCE - CURR YR ALLOC		
	Total	Allocation		Allocation		Total
		M & I	Agr	M & I	Agr	
Oct	2,732.2	1,499.5	1,232.7	11.4	8.6	20.0
Nov	2,631.3	1,451.2	1,180.0	11.4	8.6	20.0
Dec	2,602.8	1,434.1	1,168.7	11.4	8.6	20.0
Jan	2,514.3	1,370.5	1,143.8	11.4	8.6	20.0
Feb	-	-	-	1,417.9	1,415.1	2,833.0
Mar	-	-	-	-	-	-
Apr	-	-	-	-	-	-
May	-	-	-	-	-	-
Jun	-	-	-	-	-	-
Jul	-	-	-	-	-	-
Aug	-	-	-	-	-	-
Sep	-	-	-	-	-	-

TOTAL CACHUMA PROJECT BALANCE (CARRYOVER + CURRENT YR ALLOCATION) 2,833.0

Footnotes
 (1) Schedule and Revisions (February 2023) - Includes Surplus Water (+16.2 AF), Carryover Water Spilled (-2,379.5 AF), WY 23 Allocation (+2,813 AF)

SUMMARY OF WATER USED

CACHUMA PROJECT - CONTRACT #175R-1802

Contract Year: 10/1/22 to: 9/30/23

Contract Entity: **Santa Barbara Co. Water Agency**
Update by COMB 2/28/2023

Month	Carryover Balance Prior Yr	Approved Allocation Curr Yr	TOTAL WATER USED				CARRYOVER WATER					CURRENT YEAR ALLOCATION		
			Acre-feet				WATER USE CHARGED					WATER USE CHARGED		
			Use %	M & I	Agr	Total	Evap	Div	Total	Allocation		Allocation		Total
Oct	35,586.3	-	0.1	1,443.3	368.4	1,811.6	400.7	1,811.6	2,212.3	1,767.5	444.8	-	-	-
Nov	-	-	0.0	937.0	163.4	1,100.4	215.4	1,100.4	1,315.7	1,111.4	204.3	-	-	-
Dec	-	-	0.0	573.9	36.6	610.5	89.4	610.5	699.9	648.1	51.9	-	-	-
Jan	-	-	0.0	816.4	44.0	860.4	51.1	860.4	911.5	857.5	53.9	-	-	-
Feb	-	25,714.0	0.0	1,231.1	120.7	1,351.7	80.5	1,351.7	1,432.2	1,297.8	134.4	-	-	-
Mar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total	35,586.3	25,714.0	0.2	5,001.6	733.0	5,734.6	837.1	5,734.6	6,571.7	5,682.3	889.4	-	-	-

Month	CONVERSIONS (M&I AND AG SPLIT)			
	CARRYOVER WATER		CURR YR ALLOCATION	
	M & I	Agr	M & I	Agr
Oct	-	-	-	-
Nov	-	-	-	-
Dec	-	-	-	-
Jan	-	-	-	-
Feb	-	-	-	-
Mar	-	-	-	-
Apr	-	-	-	-
May	-	-	-	-
Jun	-	-	-	-
Jul	-	-	-	-
Aug	-	-	-	-
Sep	-	-	-	-

Month	SCHEDULE AND REVISIONS				SCHEDULE AND REVISIONS		
	Begin Bal	Total	Allocation		Allocation		Total
			M & I	Agr	M & I	Agr	
Oct	-	(126.0)	(71.8)	(54.2)	84.7	41.3	126.0
Nov	-	-	-	-	-	-	-
Dec	-	-	-	-	-	-	-
Jan	-	-	-	-	-	-	-
Feb	-	(28,888.6)	(23,020.5)	(5,868.2)	19,373.8	6,340.2	25,714.0
Mar	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-

Month	BALANCE - CARRYOVER WATER				BALANCE - CURR YR ALLOC		
	County Parks Usage (AF)	Total	Allocation		Allocation		Total
			M & I	Agr	M & I	Agr	
Oct	1.6	33,248.0	26,935.3	6,312.7	84.7	41.3	126.0
Nov	1.4	31,932.3	25,823.9	6,108.4	84.7	41.3	126.0
Dec	0.8	31,232.4	25,175.9	6,056.5	84.7	41.3	126.0
Jan	0.8	30,320.9	24,318.3	6,002.6	84.7	41.3	126.0
Feb	-	-	-	-	19,458.5	6,381.5	25,840.0
Mar	-	-	-	-	-	-	-
Apr	-	-	-	-	-	-	-
May	-	-	-	-	-	-	-
Jun	-	-	-	-	-	-	-
Jul	-	-	-	-	-	-	-
Aug	-	-	-	-	-	-	-
Sep	-	-	-	-	-	-	-

TOTAL CACHUMA PROJECT BALANCE (CARRYOVER + CURRENT YR ALLOCATION) **25,840.0**

Footnotes

(1) Schedule and Revisions (February 2023) - Includes Surplus Water (+153.5 AF), Carryover Water Spilled (-29,042.1 AF), WY 23 Allocation (+25,714 AF)

UNITED STATES DEPARTMENT OF THE INTERIOR
U.S. BUREAU OF RECLAMATION-CACHUMA PROJECT-CALIFORNIA

March 2023

LAKE CACHUMA DAILY OPERATIONS

Run Date: March 22, 2023

Day ¹	Lake Cachuma				Rainfall ⁴		Evaporation ⁴		CCWA Inflow	Release						Computed Inflow ²
	Elevation	Storage	Change in Storage	Surface Area						Park Use	Tunnel	Hilton Creek	WR 89-18	Outlet ³	Spillway	
	HL	LS	LC	acres	PP	PPAF	EV	EVAF	QICWA	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet
SHEF Tag→	ft	acre-feet	acre-feet	acres	inches	acre-feet	inches	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet	acre-feet
28	752.12	190,243														
1	752.05	190,025	(217.6)	3,093.3	0.61	157.2	0.080	15.67	-	-	35.09	8.52	-	229.00	6,124.00	6,037.45
2	752.12	190,243	217.6	3,095.6	-	-	0.110	21.57	-	-	35.18	8.41	-	227.00	6,139.00	6,648.75
3	751.73	189,039	(1,203.5)	3,083.1	-	-	0.100	19.53	-	-	32.83	8.50	-	226.00	6,116.00	5,199.38
4	751.17	187,317	(1,722.5)	3,065.4	-	-	0.070	13.59	-	-	33.84	8.44	-	229.00	6,009.00	4,571.41
5	751.19	187,379	61.5	3,066.0	0.44	112.4	0.050	9.71	-	-	33.98	8.37	-	229.00	4,056.00	4,286.16
6	751.13	187,194	(184.5)	3,064.1	0.11	28.1	0.010	1.94	-	-	32.40	8.49	-	226.00	3,970.00	4,026.20
7	751.00	186,794	(399.9)	3,060.0	-	-	0.130	25.19	-	-	40.94	8.40	-	231.00	3,964.00	3,869.67
8	750.76	186,064	(730.4)	3,052.0	-	-	0.100	19.33	-	-	46.16	8.35	-	222.00	3,950.00	3,515.45
9	749.97	183,661	(2,403.1)	3,025.4	-	-	0.080	15.33	-	-	44.82	8.46	-	229.00	5,359.00	3,253.48
10	748.94	180,564	(3,096.3)	2,987.7	0.43	107.1	0.090	17.03	-	-	46.44	8.26	-	226.00	9,647.00	6,741.42
11	750.13	184,146	3,582.1	3,030.9	0.79	199.5	-	-	-	-	45.30	8.33	-	230.00	8,186.00	11,852.22
12	750.28	184,603	456.5	3,035.9	-	-	0.070	13.46	-	-	43.81	8.04	-	218.00	8,160.00	8,899.80
13	749.91	183,480	(1,122.9)	3,023.2	-	-	0.040	7.66	-	-	44.72	8.38	-	227.00	8,137.00	7,301.91
14	747.83	177,272	(6,208.6)	2,948.1	0.19	46.7	0.170	31.74	-	-	42.56	8.32	-	227.00	12,821.00	6,875.38
15	748.05	177,919	647.8	2,955.7	1.27	312.8	-	-	-	-	45.30	8.21	-	226.00	11,079.00	11,693.54
16	749.91	183,480	5,560.7	3,023.2	-	-	0.050	9.57	-	-	44.48	8.32	-	117.00	5,062.00	10,802.10
17	750.75	186,033	2,553.2	3,051.6	-	-	0.160	30.92	-	-	47.79	8.41	-	43.00	4,365.00	7,048.31
18	751.29	187,686	1,652.8	3,069.2	-	-	0.110	21.38	-	-	45.73	8.43	-	43.00	4,125.00	5,896.34
19	751.61	188,670	984.3	3,079.3	0.03	7.7	0.110	21.45	-	-	44.96	8.46	-	43.00	4,097.00	5,191.44
20	751.47	188,240	(430.6)	3,074.9	0.01	2.6	0.030	5.84	-	-	44.67	8.49	-	42.00	5,020.00	4,687.83
21	751.13	187,194	(1,045.8)	3,064.1	0.66	168.5	0.100	19.41	-	-	47.12	8.42	-	43.00	5,791.00	4,694.64
22	751.30	187,717	522.9	3,069.5	1.25	319.7	-	-	-	-	46.06	8.47	-	43.00	8,168.00	8,468.68
Total			(2,526.08)		5.79	1,462.36	1.660	320.33	-	-	924.19	184.48	-	3,776.00	140,345.00	141,561.56
Minimum	747.83	177,272	(6,208.56)	2,948.06	-	-	-	-	-	-	32.40	8.04	-	42.00	3,950.00	3,253.48
Average	750.62	185,669	(114.82)	3,046.28	0.26	66.47	0.075	14.56	-	-	42.01	8.39	-	171.64	6,379.32	6,434.62
Maximum	752.12	190,243	5,560.72	3,095.64	1.27	319.74	0.170	31.74	-	-	47.79	8.52	-	231.00	12,821.00	11,852.22

Comments

1. Data based on 24-hour period ending 0800
2. Computed inflow is the sum of change in storage, releases, and evaporation minus precip on the reservoir surface and CCWA inflow.
3. Indicated outlets release include any leakage around gates.
4. Evaporation in inches is the measured pan evaporation. Calculated evaporation in acre feet uses the March pan factor: 76%
5. Storage volume based on 2021 bathymetric survey.



**Santa Barbara County Parks Division,
Cachuma Lake Recreation Area
Summary of Aquatic Invasive Species Vessel Inspection Program
and Early Detection Monitoring Program: February 2023**



Cachuma Lake Recreation Area Launch Data -- February 2023		
Inspection Data		
Total Vessels Entering Park	421	
Total Vessels Launched	401	
Total Vessels Quarantined	20	
Returning (Tagged) Boats Launched	289	72%
Kayak/Canoe: Inspected, launched	112	28%
4-stroke Engines	*	
2-strokes, w/CARB star ratings	*	
2-strokes, NO emissions ratings	*	
Quarantine Data		
Total Vessels Quarantined	20	
Quarantined 14 days	*	
Quarantined 30 days	20	
Quarantine Cause		
Water on vessel*	*	
Debris on hull*	*	
Plug installed*	*	
From infected county	4	
Ballast tanks*	*	
Boat longer than 24 feet*	*	
Out-of-state	0	
Unspecified*	*	
Mandatory Quarantine All Untagged Boats	20	
Demographic Data		
Quarantined from infected county	4	
Quarantined from SB County	12	
Quarantined from uninfected co	4	

Boat Launch Tags: Boats with Cachuma Lake Boat Launch Tags attach boat to trailer.

No mussel species have been located on any vessel entering Cachuma Lake as of the last day of this month.

* These conditions are no longer being tracked.

EARLY DETECTION MONITORING PROGRAM SUMMARY

Summary: No Dreissenid Mussels were detected, nor Aquatic Invasive Species of any kind.
 Inspection Site: Cachuma Lake Reservoir, Santa Barbara County, California.
 Plankton Tow Inspection Date and Time: No Plankton Tow in February due to lake debris.
 Artificial Substrate & Surface Survey Date and Time: 2023.02.26; 10 a.m. to 12 p.m. PDT.
 Method: 3 Artificial Substrate Stations; 16 meters/52.5 linear feet of line as well as ramp, dock, anchor, etc.
 Surveyors: COSB, Parks Division Quagga Grant Staff (P. Medel).
 Lake elevation: Max feet: 753.00, current 752.49; Max acre-feet: 192,978, current: 191,207;
 Capacity: 98.6% At of the end of the survey month.