



ZONE 3 ADVISORY COMMITTEE

San Luis Obispo County Flood Control and Water Conservation District

AGENDA

Thursday, July 16, 2020 6:30 P.M.

Due to COVID-19 Meeting Protocols
we will hold the meeting via Goto Meeting or via Phone

Phone line: +1 (408) 650-3123

Access Code: 420-641-221

OR

Webinar: <https://global.gotomeeting.com/install/420641221>

- I. CALL TO ORDER AND ROLL CALL
- II. PUBLIC COMMENT
This is also an opportunity for members of the public to address the Committee on items that are not on the Agenda
- III. RECOGNITION OF JIM GARINGS 39 YEARS OF SERVICE TO THE ZONE 3 LOPEZ WATER PROJECT
- IV. OFFICER ROTATIONS
 - A. Committee Chair rotating from City of Arroyo Grande Representative to City of Grover Beach Representative
 - B. Committee Vice-Chair rotating from City of Grover Beach Representative to City of Pismo Beach
- V. APPROVAL OF MEETING MINUTES
 - A. May 21, 2020 and Special Meeting May 28th Budget Endorsement– [Attachment 1](#)
- VI. OPERATIONS REPORT
 - A. Water Plant Operations, Reservoir Storage, Downstream Releases - [Verbal Update](#)
 - B. Projected Reservoir Levels – [Attachment 2](#)
 - C. May & June Monthly Operations Report – [Attachment 3](#)
- VII. INFORMATION ITEMS
 - A. Terminal Reservoir De-Commissioning – [Attachment 4 & Presentation](#)
 - B. Water Supply Contract Changes – [Attachment 5](#)
- VIII. CAPITAL PROJECTS UPDATE
 - A. Bi-Monthly Update – [Attachment 6](#)
- IX. ACTION ITEMS (No Subsequent Board of Supervisors Action Required)
- X. ACTION ITEMS (Board of Supervisors Action is Subsequently Required)



ZONE 3 ADVISORY COMMITTEE

San Luis Obispo County Flood Control and Water Conservation District

XI. FUTURE AGENDA ITEMS

- A. Contract Changes
- B. Cloudseeding Final Report

XII. COMMITTEE MEMBER COMMENTS

Next Regular Meeting is Tentatively Scheduled for
September 17, 2020 at 6:30 PM at City of Grover Beach Council Chambers
Agendas accessible online at www.slocounty.ca.gov/pw/zone3



**SAN LUIS OBISPO COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
ZONE 3 ADVISORY COMMITTEE
DRAFT MEETING MINUTES
THURSDAY May 21, 2020**

- I. **Call to Order and Roll Call** -- The Zone 3 Advisory Committee Meeting was called to order at 6:30 PM via GoTo Meeting due to the Covid-19 pandemic by Representative, Kristen Barneich.

County Public Works Utilities Division Senior Engineer and Secretary to the Advisory Committee, Jill Ogren, called roll. Quorum was present. Members in attendance were:

- Kristen Barneich, City of Arroyo Grande
- Karen Bright, City of Grover Beach
- Marcia Guthrie, City of Pismo Beach
- Shirley Gibson, Oceano CSD
- Brad Hagemann, County Services Area 12
- Brian Talley, Agriculture Member
- Jim Garing, Member at Large

- II. **Public Comment** – No public comment was given.

III. **Approval of Meeting Minutes**

A. **January 16, 2020** –*Member Garing motioned approval of the minutes* and Member Guthrie seconded. Member Barneich requested roll call for approval, Member Hagemann abstained. Quorum was met and ***motion passed***.

Jill Ogren stated due to the cancellation of March's meeting, an action item to endorse the FY 2020-21 budget was delayed. ***A motion was made to hold a Special Meeting via GoTo meeting on May 28, 2020 at 4:00pm for the action item proposed.*** Member Barneich motioned approval and Member Talley seconded. Member Barneich requested roll call for approval. Quorum was met and ***motion passed***.

IV. **Operations Report**

A. **Water Plant Operations, Reservoir Storage, Downstream Releases** -- Ms. Ogren indicated: Lopez Lake elevation was 490.55 feet; storage was 25,284 acre-feet (AF), which is 51% capacity; rainfall to date, since July 1, 2019, was 17.85 inches; plant production was 5.5 million gallons per day (MGD); downstream release was 2.7 MGD; and State Water was 0.67 MGD.

B. **Projected Reservoir Levels** – Ms. Ogren discussed the Lopez Reservoir Projections Chart and noted that the yellow line shows anticipated storage if no further rain is received.

C. March and April Monthly Operations Report -- Ms. Ogren reviewed the monthly operations reports with the committee. All but 20 AF of surplus water was used with Oceano and Pismo using all of their requested surplus. There is 1,530 AF of stored State Water in Lopez. Downstream releases for this water year were at 2,736 AF. Per the contract, downstream releases can be released up to 4,200 AF. Ms. Ogren reviewed the April report which shows all agencies are currently using their entitlement and noted the numbers in the Surplus Water Declared column are draft numbers as the surplus water requests have not been taken to the Board of Supervisors yet for declaration/approval. Meeting is set for June 2, 2020 with the Board of Supervisors for the declaration.

No public comment was given.

V. Information Items

A. 3rd Quarter FY 2019/20 Budget Status – Kristi Smith, County Public Works Finance Division, discussed the FY 20/21 3rd Quarter budget status and referred to Attachment 4 in the Agenda Packet. The report covers the period of July 1st, 2019 through March 31st, 2020. Expenses for the Routine O&M are at 67% leaving almost \$1.3 million available for the rest of the year. Expenses for the Non-Routine O&M are at 25% leaving almost \$653,000 available for the rest of the year. Bulk of the remaining expenses will be used towards the Lopez Water Rights/HCP effort and the Cloud Seeding Project. Unspent savings will be carried forward. Expenses for the Capital Outlay are at 5% leaving almost the entire budget for the rest of the year. Any savings will be credited back to the agencies. All agencies are current on their payments. First installment of the 2020-21 FY billings were mailed out and are due July 1st.

Member Talley asked if there were any capital outlay projects that were deferred due to the high dollar amount of capital outlay funds still available for use. Ms. Ogren stated that the Cathodic Protection survey was just completed, and remaining funds will be used to implement identified deficiencies from the survey in the next fiscal year. Ms. Ogren also stated that the Lopez Dam left abutment project will be deferred until after completion of a risk assessment study per TAC's direction. Terminal Reservoir boat ramp has been delayed as it was a low priority project.

No public comment was given.

B. Cloud Seeding Update – Ms. Ogren briefly provided an update. Contract with North American Weather Consultants ran from January 9th to April 15th. There were no storm events to seed in January and February. For the months of March and April, cloud seeding was done over six storm events. One was air-based seeding, the rest were land-based seeding. Final report should be available in the beginning of June and will be posted on the website. Cloud seeding consultant will be giving a presentation on June 10th at the Zone 3 TAC meeting. Program costs this first year came to \$160,000. \$300,000 was budgeted but due to the program only running from January to April with limited storm events, costs were reduced.

Member Gibson asked if the Cloud Seeding partnership with Santa Barbara was still open. Ms. Ogren stated that the partnership is still an option and the consultant will put in a recommendation on the final report to continue with the land-based option in conjunction with air-based due to being able to seed more storms using the land based sites. In utilizing the land-based option, negotiations will take place with Santa Barbara for cost coverage in sharing their site. SLO County can also investigate establishing land sites of its own on District property within the Lopez watershed. Member Gibson followed up asking if any testing was being done on any residual of chemicals used for cloud seeding and Ms. Ogren responded there is no testing at this time.

C. Water Supply Contract – Jill Ogren provided a verbal update on the water supply contract. Ms. Ogren stated Zone 3 TAC created a sub-committee to tackle the contract changes and have developed a draft of the proposed contract changes that will enable agencies to have the ability to store water year over year. This will promote better integrated management of each agencies water supply portfolios. The draft will be presented to Zone 3 TAC for review on June 10th and tentatively presented to the Advisory Committee at the July 16th meeting for authorization to move forward on the CEQA document.

No public comment was given.

VI. Capital Projects Update

B. Bi-Monthly Update – Ms. Ogren provided additional updates on capital projects from what was shared during the 3rd Quarter Budget Status discussion. There has been no change on the Spillway Assessment and Work Plan. Structural Assessment of the Terminal Reservoir Dam will be potentially added to the capital projects as the submission of the Geotechnical Investigation evolved into more testing requests by DSOD. This increased the original estimated costs and initiated a discussion on de-commissioning the Terminal Reservoir. A one-year extension request was submitted to DSOD to put together a work plan. This will also allow further investigations into whether it would be worth going through with the improvements or to de-commission the Terminal Reservoir Dam. A report is currently being generated to compare the two alternatives and the cost benefits involved. The report will be presented to the Advisory Committee at the July 16th meeting.

The Domestic Water Tank was repaired and resulted in savings as the final repair costs were much lower than the original estimates. During this repair, it came to light that the Fire Tank needs significant repairs at a potentially high cost and will require setting aside funding for the next couple of years to accumulate the necessary funding.

Tule Removal Project was recently completed, and root balls were removed in the Terminal Reservoir to prohibit any further growth.

No Public comment was given.

VII. Action Items (No Subsequent Board of Supervisors Action Required)

No Action Items discussed.

VIII. Action Items (Board of Supervisors Action is Subsequently Required)

A. Surplus Water Declaration for WY 19/20 – Jill Ogren discussed the surplus water declaration and noted this was originally submitted in the March agenda packet prior to the meeting cancellation. There was an original estimated amount of surplus water at 1841 AF but the actual amount ended up at 1803 AF. Ms. Ogren referred to Attachment 6 of the Agenda Packet concerning the declaration of surplus water letter. The agencies will receive a certain amount of the surplus water based on their contract percentage, a table in the attached letter provides an explanation of what each agency would receive. A similar declaration letter will be presented to the Board of Supervisors for approval. ***Member Garing motioned approval of the Surplus Water Declaration and Member Talley seconded.*** Member Barneich requested Jill Ogren to do a roll call for approval. Quorum was met, **motion passed.**

B. Request to use \$50,000 of Zone 3 District Designated Reserves for AG Creek Sub-Basin Ground Water Sustainability Plan – Jill Ogren announced that Dick Tzou was available if there were questions and referred to Attachment 7, Attachment A and Attachment B concerning the request for District Designated Reserves to be used towards the AG Creek Sub-Basin Ground Water Sustainability Plan. Ms. Ogren discussed and requested approval from the Advisory Committee to approve funding a portion of the plan in an amount not to exceed \$50,000 utilizing Zone 3 District Designated Reserves. The proposed GSP scope of work covers integrating surface and groundwater models with Lopez reservoir operations model, provide technical information to support management decisions associated with the HCP/environmental needs and reservoir operations/water supply contracts and establish groundwater management goals for groundwater levels/storage, interconnected surface water, water quality and subsidence.

Member Barneich asked how it was determined that the AG Creek Sub-basin was labeled as “low priority”. Ms. Ogren stated there are many factors that DWR used to evaluate various basins and referred to Dick Tzou to answer. Mr. Tzou stated there are about 25 criteria to classify the basins, it has nothing to do with how well the ground water is managed but more so with area population, dependence on ground water, environmental impacts/factors, etc.

Member Bright asked if TAC was in support of this request and Ms. Ogren announced TAC was in full support.

Member Talley motioned approval of utilizing \$50,000 of Zone 3 District Designated Reserves to help fund the AG Creek Sub-Basin GSP Member Garing seconded. Member Barneich requested Jill Ogren to do a roll call for approval. Quorum was met, **motion passed.**

IX. Future Agenda Items

A. Contract Changes

B. Floating Solar

C. Low Reservoir Response Plan (LRRP)

D. Cost/Benefit Analysis of Abandoning Use of the Terminal Reservoir

X. Committee Member Comments

Meeting Adjourned at 7:30 PM

Respectfully Submitted,

Jenny Williamson
County of San Luis Obispo Public Works Department



**SAN LUIS OBISPO COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
ZONE 3 ADVISORY COMMITTEE
DRAFT SPECIAL MEETING MINUTES
THURSDAY May 28, 2020**

- I. **Call to Order and Roll Call** -- The Zone 3 Advisory Committee Special Meeting was called to order at 4:00 PM via GoTo Meeting due to the Covid-19 pandemic by Vice-Chair Karen Bright.

County Public Works Utilities Division Senior Engineer and Secretary to the Advisory Committee, Jill Ogren, called roll. Quorum was present. Members in attendance were:

- Karen Bright, City of Grover Beach
- Brad Hagemann, County Services Area 12
- Brian Talley, Agriculture Member
- Jim Garing, Member at Large

- II. **Public Comment** – No public comment was given.

III. **Action Items (Board of Supervisors Action is Subsequently Required)**

A. FY 20/21 Budget Endorsement – Kristi Smith presented a power point presentation that provided a description of the budget process and budget overview. Analysis of billable variances showed an overall billing decrease of 2.6% to the contractors. Routine O& M went up by 4% due to a combination of increases and decreases across several projects. The budget includes funding for the required 2020 Urban Water Management Plan update. Non-routine O&M went down over 20% because TAC recommended budgeting \$300,000 for Cloudseeding which resulted in less funding for available for Non-routine O&M. This will maintain the overall cap of \$750,000 for Non routine O&M and Capital Outlay. In addition, \$15,000 was put into contractor reserves. The loan reserve requirement has been met so it is no longer needed and results in \$167,000 in savings. A graph of labor hours over the last 10 years was shown. Kristi explained why certain years were higher and stated that we are anticipating a decrease in labor hours in 19/20 due to staff out on extended family or sick leave. Jill asked if we budget for over time. Kristi replied that by using the weighted labor rate for each staff, it is taken into account. **Member Garing motioned endorsement of the FY 20/21 Zone 3 budget minutes and Member Talley seconded.** Member Bright requested roll call for approval, *motion passed*.

IV. **Committee Member Comments**

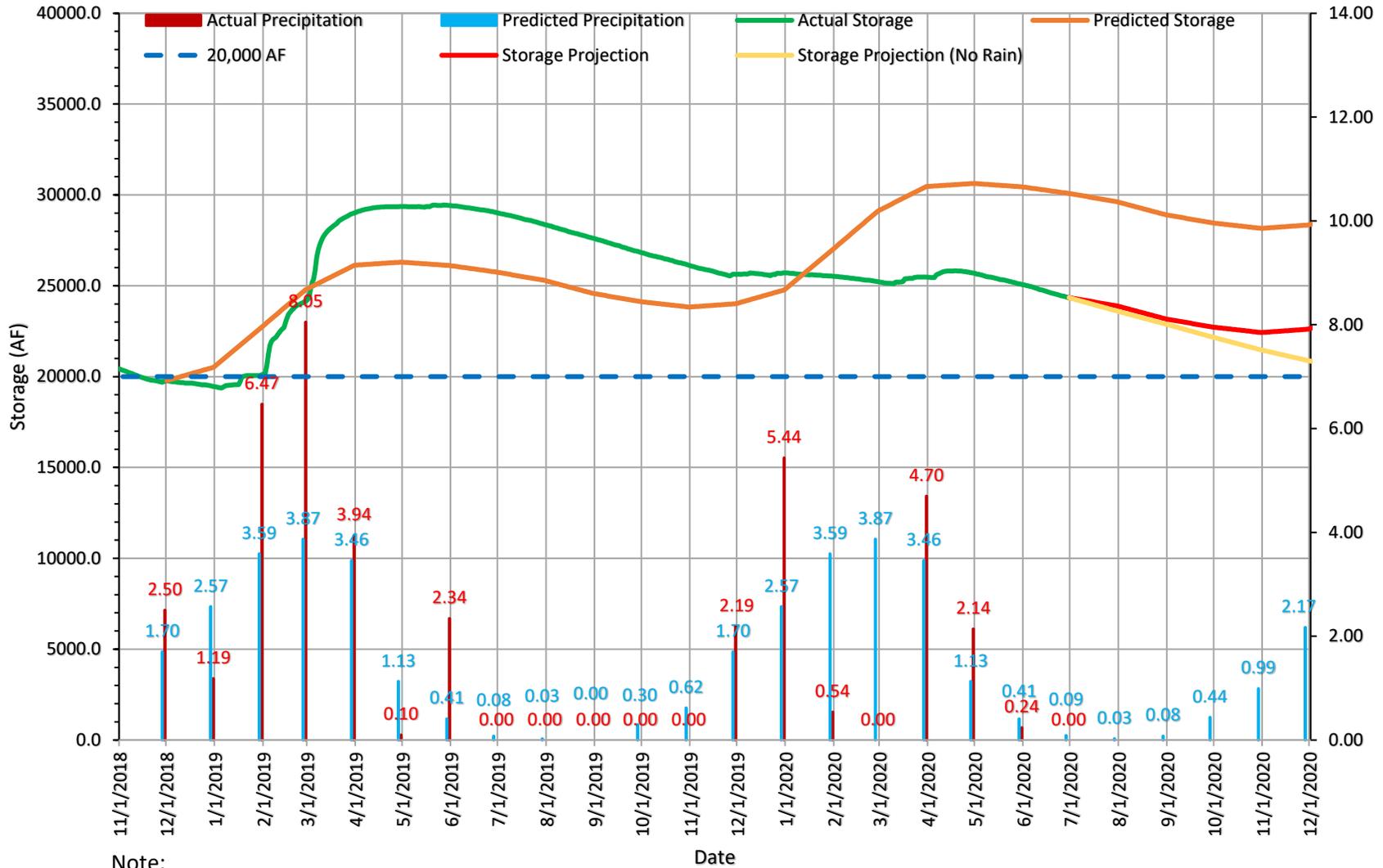
None.

Meeting Adjourned at 5:00 PM

Respectfully Submitted,

Jill Ogren, County of San Luis Obispo Public Works Department

LOPEZ RESERVOIR STORAGE PROJECTION

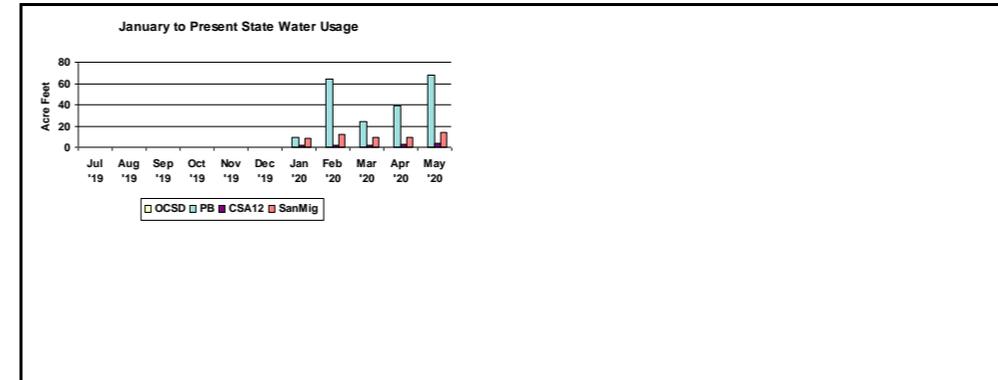
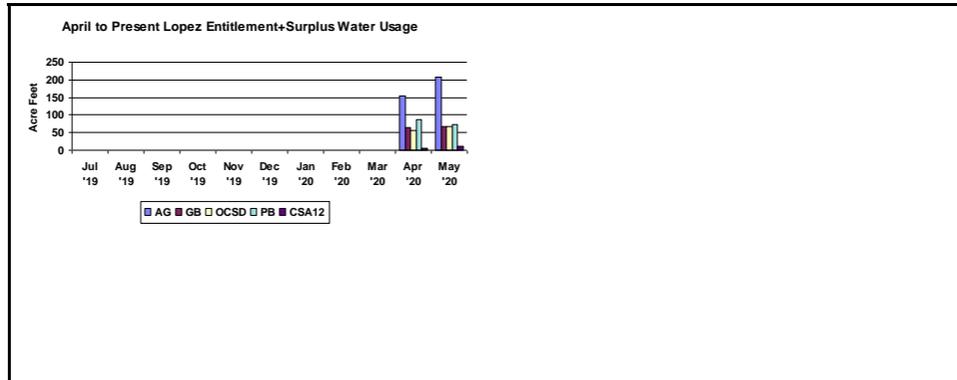


Note:

1. Storage projection is based on predicted rainfall from longrangeweather.com, historic inflow based on predicted rainfall, 18-19 downstream release requests, and municipal usage.

San Luis Obispo County Flood Control and Water District Zone 3 - Lopez Project - Monthly Operations Report May, 2020

Contractor	Lopez Water Deliveries										State Water Deliveries						Total Water Deliveries This Month								
	Entl.	Surplus Water Declared	Surplus Requested	Total Available Water	This Month				April to Present						Annual Request	This Month				January to Present					
					Entitlement		Surplus		Entitlement		Surplus		Total			Usage		% of Annual Request	SWP Deliveries	Change in Storage	Usage	% of Annual Request	SWP Deliveries		
					Usage	%	Usage	%	Usage	%	Usage	%	Usage	%											
Arroyo Grande	2290	911.00	0.00	2290.00	209.23	9.1%	0.00	0.0%	362.56	15.8%	0.00	0.0%	362.56	15.8%										209.23	
Oceano CSD	303	121.00	0.00	303.00	67.15	22.2%	0.00	0.0%	124.60	41.1%	0.00	0.0%	124.60	41.1%	227	0.00	0.0%			0.00	0.0%				67.15
Grover Beach	800	318.00	0.00	800.00	67.12	8.4%	0.00	0.0%	131.34	16.4%	0.00	0.0%	131.34	16.4%											67.12
Pismo Beach	892	355.00	0.00	892.00	73.75	8.3%	0.00	0.0%	159.51	17.9%	0.00	0.0%	159.51	17.9%	1120	68.00	6.1%			204.27	18.2%				141.75
CSA 12	245	98.00	0.00	245.00	12.48	5.1%	0.00	0.0%	19.11	7.8%	0.00	0.0%	19.11	7.8%	27	3.35	12.4%			12.31	45.6%				15.83
San Miguelito															127	14.10	11.1%			52.92	41.7%				14.1
Total	4530	1803.00	0.00	4530.00	429.73	9.5%	0.00	0.0%	797.12	17.6%	0.00	0.0%	797.12	17.6%	1501	85.45	5.7%	70	-15.45	269.50	18.0%	344.00			515.18
													Last Month Stored State Water		1546.2			This Month Stored State Water		1530.75					



Note: Deliveries are in acre feet. One acre foot = 325, 850 gallons or 43, 560 cubic feet. Safe yield is 8,730 acre feet.

"Year to Date" is January to present for State water, April to present for Lopez deliveries, and July to present for rainfall.

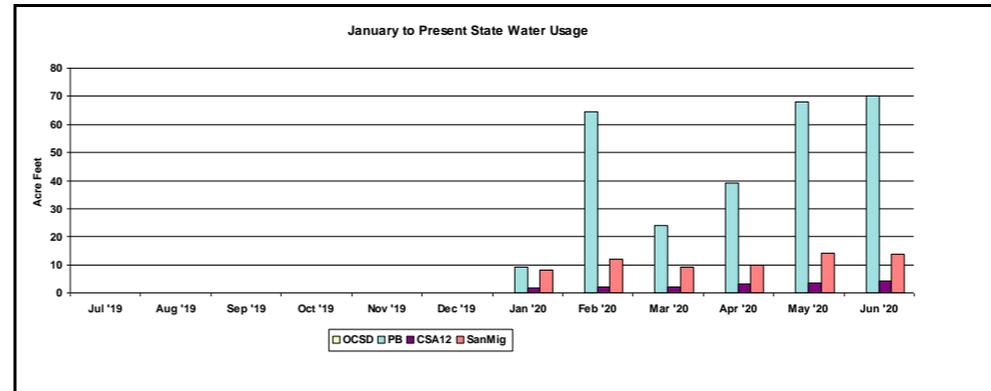
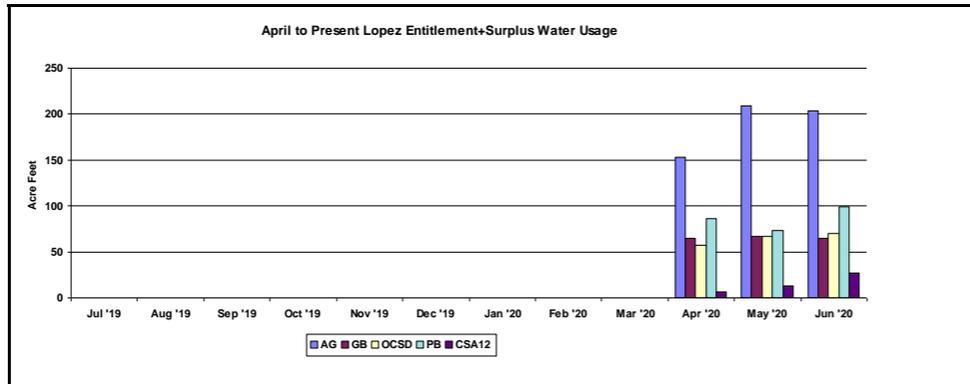
Lopez Dam Operations	This Month	Year to Date		
Lake Elevation (full at 522.37 feet)	490.18		Difference (feet)	-32.19
Storage (full at 49200 acre feet)	25068		% Full	51.0%
Rainfall	0.48	17.81		
Downstream Release (4200 acre feet/year)	236.92	445.60		
Spillage (acre feet)	0	0.00		

Comments:

- Available Surplus Water shown is draft. Surplus Water will be Declared by the Board of Supervisors on June 2, 2020. Surplus Water Requested is still to be determined.
- Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 2.4 AF delivered to Canyon Crest was added to Oceano's water usage this month and 2.4 AF was subtracted from Arroyo Grande's usage this month.

San Luis Obispo County Flood Control and Water District Zone 3 - Lopez Project - Monthly Operations Report June, 2020

Contractor	Lopez Water Deliveries											State Water Deliveries						Total Water Deliveries This Month								
	Entl.	Surplus Water Declared	Surplus Requested	Total Available Water	This Month				April to Present				Annual Request	This Month												
					Entitlement		Surplus		Entitlement		Surplus			Total		Usage	% of Annual Request		SWP Deliveries	Change in Storage	Usage	% of Annual Request	SWP Deliveries			
					Usage	%	Usage	%	Usage	%	Usage	%		Usage	%											
Arroyo Grande	2290	911.00	0.00	2290.00	204.13	8.9%	0.00	0.0%	566.69	24.7%	0.00	0.0%	566.69	24.7%											204.13	
Oceano CSD	303	121.00	0.00	303.00	70.50	23.3%	0.00	0.0%	195.10	64.4%	0.00	0.0%	195.10	64.4%	227	0.00	0.0%			0.00	0.0%					70.5
Grover Beach	800	318.00	0.00	800.00	64.80	8.1%	0.00	0.0%	196.14	24.5%	0.00	0.0%	196.14	24.5%												64.8
Pismo Beach	892	355.00	0.00	892.00	98.69	11.1%	0.00	0.0%	258.20	28.9%	0.00	0.0%	258.20	28.9%	1120	70.00	6.3%			274.27	24.5%					168.69
CSA 12	245	98.00	0.00	245.00	26.51	10.8%	0.00	0.0%	45.62	18.6%	0.00	0.0%	45.62	18.6%	27	4.40	16.3%			16.71	61.9%					30.91
San Miguelito															127	13.89	10.9%			66.81	52.6%					13.89
Total	4530	1803.00	0.00	4530.00	464.63	10.3%	0.00	0.0%	1261.75	27.9%	0.00	0.0%	1261.75	27.9%	1501	88.29	5.9%	67	-21.29	357.79	23.8%	411.00				552.92
													Last Month Stored State Water		1530.75			This Month Stored State Water		1509.46						



Note: Deliveries are in acre feet. One acre foot = 325, 850 gallons or 43, 560 cubic feet. Safe yield is 8,730 acre feet.

"Year to Date" is January to present for State water, April to present for Lopez deliveries, and July to present for rainfall.

Lopez Dam Operations	This Month	Year to Date		
Lake Elevation (full at 522.37 feet)	488.84		Difference (feet)	-33.53
Storage (full at 49200 acre feet)	24299		% Full	49.4%
Rainfall	0.08	17.89		
Downstream Release (4200 acre feet/year)	249.19	694.79		
Spillage (acre feet)	0	0.00		

Comments:

- 1) Available Surplus Water shown is draft. Surplus Water will be Declared by the Board of Supervisors on June 2, 2020. Surplus Water Requested is still to be determined.
- 2) Oceano supplied water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 2.6 AF delivered to Canyon Crest was added to Oceano's water usage this month and 2.6 AF was subtracted from Arroyo Grande's usage this month.



COUNTY OF SAN LUIS OBISPO
Department of Public Works
John Diodati, Interim Director

July 16, 2020

TO: Zone 3 Technical Advisory Committee

FROM: Desiree Bravo, Utilities Engineer

Via: Jill Ogren, Senior Utilities Engineer

SUBJECT: Lopez Terminal Dam Remediation/Decommissioning Options

Background

The Lopez Terminal Reservoir was constructed as part of the Lopez Dam Water Project in 1969 to comply with State Legislation (State Health and Safety Code 115825) requiring 30-day contact time for drinking water reservoirs that allow for body contact.

In 2018 the County of San Luis Obispo's Flood Control and Water Conservation District (District), hired the consultant, RIZZO, to conduct a preliminary geotechnical assessment of the Lopez Terminal Dam, a project identified by the TAC in December 2015. The preliminary results indicate the need to seismically retrofit the dam to meet the current seismic standards for dams classified as extremely high hazard. The Department of Safety of Dams (DSOD) re-classified the dam in 2017 because there is a large community downstream and in response to the Oroville Dam disaster.

To confirm the results of their study RIZZO recommended a geotechnical field investigation be conducted. Based on discussions with DSOD and the scope of the work they recommend, this investigation is estimated to cost ~\$300,000. Additionally, DSOD is recommending an interim safety measure of lowering the water level of the terminal reservoir, this could potentially prevent the water treatment plant from operating as it is now. It is highly likely that the results of the additional geotechnical investigation will confirm the need to seismically retrofit the

dam. A very preliminary estimate, based on the cost to seismically retrofit the main Lopez Dam in 2002, and considering inflation, is approximately \$10 million.

Because the cost of a seismic remediation project for the Terminal Dam is so significant, the Zone 3 Technical Advisory Committee (TAC) has requested staff to evaluate another option, the feasibility of no longer using the Terminal Reservoir. This is a feasible option because the Lopez Water Treatment Plant (WTP) was upgraded in 2007 with state-of-the-art membrane filters. Staff believes the plant now meets the State Division of Drinking Water's required water quality "credits" and qualifies for an exemption to Health and Safety Code Section 115825. This option would also require de-commissioning of the Terminal Dam such that it is no longer a seismic hazard. This could involve removal of a portion of or all of the terminal dam to reduce the amount of water stored in the reservoir.

DSOD has given the District a one-year time extension on starting the geotechnical field investigation (June 2021), this will allow the District to evaluate de-commissioning the Terminal Dam. The initial step would be to hire a consultant to conduct a Feasibility Study. The Advisory committee, during the budget process, requested that \$50,000 of District Designated reserves be earmarked for this study. The exact cost of the study is unknown at this time.

Alternatives

The following outlines the pros and cons of both options, Seismically Retrofitting the Terminal Dam versus amending legislation and de-commissioning the terminal reservoir and dam.

Seismic Remediation

Pro's

- Continued use of the terminal reservoir has the additional benefit of providing up to 7 days of emergency water
- Localized Algae Treatment location
- The Water Treatment Plant is working well using the Terminal Reservoir as the source

Con's

- Continued maintenance costs (tule removal, seismic monitoring, DSOD requirements, inspections, and water quality issues)
- Seismic Remediation is expensive
- Could require using the bypass pipeline to take water directly from the lake during the seismic project since the water level in the terminal reservoir would likely need to be lowered during the project

Cost

SEISMIC REMEDIATION		
Item	Cost	Time
Geotechnical Field Investigation	\$ 300,000	< 1 yr
Seismic Retrofits: design, construction, permitting, EAP, and Construction Management ^{1,2}	\$ 10,225,000	> 2 yrs
Total	\$ 10,525,000	

Notes:

1. Seismic remediation costs were estimated taking into consideration the cost of the (2002) Lopez Dam Seismic Remediation Project and *The Cost of Rehabilitating Our Nation's Dams* (Association of State Dam Safety Officials, 2016). The repair cost for a non-federally owned, earthen dam, greater than 50 ft. high, requiring an engineering assessment, not requiring a hazard change, and requiring remedial action, was calculated to be \$7,191,000 in 2003, which converts to \$10,224,561 in 2020 assuming a 2.09% annual inflation rate.
2. Seismic remediation costs include design development, construction, permitting, Emergency Action Plan, and construction management costs.

Legislation/Decommission Terminal Reservoir

Pro's

- Potential mitigation bank for local projects
- Long term maintenance savings
- Potential grant funding
- Lower upfront costs

Con's

- 2-3 years for legislation process
- Requires Legislative support from local congressman
- Unknown environmental impacts/mitigation/costs
- New recreation set back at Lopez lake
- Additional Water Quality testing
- Bypass pipeline - additional maintenance
- Loss of 7-day storage - the WTP would only be able to deliver about 8 hours of water before emptying the existing clearwater reservoir. At that point State Water would have to be utilized and its long-term reliability is not guaranteed.

LEGISLATION/DECOMMISSION TERMINAL RESERVOIR		
Item	Cost	Time
Legislative Process to Amend Health and Safety Code ¹	\$ 35,000	~ 2 yrs
LWTP Water Treatment Assessment: Including hiring a consultant, Ozone requirements, new equipment ²	\$ 625,000	>1 yr
Lopez Lake Water Quality Intake Assessment ³	\$ -	
Update Watershed Sanitary Survey ⁴	\$ 15,000	
Relocate log boom ⁵	\$ 50,000	
Dam Decommissioning		
Dam Removal (worst case scenario) ⁶	\$ 3,210,000	
Environmental Document EIR/EA	\$ 150,000	
Environmental Mitigation/Restoration Efforts 30-50 Acres ⁷	\$ 1,000,000	
Environmental CDFW Permit	\$ 175,000	
Environmental RWQCB Permit	\$ 175,000	
Updating Source Water Permit	\$ 5,000	
Total	\$ 5,440,000	

Notes:

1. The legislative process of amending the Health and Safety Code (HSC) will cost about \$35,000. Consultant will assist with researching the latest HSC amendments, consulting with the Department of Public Health, and drafting a recommendation letter.
2. This alternative requires a Water Treatment Assessment of the LWTP, which the County Water Quality Lab (WQL) believes could lead to the need to utilize an Ozone process to meet water quality requirements, this new process has an estimated cost \$625,000.

3. A Water Quality Intake Assessment is also required, but costs are negligible as the WQL would continue monitoring. There are no expected increases in monitoring based on current operation of choosing optimum intake.
4. Requires a Watershed Sanitary Survey ~ \$15,000. This is already a recurring budgeted item.
5. The new recreational setback might require the relocation of the log boom estimated to cost about \$50,000 costs still needs to be verified.
6. The cost to completely remove a 53 ft high by 500 ft long dam is estimated to be about \$3.2 million calculated using 30,620 per vertical foot and up to \$2777 per additional horizontal foot with a 2.13% inflation rate. Costs were estimated using the model in the 2017 Report, Estimating the Marginal Cost of Dam Removal by the University of Rhode Island.
7. Various Environmental tasks need to be considered including obtaining an Environmental Assessment, potential mitigation/restoration efforts, and permits. Without having performed a feasibility study, the cost is still unknown, but currently estimated to be about \$1.5 million assuming the mitigation/restoration costs to be around \$1 million.

Conclusion

Seismically remediating the Terminal Dam would allow us to keep the reservoir as is and continue the use of the Water Treatment Plant as it is now, which has the added benefit of supplying up to 7 days of water storage in the event that the pipeline from the main Lopez Dam to the Water Treatment Plant goes offline. This would however require the need to seismically retrofit the Terminal Dam at an estimated cost of \$10.5 million, could be less but will require further geotechnical investigation to understand the full scope of the remediation.

Decommissioning the Terminal Dam would result in the loss of 7 days of emergency water. This option potentially eliminates on-going maintenance and seismic remediation costs of keeping the terminal reservoir. However, there are many unknowns relating to environmental concerns/requirements/costs. Decommissioning the Terminal Dam and Reservoir has an estimated cost of \$5.5 million.

TAC Recommendation

TAC was presented this information at their July 8th meeting and is recommending moving forward with a Feasibility Study for De-Commissioning the Terminal Reservoir to better inform the a decision of seismically retrofitting versus de-commissioning the Terminal Dam.

LOPEZ TERMINAL DAM

Remediation/Decommissioning
Options

Zone 3 TAC
July 8, 2020



Background/Need

- 1969 built to comply with State Health and Safety Code
- Initially classified as a Moderate hazard
- DSOD Seismic Standards have been evolving
- 2017 DSOD re-classified hazard status to Extremely High
- 2018 Structural/Geotechnical Assessment
- Preliminary Results – Does not meet current seismic standards



alternatives

- SEISMIC REMEDIATION
- LEGISLATION/DECOMMISSION
TERMINAL RESERVOIR





SEISMIC REMEDICATION Process

- Geotechnical Assessment
- Project Planning
- Remediation Design Development
- Seismic Remediation Project ~\$10.5 M

SEISMIC REMEDIATION Pro's/Con's

PROS

- Allows for continued use of the reservoir which provides storage for up to 7 days of water in an emergency
- Status Quo in terms of operations

CONS

- ▶ Continued maintenance costs (tule removal, seismic monitoring, DSOD requirements, inspections, water quality issues)
- ▶ High cost of remediation



SEISMIC REMEDIATION

Item	Cost	Time
Geotechnical Field Investigation	\$ 300,000	< 1 yr
Seismic Retrofit: Including design, construction, permitting, EAP, and Construction Management	\$ 10,225,000	> 2-5 yrs
Total	\$ 10,525,000	



ALTERNATIVE



LEGISLATION/DECOMMISSION TERMINAL RESERVOIR AND DAM



www.slocounty.ca.gov

Legislation Process

- Conduct Feasibility Study
- Amend the Health and Safety Code to allow direct intake from Lopez Lake Reservoir
- Conduct LWTP Water Treatment Assessment
- Conduct Lopez Lake Water Quality Intake Assessment
- Update Watershed Sanitary Survey
- Determine new setback and relocate log boom



Decommission Terminal Dam Process

- Conduct Environmental Assessment
- Permits
 - CDFW
 - Regional Water Quality Control Board (RWQCB)
 - Source Water
- Dam Removal (Partial or full)
- Environmental Mitigation/Restoration Efforts



LEGISLATION/DECOMMISSION

Pro's

- Potential mitigation bank for local projects
- Long term maintenance savings
- Potential grant funding
- Public safety

Con's

- ▶ 2-3 years for legislation process
- ▶ Legislative support from local congressman
- ▶ Unknown environmental impacts/mitigation/costs/timing
- ▶ New recreation set back at lake
- ▶ Additional water quality testing
- ▶ Bypass pipeline – additional maintenance
- ▶ Loss of 7-day storage



LEGISLATION/DECOMMISSION TERMINAL RESERVOIR		
Item	Cost	Time
Legislative Process to Amend Health and Safety Code	\$ 35,000	~ 2 yrs
LWTP Water Treatment Assessment: hiring a consultant, Ozone requirements, new equipment.	\$ 625,000	>1 yr
Lopez Lake Water Quality Intake Assessment	\$ -	
Update Watershed Sanitary Survey	\$ 15,000	
Relocate log boom	\$ 50,000	
Dam Decommissioning		
Dam Removal	\$ 3,210,000	
Environmental EIR/EA	\$ 150,000	
Environmental Mitigation/Restoration Efforts 30-50 Acres	\$ 1,000,000	
Environmental CDFW Permit	\$ 175,000	
Environmental RWQCB Permit	\$ 175,000	
Updating Source Water Permit	\$ 5,000	
Total	\$ 5,440,000	

COSTS





TAC's Recommendation

- TAC has recommended moving forward with the feasibility study to better understand the alternative of decommissioning the Terminal Reservoir and Dam

Questions ?





COUNTY OF SAN LUIS OBISPO
Department of Public Works
John Diodati, Interim Director

July 16, 2020

TO: Flood Control Zone 3 Advisory Committee

FROM: Jill Ogren, Utilities Division Senior Engineer

SUBJECT: Zone 3 Contract Change Update

Recommendation

It is recommended that the Zone 3 Advisory Committee (AC) receive an update on the current status of the Zone 3 Contract Change discussions.

Discussion

The Zone 3 Technical Advisory Committee (TAC) has been evaluating potential changes to the existing Zone 3 Water Supply Contracts to allow for individual Zone 3 Agency year-over-year storage to provide the following benefits:

- To address unintended results of the LRRP after Zone 3 agencies lost water that had been stored in Lopez during the drought
- Provides enhanced ability for each agency to store water for possible use during future drought
- Improves flexibility of multi-year water resource planning for each agency
- Allows for enhanced conjunctive use or water supply portfolio management
- Provides incentive for agencies to preserve water in the reservoir

Background

In September 2019, District Staff provided an overview presentation to the Zone 3 AC on the current status of the Contract Change initiative. The presentation included a review of the drivers for the changes, a summary of the current contract provisions and proposed changes and a description of the steps required to complete the Contract Change initiative.

In January 2020, District Staff provided an update presentation on the Reservoir Modeling results completed to support the Contract Change Initiative to the AC. The modeling results compared anticipated future operations of the reservoir under the current contracts and the proposed contract changes. The modeling analysis was completed to support the CEQA evaluation and to help the stakeholders understand how the system would operate under the proposed changes.

Additional detail regarding these updates can be found in the Staff Reports for these meetings.

Current Status

Since the January 2020 AC Meeting, the District and Zone 3 Agency Staff have been working to develop the specific contract language changes required to achieve the goals and objectives of the Contract Change initiative. Starting in February 2020, the Zone 3 TAC formed a subcommittee to work through the process of modifying the contracts to include the desired changes. The subcommittee has completed their review and prepared specific contract language edits for review by the Zone 3 TAC and District Legal Counsel.

Additionally, the proposed contract changes have been provided to District Environmental team for review and to initiate the CEQA process. The Environmental team is in the process of preparing a draft Project Description and Notice of Preparation for the Contract Change initiative.

Next Steps

It is anticipated that the next steps for the AC regarding the Contract Change initiative will be to review the proposed contract edits and the draft Project Description at the September Advisory Committee Meeting. The goal will be to obtain input from the Advisory Committee on the proposed changes and a recommendation to formally initiate the CEQA process, which will include District Environmental Staff publicly releasing the Notice of Preparation and Project Description to local, regional and statewide stakeholders and regulatory agencies and preparing the appropriate CEQA Document (e.g. Negative Declaration, Mitigate Negative Declaration, etc.).



ZONE 3 Lopez Project

San Luis Obispo County Flood Control and Water Conservation District

TO: Zone 3 Advisory Committee

FROM: David Spiegel, PE

DATE: July 16, 2020

SUBJECT: Zone 3 Projects Update

Project Updates:

- Spillway Assessment
 - DSOD responded to the assessment by GEI. The District is preparing comments for resubmittal
 - DSOD agreed with the condition assessment and the recommendations in the report
- Structural Assessment of Terminal Reservoir Dam
 - The Department of Safety of Dams has given the District one year to determine the feasibility of remediating the dam or decommissioning the terminal reservoir
 - A cost benefit assessment has been prepared by the District
- Fault Zone Risk Assessment for Dam Left Abutment (No Change)
 - Received one quote at \$39,000
 - Additional quotes needed
- Lopez WTP Safety Upgrades (No Change)
 - Determining options for membrane building safety upgrades
 - Consultant has reviewed the facility and is working on a proposal
- Fire Tank Repairs
 - Fire tank is being evaluated for replacement
- Cathodic Protection Survey
 - Developing scope/estimates/quotes for repairs
- Equipment Storage Building
 - Potential new site is being investigated, previous two sites had multiple challenges for construction
 - Quotes are being solicited for structural design of new building site



ZONE 3 Lopez Project

San Luis Obispo County Flood Control and Water Conservation District

Upcoming Projects:

- Replacement of Hatch Turbidimeter
- EQ Pump Upgrade
- CO2 Injection System
- Improved Boat Access

Completed Projects

- Repairs to Terminal Dam Spillway
- Lopez Terminal Dam Monument Survey
- Domestic Tank Repairs