



ZONE 3 ADVISORY COMMITTEE

San Luis Obispo County Flood Control and Water Conservation District

AGENDA

Thursday, November 15, 2018 6:30 P.M.
City of Arroyo Grande Council Chambers
300 East Branch Street, Arroyo Grande, California 93420

- I. CALL TO ORDER AND ROLL CALL
- II. PUBLIC COMMENT
This is an opportunity for members of the public to address the Committee on items that are not on the Agenda
- III. APPROVAL OF MEETING MINUTES OF SEPTEMBER 20, 2018
- IV. APPROVAL OF 2019 MEETING SCHEDULE
- V. OPERATIONS REPORT
 - A. Water Plant Operations, Reservoir Storage, Downstream Releases
 - B. Projected Reservoir Levels
 - C. September & October Monthly Operations Report
- VI. INFORMATION ITEMS
 - A. Climate Update
 - B. Lopez Spillway Assessment Update
 - C. 1st Quarter Budget Status
 - D. Cloud Seeding Update
 - E. Low Reservoir Response Plan Revisions Update
- VII. CAPITAL PROJECTS UPDATE
 - A. Bi-Monthly Update
- VIII. ACTION ITEMS (No Subsequent Board of Supervisors Action Required)
- IX. ACTION ITEMS (Board of Supervisors Action is Subsequently Required)
- X. FUTURE AGENDA ITEMS
 - A. Contract Changes
 - B. Cloud Seeding
 - C. Revisions to the Low Reservoir Response Plan (LRRP)
- XI. COMMITTEE MEMBER COMMENTS

Next Regular Meeting is Tentatively Scheduled for
January 17, 2019 at 6:30 PM at City of Grover Beach Council Chambers
Agendas accessible online at SLOCountyWater.org

**SAN LUIS OBISPO COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
ZONE 3 ADVISORY COMMITTEE
DRAFT MEETING MINUTES
THURSDAY SEPTEMBER 20, 2018**

- I. **Call to Order and Roll Call** -- The Zone 3 Advisory Committee Meeting was called to order at 6:30 PM at the Grover Beach City Hall by Committee Chair and Member at Large Representative, Jim Garing.

County Public Works Utilities Division Program Manager and Secretary to the Advisory Committee, Andrea Montes, called roll. Members in attendance were:

- Brad Hagemann, Avila Beach Community Services District
- Kristen Barneich, City of Arroyo Grande
- Marcia Guthrie, City of Pismo Beach
- Vard Ikeda, Agriculture Representative
- Jeff Lee, City of Grover Beach
- Jim Garing, Member at Large
- Shirley Gibson, Oceano Community Services District

- II. **Public Comment** -- Ms. Montes introduced Colt Esenwein, the County Department of Public Works Director hired in April 2018. Mr. Esenwein indicated he's worked with Santa Cruz County as Assistant Director; Stanislaus County; City of Stockton; and Navy as a Civilian and Nuclear Sub Reactor Operator. He shared that he values integrity and teamwork.

Chairman Garing introduced Shirley Gibson, who is the new Oceano Community Services District representative.

- III. **Approval of Meeting Minutes of July 19, 2018** -- Ms. Montes noted that Member John King, who attended the July 19 meeting was representing County Service Area 12, rather than Avila Beach Community Services District as referenced in the July 19 meeting minutes. Member Barneich motioned approval; Member Lee second approval of the minutes, as amended. Member Garing abstained as he was absent from the July 19 meeting. Quorum was met, motion passed.

IV. **Operations Report**

A. Water Plant Operations, Reservoir Storage, Downstream Releases -- Ms. Montes indicated: Lopez Lake elevation was 483.66 feet; storage was 21,501 acre-feet (AF), which is 44% capacity; rainfall to date, since July 1, 2018, was 0 inches; plant production was 5.0 million gallons per day (MGD); downstream release was 4.0 MGD; and State Water was 0.70 MGD.

No public comment was given.

B. Projected Reservoir Levels Jill Ogren, Hydraulic Engineer with the Public Works Utilities Division, indicated Zone 3 water customers are using more water than historically used. This factor, combined with no rainfall, indicates the Lopez Reservoir

level could be down to 20,000 AF in November or December--low enough to re-enter into the Low Reservoir Response Plan (LRRP).

No public comment was given.

C. July & August Monthly Operations Report -- Ms. Ogren indicated the total water deliveries, including State Water, for the month of July was 521 AF. The total water deliveries for the month of August was 514 AF. According to Ms. Ogren, Flood Control Zone 3 Agencies are still using "Entitlement" water, which is used first. "Surplus" water is used second. Ms. Ogren stated she does not expect Agencies to use "Surplus" water until January 2019.

No public comment was given.

V. Information Items

A. Climate Update -- Ms. Montes indicated that according to the United States Drought Monitor, the County continues to experience abnormally dry, moderate drought and severe drought conditions as it has since March of this year. According to National Oceanic and Atmospheric Administration, there was a 70 to 80% chance of above average temperatures for September when compared to the month of September in prior years. There were equal chances of below average, average and above average rainfall forecasted for September when compared to September in prior years.

No public comment was given.

B. Lopez Spillway Assessment Update -- Ms. Ogren gave an update of the Department of Water Resources (DWRs') Division Safety of Dams' (DSODs') required assessment of the Lopez Spillway, in response to the Oroville Dam failure.

Ms. Ogren stated the assessment bid was awarded to GEI Consultants, who began the physical assessment of the spillway in August and were preparing the report to be completed by the end of December 2018.

C. Low Reservoir Response Plan Update -- Ms. Ogren indicated the Zone 3 Technical Advisory Committee (TAC) comprised of technical operations staff from Zone 3 Agencies, decided to pursue revisions the LRRP. A consultant was hired to develop proposed revisions to the LRRP which the TAC has approved. County Counsel reviewed the proposed revisions and directed staff to create a water supply contract amendment to revise the LRRP. Meanwhile, the previous LRRP is in place and can be enacted when the Lopez Reservoir hits 20,000 AF and/or when the County Board of Supervisors (BOS) declares a local emergency. Discussion occurred regarding water storage models. Ms. Ogren indicated the TAC is discussing storage model options.

D. 4th Quarter Budget Status -- County Public Works Finance Division and Flood Control Zone 3 Accountant, Kristi Smith, distributed the 4th Quarter Fiscal Year 2017/18 (FY 17/18) budget report for Flood Control Zone 3. Ms. Smith indicated expenses through June 30, 2018 (the end of FY 17/18) totaled 84% of the annual FY budget, leaving a budget of approximately \$895,000. Of this amount, over \$700,000 will be carried into FY 2018/19 for ongoing efforts and projects.

Ms. Smith reviewed graphs and indicated at the end of the FY:

- Routine Operations and Maintenance (O&M) costs totaled 106% of the OM budget, resulting in a deficit of approximately \$241,000 due to labor costs associated with Lopez Water Treatment Plant staff who were relieved of wastewater duties and were able to spend more working hours focused on drinking water duties, in addition to the repair of a standby generator;
- Non-Routine O&M costs created a deficit of \$97,000 due to unbudgeted work efforts, with \$454,000 to be carried forward to FY 2018/19 for continued work with the Lopez Water Rights/Habit Conservation Plan (HCP) and pigging projects; and
- Capital Outlay costs totaled 35% of the budget, with a balance of \$516,135 due to completed project savings, and approximately \$263,000 carried forward to FY 2018/19.

Ms. Smith indicated all Zone 3 Agencies were current on their payments. The estimated billings for FY 2017/18 totaled \$322,628 which will be allocated and billed to the agencies, mailed with the 2nd installment of the FY 2018/19 billings due January 1, 2019.

No public comment was given.

D. Cloud Seeding Update -- Mr. Esenwein provided a brief update of the cloud seeding program. He indicated Public Works Staff spoke with District Supervisors and a date was set to present the cloud seeding program to the BOS and members of the public; however, the item was pulled in order to gather more information, support and funding for the item. He further indicated the City of San Luis Obispo is not interested in the program, leaving only the Zone 3 water contractors interested. Mr. Esenwein asked for direction from the Advisory Committee Members on further exploring the program and moving forward with it. After some discussion, the Committee advised Mr. Esenwein to move forward with gathering information related to the program costs directed towards Zone 3 Agencies only and bringing the information back to the Committee.

VI. Capital Projects Update

A. Bi-Monthly Update -- Ms. Ogren presented a brief update of the Capital Projects listed below.

- **Spillway Assessment** -- Due to be completed February 2019 in accordance with approved DSODs' work plan.
- **Lopez Dam & Terminal Dam Hazard Classification** -- The draft inundation maps for the both dams were submitted to the DSOD for approval. Completed Emergency Action Plans will be submitted once the inundation maps are approved.
- **Structural Assessment of Terminal Reservoir Dam** -- Preliminary findings suggested additional geotechnical investigation needs to be completed to understand the soil below the terminal reservoir. Quotes were being gathered.
- **Fault Zone Assessment Dam Left Abutment** -- Erosion at the left abutment occurred and was assessed. Results showed insignificant erosion to dam; however, erosion will be addressed.
- **Equipment Storage at Lopez Water Treatment Plant** -- Project is on hold due to the investigation of terminal dam, where the storage unit might be placed.

- **Lopez Water Treatment Plant Safety Upgrades** -- Upgrades are ongoing and in response to a 2016 safety assessment at the Plant.
- **Domestic and Fire Flow Tanks Repair at Lopez Water Treatment Plant** -- Options being explored to replace fire tanks.
- **Rebuild Membrane Feed Pumps** -- One pump per year is being replaced as part of regular maintenance and repairs of aging equipment.

Ms. Ogren reviewed upcoming projects listed below.

- **Cathodic Protection Survey** -- May or may not result in future work to be completed.
- **Lopez Water Treatment Plant Leach Field Repair/Replacement**
- **Ammonia Analyzer** -- One aging ammonia analyzer (equipment) was replaced, and another will be replaced as part of regular maintenance and repairs of aging equipment.
- **Water Treatment Alternatives Study -- Taste and Odor**
- **Improved Boat Access**

Existing Bypass Pipeline Condition Assessment -- Investigating possibility of using an existing backup pipeline to deliver State Water.

No public comment was given.

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

A. Strategy for Use of District Designated Reserves -- Ms. Smith reminded the Committee of the three (3) Flood Control Zone 3 reserve funds: 1.) Contractor Funded Reserves (financed and used by Zone 3 agencies to stabilize billings in years with higher capital needs); 2.) District Funded Operating Reserves (held at approximately 50% of Routine O&M); and 3.) District Funded Designated Reserves (set aside for significant maintenance and operational costs).

Ms. Smith indicated \$516,135 remained of the FY 2017-18 District Funded Designated Reserves following the completion of the Lopez Water Treatment Plant PH Suppression Project. In May, the Committee indicated using these savings to replace reserves and offset the 2017-18 final bill to Zone 3 agencies.

She presented the Committee two (2) options:

Option 1 -- replace the entire \$48,000 spent from the Contractor Reserves back to Contractor Reserves; replace \$280,500 to District Designated Reserves and partially offset the FY 2017-18 final bill to Zone 3 Agencies, bringing the total bill to \$135,000, to be spread across the Cities of Arroyo Grande, Grover Beach, Pismo Beach, County Service Area 12, and Oceano Community Services District.

Option 2 -- replace the entire \$48,000 spent from the Contractor Reserves back to Contractor Reserves; replace \$145,500 to District Designated Reserves and fully offset the FY 2017-18 final bill to Zone 3 agencies, resulting in the Zone 3 Agencies not receiving a bill.

According to Ms. Smith, the TAC recommended Option 2. She indicated the Committee could choose to allocate the District Funded Designated Reserves

however they'd like. Their decision would not require BOS approval since the BOS had already approved the Flood Control Zone 3 District Funded Designated Reserves budget.

If Option 1 was chosen, the total earmarked money in District Funded Designated Reserves would be \$791,447.

If Option 2 was chosen, the total earmarked money in District Funded Designated Reserves would be \$656,447.

The Committee discussed the unknowns of the DSODs' assessment of the Lopez Dam Spillway and potential funding needed for cloud seeding. After further discussion, the Committee members agreed to email Ms. Smith within one (1) week with their choice of Option 1 or Option 2, majority rule.

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

None discussed

IX. Future Agenda Items -- The Committee agreed to remove the "Lopez Lake Safe Yield" item and replace with "Contract Changes". The items below will remain:

- **Cloud Seeding**
- **Revisions to the Low Reservoir Response Plan (LRRP)**

X. Committee Member Comments -- Member Lee mentioned both the Grover Beach Finance Manager, as well as the City Clerk will be retiring. Member Gibson mentioned the Oceano Community Services District will soon have three (3) new board members.

Meeting Adjourned at 7:59 PM

Respectfully Submitted,

Andrea M Montes
County of San Luis Obispo Public Works Department

**SAN LUIS OBISPO COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT
ZONE 3 ADVISORY AND TECHNICAL ADVISORY COMMITTEES**

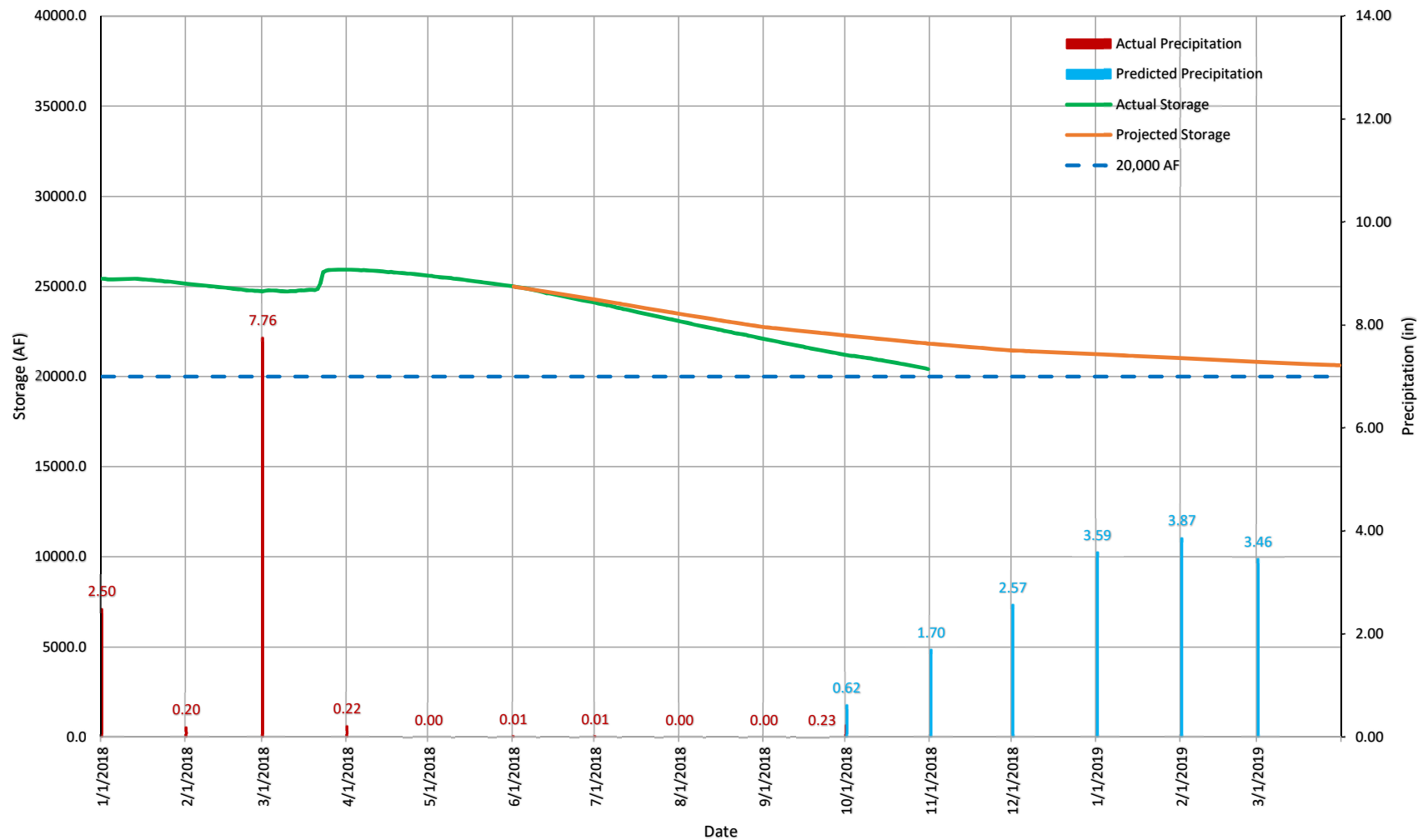
2019 MEETING SCHEDULE

Date	Group	Location¹	Purpose
Jan 9, 2019	TAC ²	Arroyo Grande, 9:00 AM	Discuss proposed FY19/20 budget
Jan 17, 2019	Advisory Committee	Grover Beach, 6:30 PM	Distribute proposed FY19/20 budget
Feb 13, 2019	TAC	Arroyo Grande, 9:00 AM	Distribute proposed FY 19/20 budget
Mar 13, 2019	TAC	Arroyo Grande, 9:00 AM	Budget discussion/recommendation; present estimated surplus water quantity available in 19/20
Mar 21, 2019	Advisory Committee	Arroyo Grande, 6:30 PM	Present 2 nd quarter FY 18/19 budget status; present proposed FY19/20 budget; endorse FY19/20 budget; present estimated surplus water quantity available in WY19/20
Apr 10, 2019	TAC	Arroyo Grande, 9:00 AM	Present actual surplus water quantity available in WY 19/20
May 8, 2019	TAC	Arroyo Grande, 9:00 AM	
May 16, 2019	Advisory Committee	Pismo Beach, 6:30 PM	3 rd Quarter Budget Status
Jun 12, 2019	TAC	Arroyo Grande, 9:00 AM	
Jul 10, 2019	TAC	Arroyo Grande, 9:00 AM	
Jul 18, 2019	Advisory Committee	Oceano CSD, 6:30 PM	Officer Rotations
Aug 14, 2019	TAC	Arroyo Grande, 9:00AM	
Sep 11, 2019	TAC	Arroyo Grande, 9:00 AM	Request Water Delivery Schedule - due Oct 1
Sep 19, 2019	Advisory Committee	Grover Beach, 6:30 PM	4 th Quarter Budget Status
Oct 9, 2019	TAC	Arroyo Grande, 9:00 AM	
Nov 13, 2019	TAC	Arroyo Grande, 9:00 AM	Discuss proposed CIP projects for next FY
Nov 14, 2019	Advisory Committee	Arroyo Grande, 6:30 PM	1 st Quarter Budget Status
Dec 11, 2019	TAC	Arroyo Grande, 9:00 AM	Distribute Water Delivery Schedule by Jan 1

¹ All locations noted are at City Hall or Oceano Community Services District Board Chambers unless otherwise noted

² TAC - Technical Advisory Committee

LOPEZ RESERVOIR STORAGE PROJECTION



Note:

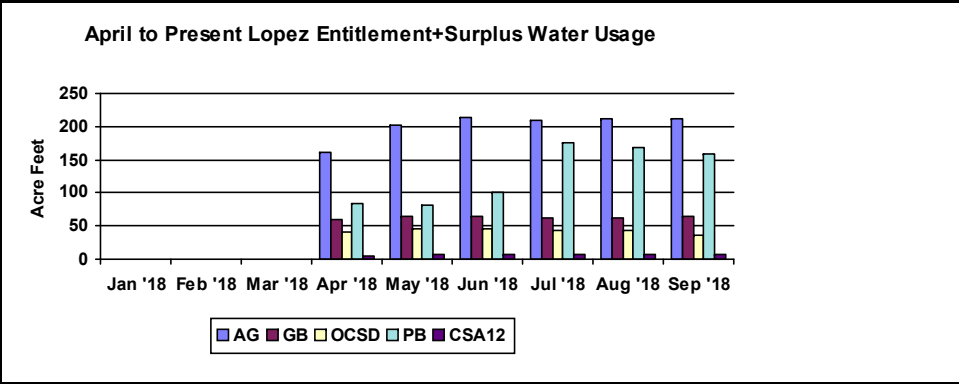
- Storage projection is based on predicted rainfall from longrangeweather.com, historic inflow based on predicted rainfall, 18-19 downstream release requests, and municipal usage.
- Municipal Usage is based on 2010-2017 average monthly deliveries.

San Luis Obispo County Flood Control and Water District

Zone 3 - Lopez Project - Monthly Operations Report

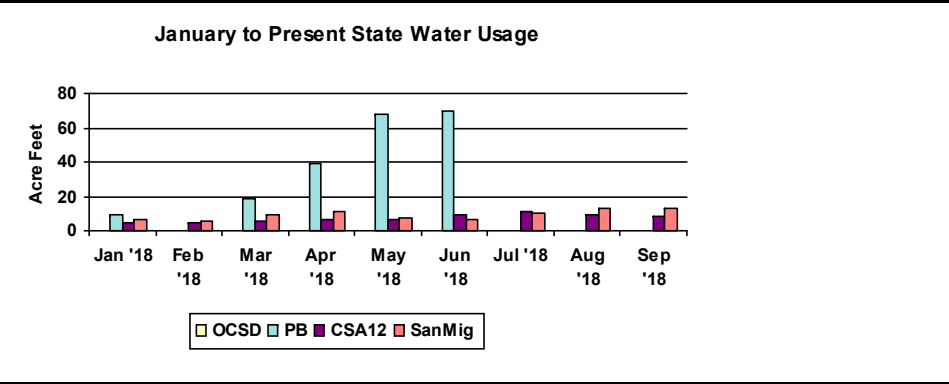
September, 2018

Contractor	Lopez Water Deliveries											State Water Deliveries						Total Water Deliveries This Month					
	Entl.	Surplus	Total	This Month				April to Present				Annual Request	This Month				January to Present						
				Entitlement		Surplus		Entitlement		Surplus			Usage	% of Annual Request	SWP Deliveries	Change in Storage	Usage		% of Annual Request	SWP Deliveries			
				Usage	%	Usage	%	Usage	%	Usage	%												
Arroyo Grande	2290	564.00	2854.00	212.71	9.3%	0.00	0.0%	1209.04	52.8%	0.00	0.0%	1209.04	42.4%								212.71		
Oceano CSD	303	75.00	378.00	36.14	11.9%	0.00	0.0%	254.70	84.1%	0.00	0.0%	254.70	67.4%	0	0.00	0.0%						36.14	
Grover Beach	800	197.00	997.00	64.53	8.1%	0.00	0.0%	378.17	47.3%	0.00	0.0%	378.17	37.9%									64.53	
Pismo Beach	892	220.00	1112.00	159.79	17.9%	0.00	0.0%	769.03	86.2%	0.00	0.0%	769.03	69.2%	205	0.00	0.0%							159.79
CSA 12	245	60.00	305.00	7.05	2.9%	0.00	0.0%	41.49	16.9%	0.00	0.0%	41.49	13.6%	83.96	8.57	10.2%							15.62
San Miguelito														120	13.36	11.1%							13.36
Total	4530	1116.00	5646.00	480.22	10.6%	0.00	0.0%	2652.43	58.6%	0.00	0.0%	2652.43	47.0%	408.96	21.93	5.4%	65	43.07	354.49	86.7%	521.00	502.15	
											Last Month Stored State Water		1253.19			This Month Stored State Water		1296.26					



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

Lopez Dam Operations	This Month	Year to Date		
Lake Elevation (full at 522.37 feet)	483.07		Difference (feet)	-39.30
Storage (full at 49200 acre feet)	21200		% Full	43.1%
Rainfall	0	0.00		
Downstream Release (4200 acre feet/year)	382.38	2160.19		
Spillage (acre feet)	0	0.00		



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

Comments: Surplus water shown is as designated per BOS May 15, 2018 Declaration of Surplus Water.

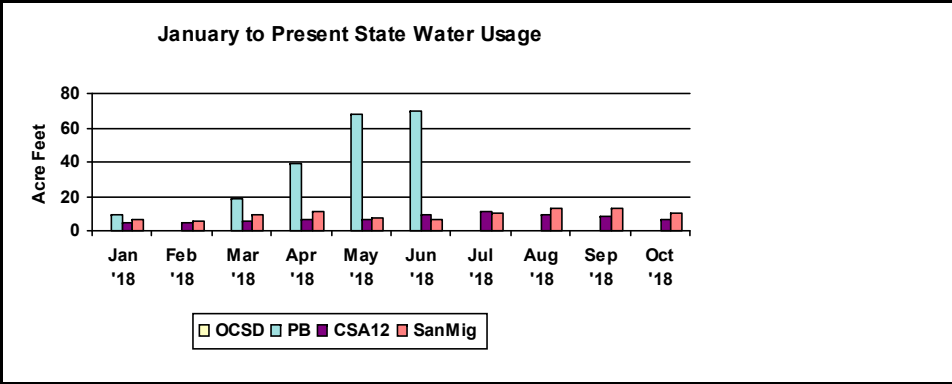
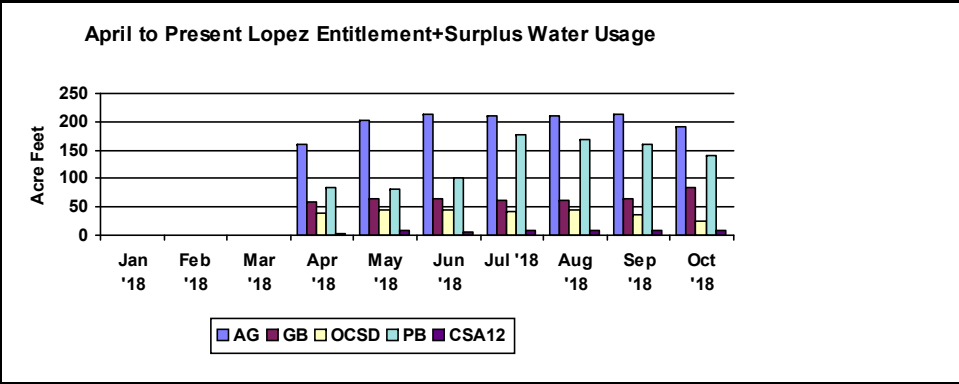
1) Oceano supplied State Water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 2.23 AF delivered to Canyon Crest was added to Oceano's State Water usage this month and 2.23 AF was subtracted from Arroyo Grande's usage this month.

San Luis Obispo County Flood Control and Water District

Zone 3 - Lopez Project - Monthly Operations Report

October, 2018

Contractor	Lopez Water Deliveries											State Water Deliveries						Total Water Deliveries This Month				
	Entl.	Surplus	Total	This Month				April to Present				Annual Request	This Month				January to Present					
				Entitlement		Surplus		Entitlement		Surplus			Usage	% of Annual Request	SWP Deliveries	Change in Storage	Usage		% of Annual Request	SWP Deliveries		
				Usage	%	Usage	%	Usage	%	Usage	%											
Arroyo Grande	2290	564.00	2854.00	189.62	8.3%	0.00	0.0%	1398.66	61.1%	0.00	0.0%	1398.66	49.0%								189.62	
Oceano CSD	303	75.00	378.00	25.43	8.4%	0.00	0.0%	280.13	92.5%	0.00	0.0%	280.13	74.1%	0	0.00	0.0%						25.43
Grover Beach	800	197.00	997.00	85.46	10.7%	0.00	0.0%	463.63	58.0%	0.00	0.0%	463.63	46.5%									85.46
Pismo Beach	892	220.00	1112.00	141.83	15.9%	0.00	0.0%	910.86	102.1%	0.00	0.0%	910.86	81.9%	205	0.00	0.0%						141.83
CSA 12	245	60.00	305.00	7.92	3.2%	0.00	0.0%	49.41	20.2%	0.00	0.0%	49.41	16.2%	83.96	6.20	7.4%						14.12
San Miguelito														120	10.51	8.8%						10.51
Total	4530	1116.00	5646.00	450.26	9.9%	0.00	0.0%	3102.69	68.5%	0.00	0.0%	3102.69	55.0%	408.96	16.71	4.1%	61	44.29	371.20	90.8%	582.00	466.97
											Last Month Stored State Water			1296.26			This Month Stored State Water		1340.55			



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)	481.5		Difference (feet)	-40.87
Storage (full at 49200 acre feet)	20417		% Full	41.5%
Rainfall	0.67	0.67		
Downstream Release (4200 acre feet/year)	392.82	2553.01		
Spillage (acre feet)	0	0.00		

Comments: Surplus water shown is as designated per BOS May 15, 2018 Declaration of Surplus Water.

1) Oceano supplied State Water to Canyon Crest via Arroyo Grande's Edna turn out. A total of 2.05 AF delivered to Canyon Crest was added to Oceano's State Water usage this month and 2.05 AF was subtracted from Arroyo Grande's usage this month.

U.S. DROUGHT MONITOR

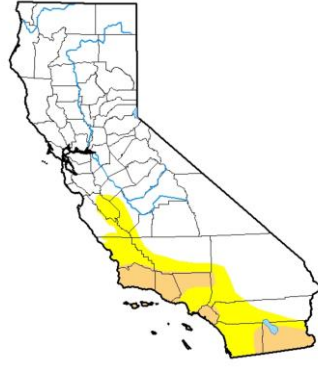
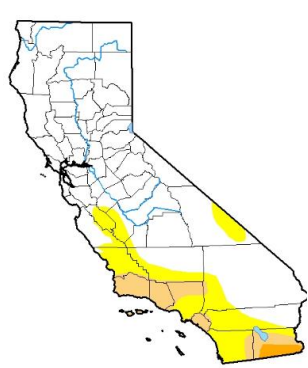
May 2017

July 2017

September 2017

November 2017

January 2018



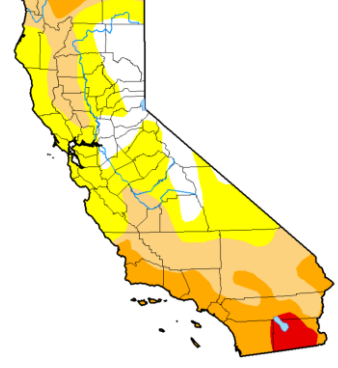
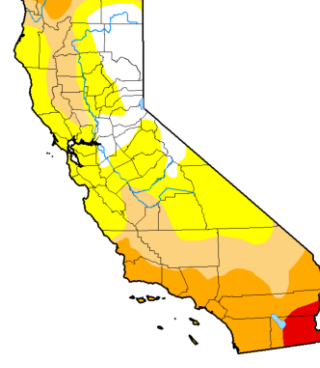
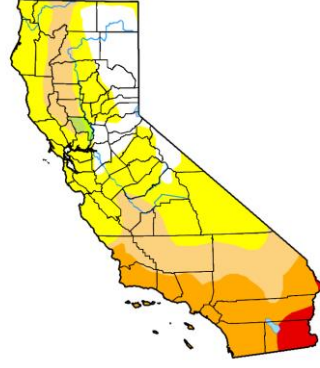
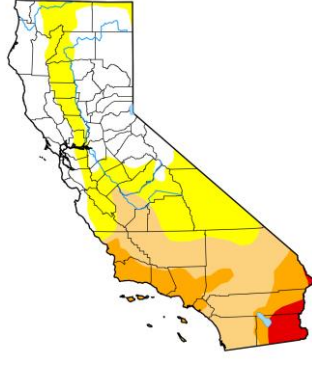
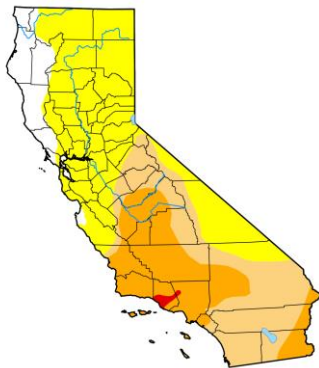
March 2018

May 2018




July 2018



September 2018

November 2018



Intensity:

 D0 - Abnormally Dry
 D1 - Moderate Drought
 D2 - Severe Drought

 D3 - Extreme Drought
 D4 - Exceptional Drought

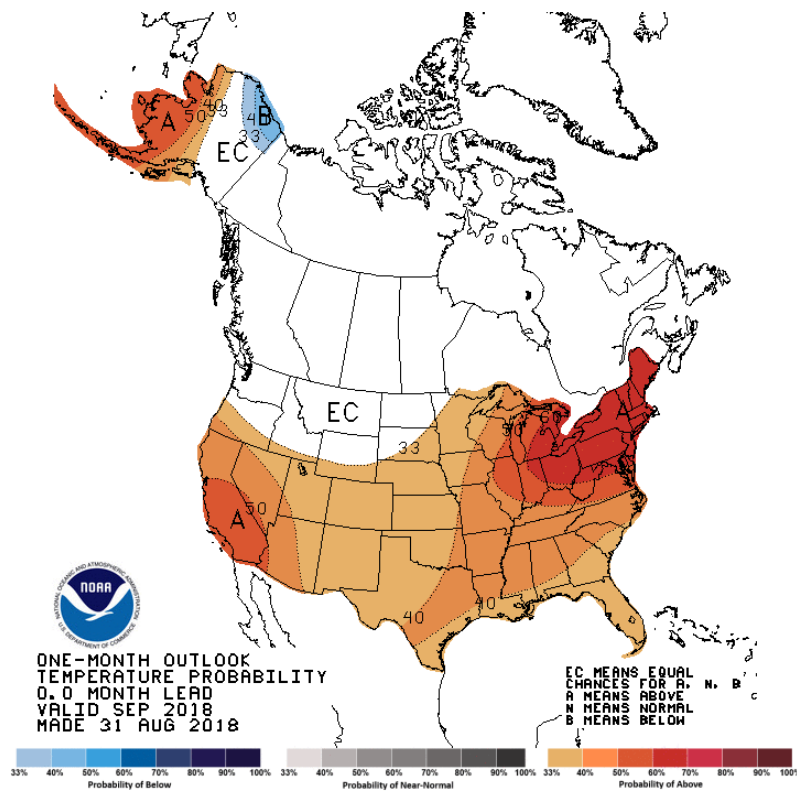
Permission to reproduce the map

If you reproduce the U.S. Drought Monitor map, please use this wording:

The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of NDMC-UNL.

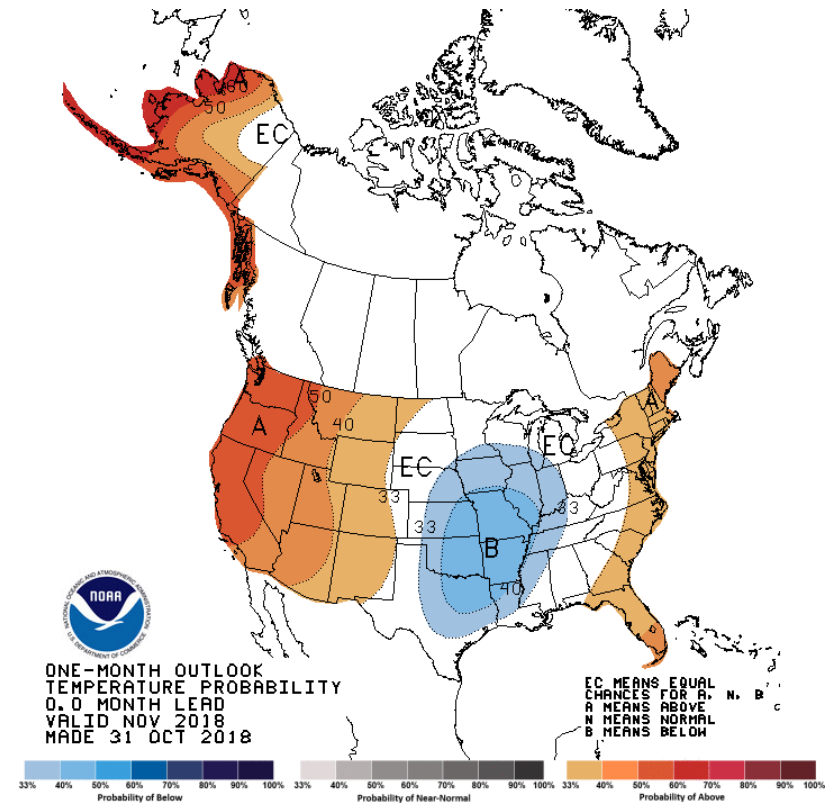
NOAA TEMPERATURE FORECAST

September



September Meeting

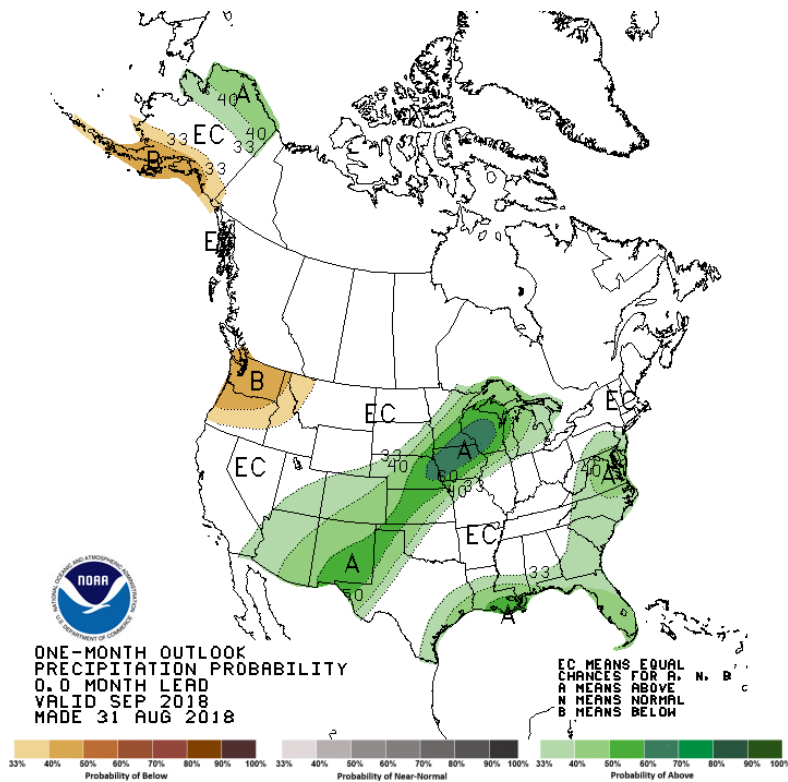
November



November Meeting

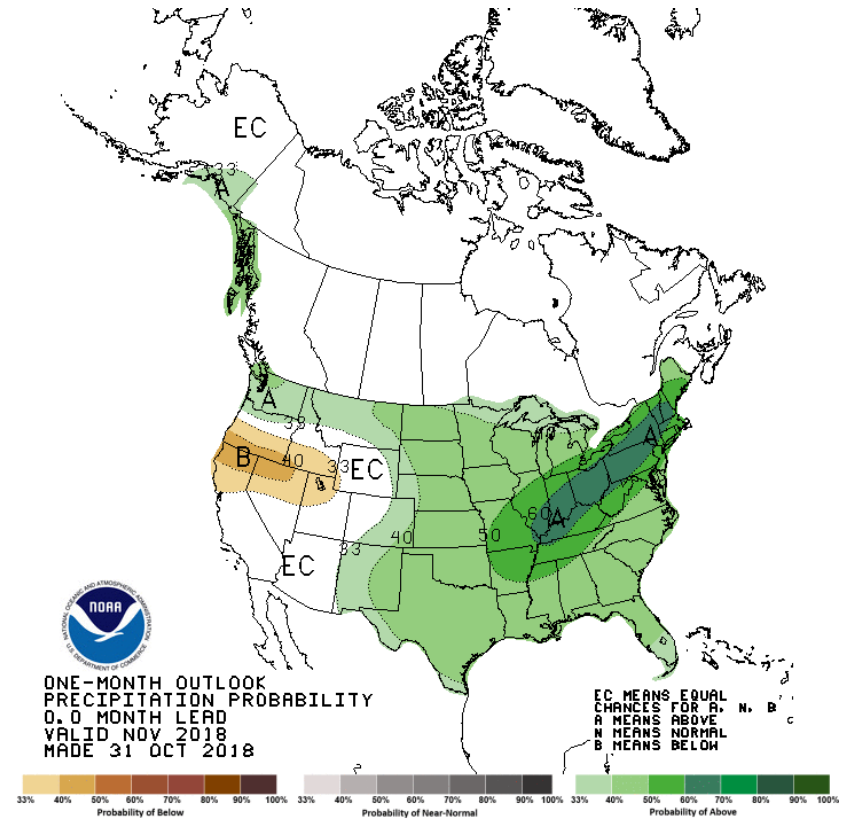
NOAA PRECIPITATION FORECAST

September



September Meeting

November



November Meeting



November 15, 2018

MEMORANDUM

TO: Flood Control Zone 3 Advisory Committee

FROM: Kristi Smith, Accountant

SUBJECT: Flood Control Zone 3, First Quarter Budget Status, Fiscal Year 2018-19

Recommendation

The item to be received and filed.

Summary

Attached please find the comparison of the budget to actual expenses for the first quarter of fiscal year 2018-19. The \$5.4M budget is broken into three categories: Routine Operations & Maintenance, Non-Routine Operations & Maintenance, and Capital Outlay. At the end of the first quarter, 16% of the annual budget has been expended.

Total Budget	Expenses through Q1	Balance Available	% of Budget Expended
5,476,793	883,433	4,593,360	16%

Routine O&M: This category has a budget of just under \$4M dollars. At the end of the first quarter, 21% of the annual budget has been expended, resulting in approximately \$3.1M available for the remainder of the year. Expenses in this category are on target with budgeted levels.

Total Budget	Expenses through Q1	Balance Available	% of Budget Expended
3,961,768	845,401	3,116,367	21%

Non-Routine O&M: This category has a budget of \$762,377. At the end of the first quarter, 5% of the annual budget has been expended, resulting in an available balance of \$724,452 for the remainder of the year. Roughly half of the available balance is budget that has been carried forward from prior years for the Lopez Water Rights/Habitat Conservation Plan (HCP) and Pigging.

Total Budget	Expenses through Q1	Balance Available	% of Budget Expended
762,377	37,925	724,452	5%

Capital Outlay: This category has a budget of \$752,648. At the end of the first quarter, expenses were essentially 0% of the annual budget, resulting in \$752,541 available for the remainder of the year. Unspent budget from the prior year has been carried forward for many projects and accounts for roughly a third of the available balance.

Total Budget	Expenses through Q1	Balance Available	% of Budget Expended
752,648	107	752,541	0%

Other Agency Involvement/Impact

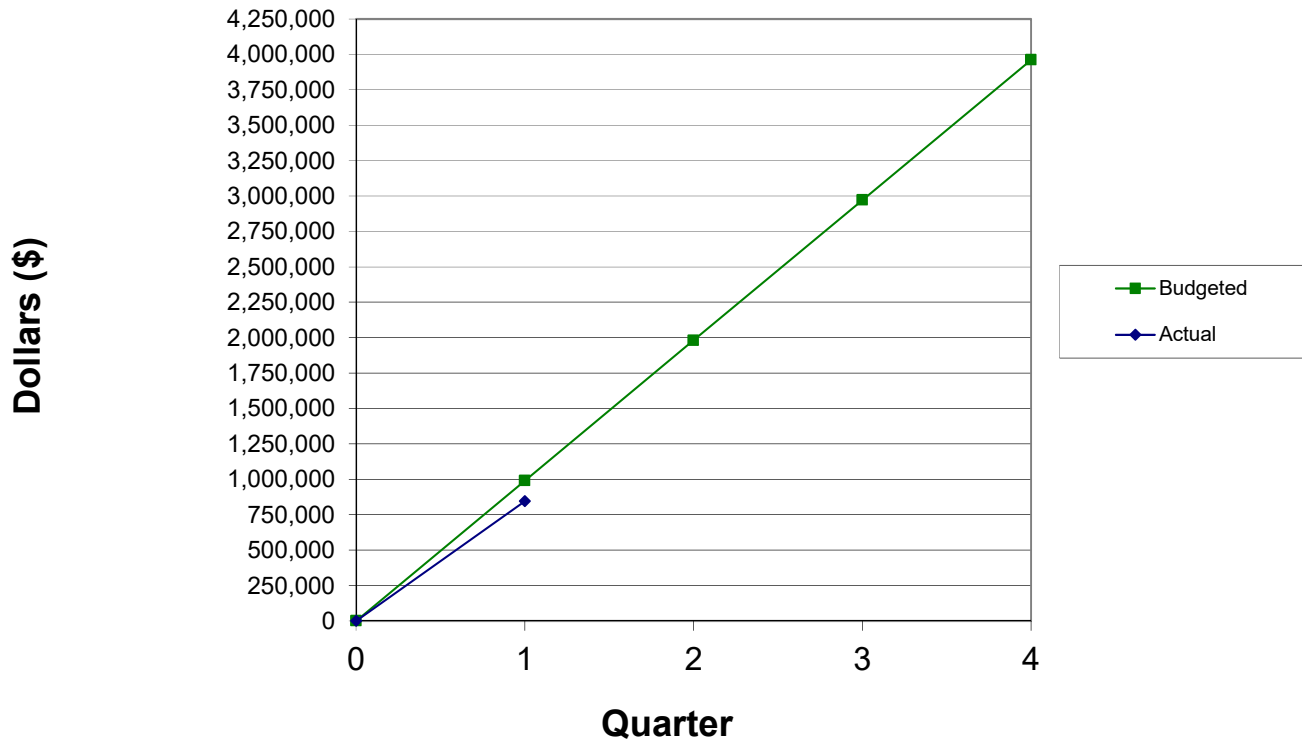
The agencies involved are: City of Arroyo Grande, City of Grover Beach, City of Pismo Beach, Oceano Community Services District, and County Service Area 12. Subcontractors of CSA 12 include Port San Luis Harbor District and Avila Beach Community Services District.

Financial Consideration

All agencies are current on their payments. Earlier this month, the revised billings for FY 2017-18 were mailed along with the 2nd installment of the FY 2018-19 billings. Payment are due January 1, 2019.

Zone 3 Budget Status
1st Quarter FY18/19

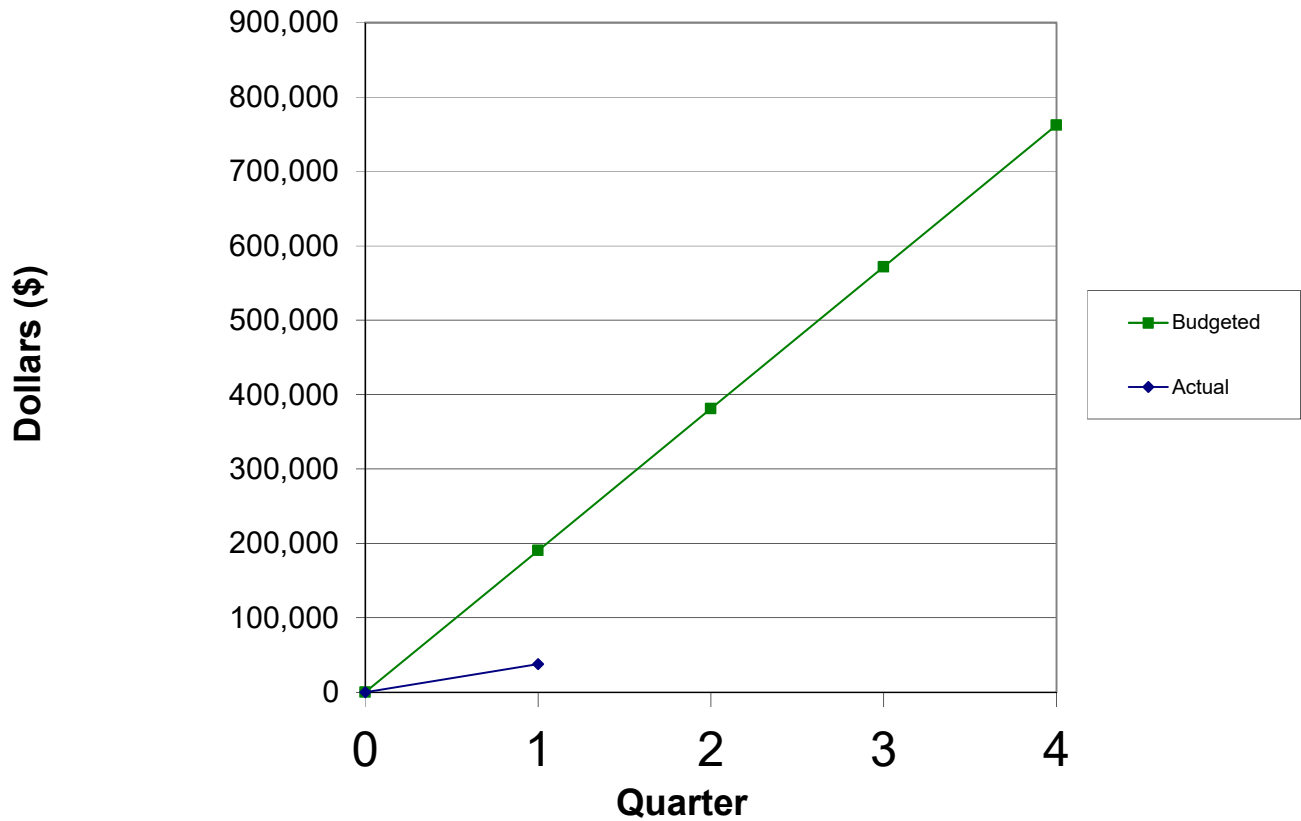
Routine Operation and Maintenance



O&M Routine Category	Total Budget	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Total Exp as % of Budget	Total Balance Avail
Labor Hours	24,926	4,902	-	-	-	4,902	20%	
Chemicals - Water Treatment Plant	\$ 232,174	\$ 104,864	\$ -	\$ -	\$ -	\$ 104,864	45%	\$ 127,311
Water Quality Testing - Treatment Plant	56,120	12,439	-	-	-	12,439	22%	43,681
Electricity - Water Treatment Plant	128,898	83,921	-	-	-	83,921	65%	44,977
All Other Costs - Water Treatment Plant	2,019,164	388,885	-	-	-	388,885	19%	1,630,279
Terminal	156,872	37,295	-	-	-	37,295	24%	119,577
Main Dam	301,828	60,538	-	-	-	60,538	20%	241,290
Other	1,066,712	157,459	-	-	-	157,459	15%	909,253
Expenses		845,401	-	-	-	845,401	21%	3,116,367
Budget	3,961,768	990,442	990,442	990,442	990,442	3,961,772		
Variance (over)/under		145,041	990,442	990,442	990,442	3,116,367		
% Variance		15%	100%	100%	100%			

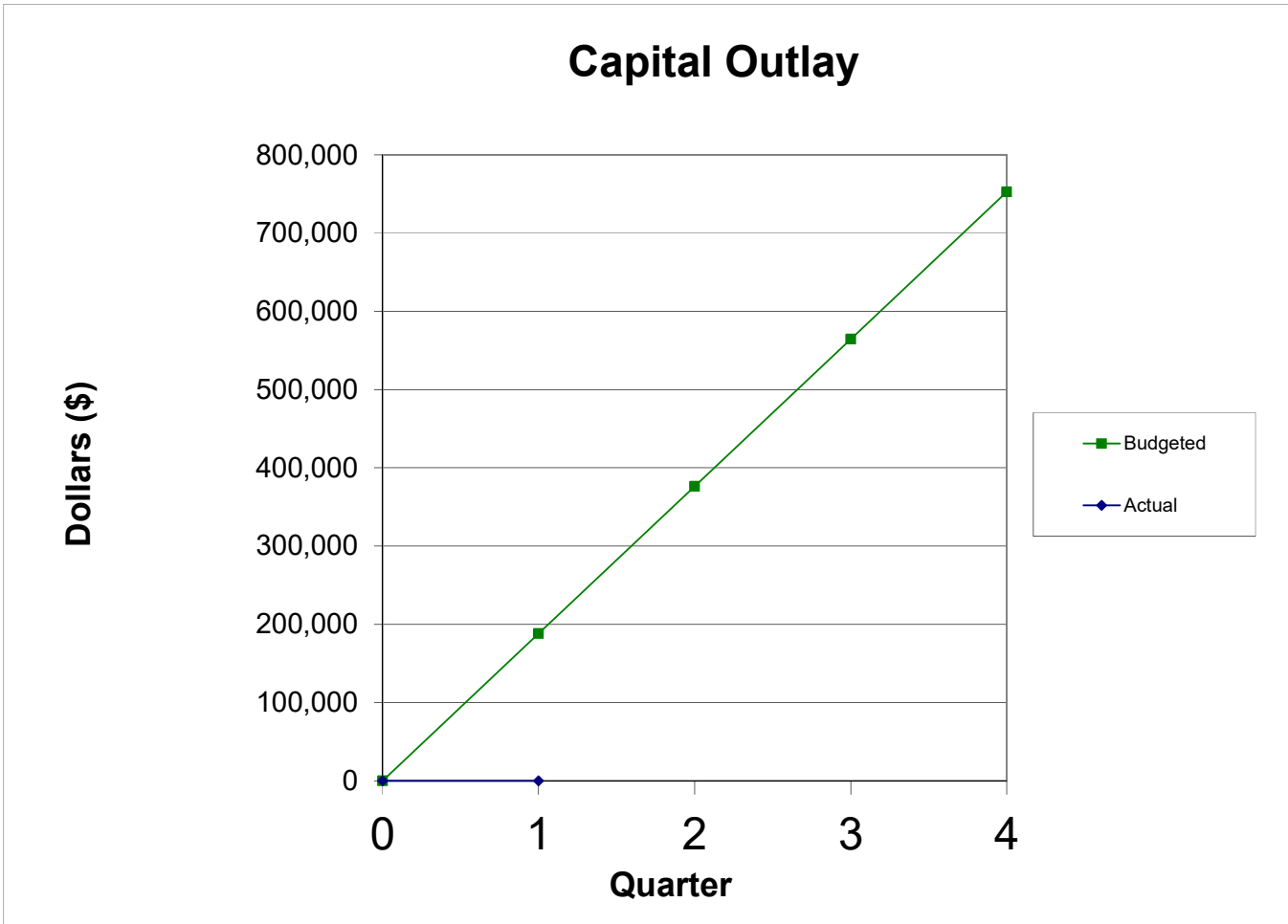
Zone 3 Budget Status
1st Quarter FY18/19

Non-Routine Operation and Maintenance



O&M Non Routine Category	Total Budget	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Total Exp as % of Budget	Total Balance Avail
Lopez Water Rights /HCP	\$ 324,482	\$ 864	\$ -	\$ -	\$ -	\$ 864	0%	\$ 323,618
Pigging-Unit B	89,503	-	-	-	-	-	0%	89,503
Contribution to ISF for Shared New Equip	23,867	-	-	-	-	-	0%	23,867
Santa Maria Groundwater Basin Modeling	70,311	-	-	-	-	-	0%	70,311
Spill Prevention Valve #5 & #11 Replc	40,000	-	-	-	-	-	0%	40,000
5 Cities Stormwater Resource Plan	99,875	-	-	-	-	-	0%	99,875
Other	114,339	37,061	-	-	-	37,061	32%	77,278
Expenses		37,925	-	-	-	37,925	5%	724,452
Budget	762,377	190,594	190,594	190,594	190,594	762,377		
Variance (over)/under		152,669	190,594	190,594	190,594	724,452		
% Variance		80%	100%	100%	100%			

Zone 3 Budget Status
1st Quarter FY18/19



Capital Outlay Projects	Total Budget	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total	Total Exp as % of Budget	Total Balance Avail
Cathodic Protection Maint	154,172	-	-	-	-	-	0%	154,172
Dam Intake Fac & Op Assessment	20,899	-	-	-	-	-	0%	20,899
Pressure Transducers	1,250	107	-	-	-	107	9%	1,143
Geologic Assessment Fault Zn Lft Abtmt	12,631	-	-	-	-	-	0%	12,631
Domestic & Fireflow Tank Assessment	48,114	-	-	-	-	-	0%	48,114
Safety Upgrades to WTP	30,000	-	-	-	-	-	0%	30,000
Rebuild Membrane Feed Pumps	44,064	-	-	-	-	-	0%	44,064
Power Monitoring	30,000	-	-	-	-	-	0%	30,000
Improved Boat Access at Term Res	50,000	-	-	-	-	-	0%	50,000
Ammonia Analyzer Equip Repl	36,609	-	-	-	-	-	0%	36,609
Repair Fault Zone Left Dam Abutment	180,000	-	-	-	-	-	0%	180,000
Equip Storage Bldg 4-Bay PreFab	89,849	-	-	-	-	-	0%	89,849
Various Equipment Replacement	55,000	-	-	-	-	-	0%	55,000
Expenses		107	-	-	-	107	0%	752,541
Budget	752,648	188,162	188,162	188,162	188,162	752,648		
Variance (over)/under		188,055	188,162	188,162	188,162	752,541		
% Variance		100%	100%	100%	100%			



November 15, 2018

TO: Flood Control Zone 3 Advisory Committee
FROM: Ray Dienzo, Public Works - Water Resources Senior Engineer
SUBJECT: Cloud Seeding Cost Summary

Summary

The following tables below summarize the estimated costs of a potential cloudseeding program. These estimates are excerpted from the Cloud Seeding Feasibility Study that was released on March 2017 (Study). Tables 1-4 show the cost estimates of ground, air and ground-air combo program. For ground sites, Table 1 shows start up costs for site surveys, securing easements, preparing the sites, installing and testing. Tables 2-4, shows yearly program costs of Ground stations only, Aircraft only, and Combination Ground-Aircraft. Note that there are fixed and reimbursable cost components to the programs. For instance, if there are not enough rain seeding events, then flight hours or flares that are unused would be reimbursed.

Ground stations would take more time to implement due to planning and construction. Choosing this option would probably take year to implement. Aircraft only option as shown in Table 3, can be implemented in the first available rain season after project approval. Also, there are potential partnering opportunities with neighboring agencies such as County of Santa Barbara that would reduce the costs.

Table 1. Start up Costs - Ground Sites	Costs
Site Surveys, Leases, etc.	\$ 15,000
Four Ground Based Units - Fabrication, Installing and Testing - @\$30K each	\$ 140,000
Total	\$ 155,000

Table 2. Yearly Program Costs - Five Month with 4 Ground-sites only	Costs
Set up, Take-down, and Reporting	\$ 25,000
Five month fixed costs @\$13K each	\$ 65,000
Reimbursable costs - 200 ground flares at \$90/flare	\$ 18,000
Total	\$ 108,000

Table 3. Yearly Program Costs - Five Month Aircraft Only	Costs
Set up, Take Down, and Reporting	\$ 53,000
Airborne operation, five month fixed cost @\$30K/month	\$ 150,000
Reimbursable Costs - 80 flight hours@\$550/hour	\$ 44,000
Reimbursable Costs - 60 hours airborne seeding @4 flares/hour, @\$90/flare	\$ 21,600
Total	\$ 268,600

Table 4. Yearly Program Costs - Combination Five Month Ground and Three Month Aircraft	Costs
Set up, Take Down, and Reporting	\$ 66,000
Ground operations, two month fixed cost @\$13K	\$ 26,000
Ground and Airborne operations, three months fixed costs @\$44K	\$ 132,000
Reimbursable costs - 50 flight hours @\$550/hr	\$ 27,500
Reimbursable costs - 40 hours airborne seeding, 4 flares/hr, @\$90/flare	\$ 15,200
Reimbursable costs - 200 ground flares @\$90/flare	\$ 18,000
Total	\$ 284,700

Tables A and B show the estimated flow increases to the Salinas and Lopez watersheds with 9% or 17% rain increases from cloud seeding. The Study also states that a 9% rain increase can be expected from Ground Stations only. And 17% rain increase would more likely result from the combination ground station and aircraft option. The aircraft only option would likely yield results somewhere between the 9-17% projection.

Staff recommend the Aircraft only option as summarized in Table 3. This option would increase precipitation with minimal implementation time, and readily provide partnering opportunities.

Table A. Estimated Increased Flows assuming 9% Rainfall Increase		
Salinas Reservoir	3,100	AF
Salinas - creeks and tributaries	2,334	AF
Total Salinas Increase	5,434	AF
Lopez Reservoir	2,926	AF
Lopez - creeks and tributaries	2,203	AF
Total Lopez Increase	5,129	AF
Overall Increase	10,563	AF

Table B. Estimated Increased Flows assuming 17% Rainfall Increase		
Salinas Reservoir	5,855	AF
Salinas - creeks and tributaries	4,579	AF
Total Salinas Increase	10,434	AF
Lopez Reservoir	5,527	AF
Lopez - creeks and tributaries	4,322	AF
Total Lopez Increase	9,849	AF
Overall Increase	20,283	AF

County of San Luis Obispo Department of Public Works



ZONE 3 ADVISORY COMMITTEE

San Luis Obispo County Flood Control and Water Conservation District

TO: Zone 3 Advisory Committee

FROM: David Spiegel, PE

DATE: November 14, 2018

SUBJECT: Zone 3 Projects Update

Project Updates:

- Equipment Audit & Replacement – Ongoing (No Change)
 - Work proposed to continue in 2018/19
- Spillway Assessment
 - GEI performed onsite assessment
 - Desktop assessment of structural integrity and probable maximum flood (PMF) in progress
- Lopez Dam and Terminal Dam Hazard Classification – (No Change)
 - Inundation Maps have been submitted to DSOD for review
 - Emergency Action Plans are in preparation
- Structural Assessment of Terminal Reservoir Dam
 - Received one quote for geological investigation
 - Budgeted for 19/20
- Fault Zone Assessment – Dam Left Abutment
 - Preliminary engineers estimate has been prepared
 - Under review for budgeting and priority
- Equipment Storage – (No Change)
 - On hold pending Terminal Reservoir Dam geotechnical investigation
- Lopez WTP Safety Upgrades – (No Change)
 - Implementation of safety railings and catwalks in DAF building in progress
- Domestic and Fire Tank
 - Collings and Associates is scheduled for required fire flow storage assessment
 - Repairs will be dependent on assessment
- Rebuild Membrane Feed Pumps (1 per year) (No Change)
 - Second pump is being scheduled for removal and rebuilding in the Fall after high demands subside
 -
- Lopez Leach Field Replacement
 - Geosolutions is scheduled for percolation investigation for siting of new leach field



ZONE 3 ADVISORY COMMITTEE

San Luis Obispo County Flood Control and Water Conservation District

- Existing Bypass Pipeline Condition Assessment
 - Camera Access is being established to perform a visual inspection of the interior of the pipeline

Upcoming Projects (Requested FY 2018/19):

- Cathodic Protection Survey
- Ammonia Analyzer (2nd)
- Water Treatment Alternatives Study – Taste and Odor
- Improved Boat Access

Completed Projects

- Sludge Bed Cleanout Repair – 4 total
- Turnout SCADA Project
- Ammonia Analyzer
- Sludge Repair on 4A
- Pressure Transducers
- Turnout Flow Meters
- Static Mixer