

## **RESOLUTION NO. 749**

### **RESOLUTION OF THE GOVERNING BOARD OF THE CACHUMA OPERATION & MAINTENANCE BOARD ADOPTING THE THIRD AMENDMENT TO THE COMB 2021-2025 INFRASTRUCTURE IMPROVEMENT 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 a Second Amendment to the 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 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 along the entire system; and

**WHEREAS**, the Five-Year 2021-2025 Infrastructure Improvement Plan (“IIP”), which contemplates certain projects, was initially adopted by the COMB Governing Board in February 2020, then subsequently amended in April 2021 (“First Amendment”) and November 2021 (“Second Amendment”); and

**WHEREAS**, each year, in conjunction with preparation of COMB's annual Operating Budget, the Governing Board reviews the upcoming infrastructure needs and related projects for COMB based on current conditions and priorities; and

**WHEREAS**, more detailed cost/benefit information, including potential funding offsets, is now available for certain infrastructure improvement projects; and

**WHEREAS**, since the initial adoption of the IIP and adoption of the First and Second Amendments, project budgets and scheduling adjustments are necessary primarily due to declared drought conditions, inflationary pressures, supply chain issues, shutdown limitations, results of completed engineering evaluations and potential funding offsets; and

**WHEREAS**, a third amendment to the IIP is necessary and will facilitate the decision-making process for allocation of resources to help ensure the delivery of quality, reliable water to the COMB Member Agencies (“Third Amendment”); and

**WHEREAS**, the proposed Third Amendment to the IIP is presented to the Governing Board with a recommendation to approve and adopt that amendment.

**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 approves the May 2022 Third Amendment to the 2021-2025 Infrastructure Improvement Plan, as set forth in the accompanying staff memorandum and Exhibit 2 of the memorandum.
3. This Resolution shall take effect immediately.


**PASSED, APPROVED AND ADOPTED** by the Governing Board of the Cachuma Operation and Maintenance Board, this 23<sup>rd</sup> day of May 2022, by the following roll call vote:

**Ayes:** Sneddon, Hayman, Hanson, Holcombe

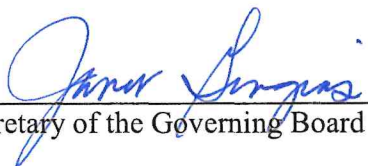
**Nayes:**

**Absent/Abstain:**

**APPROVED:**

  
\_\_\_\_\_  
President of the Governing Board

**ATTEST:**

  
\_\_\_\_\_  
Secretary of the Governing Board

The following two tables display the estimated costs associated with the 2nd amendment to the 2021-2025 IIP planning matrix and the proposed 3rd amendment to the 2021-2025 IIP planning matrix.

2nd Amendment IIP (2021 - 2025)								
Board Approved November 2021								
	Project ID	Project Name	2020-21	2021-22	2022-23	2023-24	2024-25	5-yr Total
Priority	1	2012-1-A SCC AVAR Valve Replacement/Relocation	\$ 90,000	\$ 190,000	\$ -	\$ -	\$ 40,000	\$ 320,000
	2	2004-2-I SCC Blow-Off Nozzle/Valve Replacement	\$ 90,000	\$ 200,000	\$ -	\$ -	\$ 120,000	\$ 410,000
		2004-2-B Rehabilitate Lateral Structures (LIVR)	\$ 85,000	\$ 450,000	\$ 550,000	\$ -	\$ -	\$ 1,085,000
		2014-C-61 SCADA Upgrades	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ 300,000
		2019-C-1 Lake Cachuma EPF Pump Station (if required)	\$ -	\$ -	\$ 1,600,000	\$ 1,475,000	\$ -	\$ 3,075,000
	3	2018-C-1 Lake Cachuma EPF Secured Pipeline Project	\$ 152,000	\$ 352,000	\$ 2,400,000	\$ -	\$ -	\$ 2,904,000
		2019-C-2 Modular Office Building Replacement	\$ 175,000	\$ 216,000	\$ -	\$ -	\$ -	\$ 391,000
		2018-C-2 SCC In-Line Isolation Valves	\$ -	\$ 400,000	\$ 500,000	\$ -	\$ -	\$ 900,000
		2019-C-3 Lake Cachuma Water Quality and Evaporation Buoy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2013-C-1 North Portal Jet Flow Control Valve Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2019-C-4 Critical Control Valve Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	4	2013-C-1 Meter Replacement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2007-2-B Sheffield Tunnel Evaluation and Repair	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2013-2-C Lauro Reservoir Intake Assessment and Repair	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2016-C-1 North Portal Intake Tower Seismic Assessment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		1999-2-A Tecolote Tunnel Concrete Deterioration Investigation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal		\$ 742,000	\$ 1,958,000	\$ 5,050,000	\$ 1,475,000	\$ 160,000	\$ 9,385,000
	Grant Funding				\$ (750,000)			\$ (750,000)
	Actual / Proposed CVWD Funding		\$ (40,000)	\$ (450,000)	\$ (550,000)			\$ (1,040,000)
	Total		\$ 702,000	\$ 1,508,000	\$ 3,750,000	\$ 1,475,000	\$ 160,000	\$ 7,595,000

3rd Amendment IIP (2021 - 2025)										
	Board Approved May 2022									
		Project ID	Project Name	2020-21	2021-22	2022-23	2023-24	2024-25	5-yr Total	Variances
Priority	1	2012-1-A	SCC AVAR Valve Replacement/Relocation	\$ 90,000	\$ -	\$ 220,000	\$ -	\$ -	\$ 310,000	\$ (10,000)
		2004-2-I	SCC Blow-Off Nozzle/Valve Replacement	\$ 90,000	\$ -	\$ 220,000	\$ -	\$ -	\$ 310,000	\$ (100,000)
	2		Ortega Emergency Repair		\$ 264,751				\$ 264,751	\$ 264,751
			Carp Resv. / Toro Cyn rehab / Emergency repairs		\$ 125,249				\$ 125,249	\$ 125,249
		2004-2-B	Rehabilitate Lateral Structures (LIVR)	\$ 85,000	\$ 450,000	\$ 550,000	\$ -	\$ -	\$ 1,085,000	\$ -
		2014-C-61	SCADA Upgrades	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ 300,000	\$ -
		2019-C-1	Lake Cachuma EPF Pump Station (if required)	\$ -	\$ -	\$ -	\$ 2,000,000	\$ 1,250,000	\$ 3,250,000	\$ 175,000
		2018-C-1	Lake Cachuma EPF Secured Pipeline Project	\$ 152,000	\$ 152,000	\$ 4,400,000	\$ -	\$ -	\$ 4,704,000	\$ 1,800,000
	3	2019-C-2	Modular Office Building Replacement	\$ 175,000	\$ 216,000	\$ -	\$ -	\$ -	\$ 391,000	\$ -
		2018-C-2	SCC In-Line Isolation Valves	\$ -	\$ 400,000	\$ 500,000		\$ -	\$ 900,000	\$ -
		2019-C-3	Lake Cachuma Water Quality and Evaporation Buoy	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2013-C-1	North Portal Jet Flow Control Valve Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2019-C-4	Critical Control Valve Replacement	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		2013-C-1	Meter Replacement Program	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	4	2007-2-B	Sheffield Tunnel Evaluation and Repair	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2013-2-C		Lauro Reservoir Intake Assessment and Repair	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
2016-C-1		North Portal Intake Tower Seismic Assessment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
	1999-2-A	Tecolote Tunnel Concrete Deterioration Investigation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
		Subtotal	\$ 742,000	\$ 1,758,000	\$ 5,890,000	\$ 2,000,000	\$ 1,250,000	\$ 11,640,000	\$ 2,255,000	
		DWR Urban and Multi-benefit Grant Funding			\$ (2,250,000)			\$ (2,250,000)	\$ (2,250,000)	
		USBR Grant Funding			\$ (750,000)			\$ (750,000)	\$ -	
		Actual / Proposed CVWD Funding	\$ (40,000)	\$ (450,000)	\$ (550,000)			\$ (1,040,000)	\$ -	
		Operating Budget Total	\$ 702,000	\$ 1,308,000	\$ 2,340,000	\$ 2,000,000	\$ 1,250,000	\$ 7,600,000	\$ 5,000	

**APPENDIX A: IIP PROJECT DESCRIPTIONS**  
Updated May 2022

# South Coast Conduit AVAR Valve Replacement / Relocation (2012-1-A)

## Background

Combination air vacuum air release valves (AVARs) are located at high points along the pipeline and act to automatically expel air and relieve vacuum accumulation in pipes. If air is not adequately expelled, air pockets can constrict flows. If the vacuum is not relieved, serious damage or collapse of the pipeline can occur. If AVAR vaults become flooded or if a negative pressure is experienced within the pipeline, the AVAR valves could allow contaminated water to enter the pipeline. It is now required to install these valves above grade, where flooding is less likely. COMB has been upgrading the AVAR valves in the system such that all are above grade. The AVAR valve structures consist of a manhole cover, riser pipe, valve, and AVAR valve. Over time, the original valves, riser, and manhole covers have also been corroded and pose an operational risk.



## Need

There are twenty-six AVARs on the Lower Reach of the SCC. Most AVAR structures were rehabilitated from 2018 to 2021. There are two remaining AVAR valve structures in Highway 192 that need rehabilitation as they pose an operational risk and/or do not meet Section 64576 of Titles 17 and 22 California Code of Regulations, which requires “each new air-release, air vacuum, or combination valve, and any such valve installed to replace an existing valve shall be: (a) installed such that its vent opening is above grade.” In addition, three air vents were partially rehabilitated and require replacement of the valve and riser pipe when a coordinated shutdown can occur. The consequence of not completing this project may be major facility failure in multiple locations and potential water contamination.

## Description

Replace and relocate to above ground AVARs, and replace riser pipes in the Lower Reach. Consistent with other AVAR replacements, manhole covers, valves, risers, laterals would be replaced at the same time. The project would require coordination with impacted Member Agencies during the required shutdown of the SCC. For efficiency and to minimize cost, phases of this project will be performed concurrently with similar phases of the South Coast Conduit Blow-Off Nozzle/Valve Replacement. Project implementation will occur over time and during low water demand months to reduce the impact of system shutdown.

### PRIORITY CATEGORY

**1. Regulatory or Legal Requirement**

### ESTIMATED COST

**\$310,000**

Fiscal Year	Phase	Cost
2020-21	Toro Cyn to Carp HS	\$90,000
2022-23	Toro Cyn to Carp HS	\$220,000

*This project has been identified by the USBR as a Category 1 recommendation.*

## Background

Blow-off structures exist on all low points of a water distribution system. The components included in these structures include access-hole covers, blow-off nozzles, a gate valve and blow-off piping. There are a total of sixty-five blow-off structures in South Coast Conduit system.

## Need

The existing blow-off components are in need or rehabilitation due to extensive corrosion. The dependability of these components is necessary to allow the system to be dewatered for maintenance and response to an emergency break in the pipe. Blow-off valves and piping have been replaced in the Upper Reach and 21 blow-off nozzles/valves have been replaced in the Lower Reach. Five blow-off nozzles in the Montecito and Carpinteria areas are in need of replacement. The original nozzles and valves are in need of replacement because of corrosion. The consequence of not completing this project could result in a major facility failure in multiple locations and potential risk of water contamination.

## Description

The project consists of replacing the man hole covers, blow-off nozzles, gate valves, upper spools, and discharge piping within the Lower Reaches of the SCC. The project would be completed in conjunction with the AVAR valve replacement and relocation project and coordinated with the affected Member Agencies during the required system shutdown. The design for this project is complete. Six scheduled shutdowns remain to be completed to replace 15 remaining blow-off nozzles and valves.



## PRIORITY CATEGORY

**2. Required to Maintain Level of Service**

## ESTIMATED COST

**\$310,000**

Fiscal Year	Phase	Cost
2020-21	Toro Cyn to Carp HS	\$90,000
2022-23	Toro Cyn to Carp HS	\$220,000

*This project has been identified by the USBR as a Category 2 recommendation.*

## Background

The proposed Pump Station Project would be required to be installed when the lake levels are projected to fall below the intake gates. The pumping facility provides a lifeline delivery of Cachuma Project water and imported State Water Project (SWP) water to 200,000 residents on the South Coast of Santa Barbara County during times of drought.

## Need

A pump-system has been installed three times in Lake Cachuma in 1957, 1990-91, and 2015-2017. In 1990-91 and 2015-17, the pumps were installed on a floating barge. Key components of the pumping barge from 2015-2017 EPF are currently being stored at a storage facility in Paso Robles. A land-based pump system was installed at Site 1 in 1957.

## Description

The floating pump station that is currently in storage consists of seven electrical pumps with fixed drum fish screens set on Flexifloat and Quadrafloat system. The pump station is powered by electricity through a temporary power line connected to PG&E system. A backup generator would be available on shore in case there was a power outage.

These costs are based on the installation and operation of the floating pump system that is currently in storage, under contract.



## PRIORITY CATEGORY

**2. Required to Maintain Level of Service**

## ESTIMATED COST

**\$3,250,000\* (If required)**

Fiscal Year	Phase	Cost
2023-24	Mobilize/Install/Ops	\$2,000,000
2024-25	Mobilize/Install/Ops	\$1,250,000

\*If required, the actual schedule for the Lake Cachuma EPF Pump Station (2019-C-1) may shift depending on drought severity and lake levels

*Permits are in the process of being renewed for future redeployment of the EPF (if required) with a secured pipeline to site 1.*

## Background

The Secured Pipeline Project - Gate 5 Extension is currently in the design phase. The North Portal Intake Tower is normally operated as a gravity flow system. However, when the lake level recedes below the lowest gates, water is unable to be transported to the South Coast. Under these conditions, water must be pumped from deeper parts of the lake to the Intake Tower.

## Need

Sedimentation has buried the lowest gate (Gate 5) on the North Portal Intake Tower. A pumping system is needed when lake levels recede below the Gate 4 elevation (678'). Without a pipeline and pumping system, Cachuma Project and State Water Project (SWP) water cannot be transported to the South Coast, causing a widespread immediate threat to public health during drought. This project would consist of a pipeline secured to the lake bottom with a connection at Gate 5, and a gravity intake with fish screen at an alternate drafting location (Site 1). Should water quality become poor at the Intake Tower (temp, algae, turbidity, TOC, etc.), the alternative Site 1 intake could also be utilized.

Water quality data collected by COMB over the last 2 years demonstrates that water temp, TOC, boron, and sulfate are consistently lower at depth. Lower water temperatures are associated with decreased THM formation during treatment and lower boron/sulfate levels will help Member Agencies meet aquifer storage and recovery (ASR) injection requirements.

## Description

The project would consist of installation of a 36-inch, 3,600' DR-17 HDPE pipeline secured to the lake bottom with concrete pipe weights. A fish screen installed at the drafting end would allow water deliveries from deeper portions of the lake for better management of delivered water quality. In times of drought, the pipeline would be connected to a pumping system to allow deliveries of water to the Tecolote Tunnel. The preferred elevation to install the pipeline is at 710' or less. The project could be installed during the next drought when the appropriate lake level is reached for construction (Makai Ocean Engineering, Inc. 2019).



## PRIORITY CATEGORY

### 3. Addresses Critical Deficiency

## ESTIMATED COST

**\$4,704,000**

Fiscal Year	Phase	Cost
2020-21	Env/Eng	\$152,000
2021-22	Env/Eng	\$152,000
2022-23	Construction	\$4,400,000

\*USBR Drought Resiliency Grant awarded to COMB in the amount of \$750,000 for this project – DWR Multibenefit Drought Relief Program awarded COMB \$2,250,000 for the project.

*Environmental review has been completed and permits are in the process of being renewed or applied for the secured pipeline project.*