Special Board Meeting Agenda

Russ Baggerly, Director
Mary Bergen, Director
Bill Hicks, Director
Pete Kaiser, Director
James Word, Director

CASITAS MUNICIPAL WATER DISTRICT
Meeting to be held at the
Casitas Board Room
Off the main lobby
1055 Ventura Ave.
Oak View, CA 93022
November 22, 2017 @ 9:30 A.M.

Right to be heard: Members of the public have a right to address the Board directly on any item of interest to the public which is within the subject matter jurisdiction of the Board. The request to be heard should be made immediately before the Board's consideration of the item. No action shall be taken on any item not appearing on the agenda unless the action is otherwise authorized by subdivision (b) of ¶54954.2 of the Government Code and except that members of a legislative body or its staff may briefly respond to statements made or questions posed by persons exercising their public testimony rights under section 54954.3 of the Government Code.

1. Roll Call

2. Public comments (Items not on the agenda – three minute limit).

3. General Manager comments.

4. Board of Director comments.

5. Board of Director Verbal Reports on Meetings Attended.

6. Consent Agenda

   a. Minutes from the November 8, 2017 meeting.

   RECOMMENDED ACTION: Adopt Consent Agenda.

7. Review of District Accounts Payable Report for the Period of 11/02/17 - 11/15/17.

   RECOMMENDED ACTION: Motion approving report.

8. Presentation of the draft Invasive Mussel Rapid Response Plan.

RECOMMENDED ACTION: Motion Approving the Plan

9. Presentation of the Lake Casitas Recreation Area Sewer Feasibility Study.

RECOMMENDED ACTION: Direction to Staff

10. Resolution awarding a contract for District Office Lighting Replacement Specification 17-396 to Oilfield Electric in the amount of $103,900.

RECOMMENDED ACTION: Adopt Resolution

11. Recommend authorization of up to $100,000 in additional asphalt Paving Work during fiscal year 2017-2018.

RECOMMENDED ACTION: Motion approving recommendation

12. Adopt resolution repealing Resolution 90-5 and adopting a new Records Retention and Destruction Policy and Retention Schedule.

RECOMMENDED ACTION: Adopt Resolution

13. Information Items:

a. Lake Casitas Recreation Area Report for September.
b. Recreation Committee Minutes.
c. Quagga Mussel Committee Minutes.
d. Executive Committee Minutes.
e. Personnel Committee Minutes.
f. Finance Committee Minutes.
g. Investment Report.

14. Adjournment.

If you require special accommodations for attendance at or participation in this meeting, please notify our office 24 hours in advance at (805) 649-2251, ext. 113. (Govt. Code Section 54954.1 and 54954.2(a)).

Minutes of the Casitas Municipal Water District
Board Meeting Held
November 8, 2017

A meeting of the Board of Directors was held November 8, 2017 at the Casitas Municipal Water District located at 1055 Ventura Ave. in Oak View, California. The meeting was called to order at 3:00 p.m. President Baggerly led the group in the flag salute.

1. Roll Call

Directors Baggerly, Word, Hicks, Bergen and Kaiser were present. Also present were Steve Wickstrum, General Manager, Rebekah Vieira, Clerk of the Board, and Attorney, John Mathews. There were four staff members and four members of the public in attendance.

2. Public comments (Items not on the agenda – three minute limit).

None

3. General Manager comments.

Mr. Wickstrum reported that the AWA bus tour would be at the Casitas Dam at approximately 2:30. He also mentioned the Employee Appreciation lunch on the same day at the Oak View Resource Center and applauded our employees for their efforts this last year with the acquisition of the Ojai system. We have decided to close the office at 11:30 tomorrow to allow the entire Administration staff to join us at the appreciation luncheon.

We are still seeing numerous leaks in the Ojai system and we are moving through the asphalt repair budget quickly. The rest of our system is performing well. The Ojai customers received their first Casitas bill last week and we have incorporated autopay into the rest of the district. Staff is readying the canal and Robles Diversion in hope that we operate Robles in the coming months.

4. Board of Director comments.

President Baggerly jokingly reported that he has no business ties to Russia or the Ukraine or anywhere.

5. Board of Director Verbal Reports on Meetings Attended.

Director Word reported that he attended the AWA board meeting and the water issues committee will meet on 21st on the cost of water. They are looking for an additional place to meet as they now have more than 35 people attend that meeting. Ron Merckling received some kudos for his participation and contribution to the symposium. The next water wise breakfast is next Thursday where Steve Wickstrum will be making a presentation. The water systems lunch and educational program has grown to over 140.

Director Baggerly reported attending the VRWC meeting. The Resource Conservation District funding will be gone in six months. Tully Clifford is working for the City of Ventura and gave a presentation on the Stanley Avenue reconfiguration alternatives. Director Bergen reported she was also at the meeting.

6. Consent Agenda ADOPTED

a. Minutes from the October 25, 2017 meeting.

Director Bergen had an email from Renee Roth who was concerned that her comments came across as too strong but she is supportive of what Casitas is doing. Director Bergen stated the minutes sound strong but no changes were recommend.

On the motion of Director Hicks, seconded by Director Bergen, the Consent Agenda was adopted by the following roll call vote:

AYES:	Directors:	Kaiser, Bergen, Hicks, Word, Baggerly
NOES:	Directors:	None
ABSENT:	Directors:	None

7. Review of District Accounts Payable Report for the Period of 10/19/17 - 11/01/17. APPROVED

Director Bergen questioned the archeological consulting with Mr. Wickstrum explaining that it for the work that was done for the Ojai System at Mallory and Eucalyptus, as it is a requirement in the City of Ojai.

On the motion of Director Word, seconded by Director Bergen, the Accounts Payable Report was approved by the following roll call vote:

AYES:	Directors:	Kaiser, Bergen, Hicks, Word, Baggerly
NOES:	Directors:	None
ABSENT:	Directors:	None

8. Recommend approval of the Five Year Agreement with Rotary Club of Ojai West Foundation for the Ojai Wine Festival to be held at Lake Casitas Recreation Area 2018 – 2022. Directed back to staff

The board expressed a number of concerns regarding the potential for liability and the level of insurance we are requiring including requests for additional insurance coverages to be provided by the event sponsor and also potentially from vendors. The board also expressed concern over the change to have staff oversee the event and requested that the board be inserted back into that monitoring role in the agreement. Director Baggerly requested that in the future with agreements where there are a number of changes that they be provided in legislative format so they can see the modifications. Another concern was with the beginning time being moved to 11:30 and not having the definite end time of 5:00 p.m. The board also expressed concerns about having a designated driver program to ensure attendees get home safe, concerns regarding the crossing guard training and the storage that is provided.

Bob Daddi spoke to the board regarding insurance requirements and suggested a scaled approach on events based on projected attendance. He echoed the idea that individual vendors provide a certificate of insurance listing the district as additionally insured. He expressed that 2 million in coverage in inadequate for this type of event. He also suggested having some sort of self-testing available as a first line of defense.

The board also expressed concern over how we move forward as the City of Ventura had to shut down their street fairs because they made is so difficult to operate.

9. Recommend approval of a Purchase Order to J & H Engineering General Contractors, Inc. in the amount of $30,650 for pavement repair.
APPROVED

On the motion of Director Hicks, seconded by Director Kaiser the above recommendation was approved by the following roll call vote:

AYES:	Directors:	Kaiser, Bergen, Hicks, Word, Baggerly
NOES:	Directors:	None
ABSENT:	Directors:	None

10. Recommend approval of the salary range adjustment and job title revisions to create the position of Executive Administrator, HR and Risk Management. APPROVED

On the motion of Director Hicks, seconded by Director Word, the above recommendation was approved by the following roll call vote:

AYES:	Directors:	Kaiser, Bergen, Hicks, Word, Baggerly
NOES:	Directors:	None
ABSENT:	Directors:	None

11. Information Items:

a. Water Conservation October 2017 Update.
b. Water Resources Committee Minutes.
c. Personnel Committee Minutes.
d. Water Consumption Report.
e. CFD No. 2013-1 (Ojai) Monthly Cost Analysis.
f. Investment Report.

On the motion of Director Word, seconded by Director Bergen, the Information items were approved.

12. Adjournment.

President Baggerly adjourned the meeting at 4:06 p.m.

_____
Bill Hicks, Secretary

CASITAS MUNICIPAL WATER DISTRICT
Payable Fund Check Authorization
Checks Dated 11/02/17-11/15/17
Presented to the Board of Directors For Approval November 22, 2017

Check	Payee			Description	Amount
000764	Payables Fund Account	#	9759651478	Accounts Payable Batch 110817	$113,432.87
000765	Payables Fund Account	#	9759651478	Accounts Payable Batch 111517	$239,028.29
					$352,461.16
000766	Payroll Fund Account	#	9469730919	Estimated Payroll 12/7/17	$170,000.00
				Total	$522,461.16

Publication of check register is in compliance with Section 53065.6 of the Government Code which requires the District to disclose reimbursements to employees and/or directors.

The above numbered checks,
000764-000766
have been duly audited is hereby certified as correct.

Denise Collin 11/15/17

Denise Collin, Accounting Manager/Treasurer

Signature

Signature

Signature

A/P Fund

Publication of check register is in compliance with Section 53065.6 of the Government Code which requires the District to disclose reimbursements to employees and/or directors.

000764	A/P Checks:	028423-028440
	A/P Draft to P.E.R.S.	000000
	A/P Draft to State of CA	000000
	A/P Draft to I.R.S.	000000
	Voids:	
000765	A/P Checks:	028441-028529
	A/P Draft to P.E.R.S.	
	A/P Draft to State of CA	
	A/P Draft to I.R.S.	
	Voids:	028490, 028491

Denise Collin 11/15/17

Denise Collin, Accounting Manager/Treasurer

_____

Signature

_____

Signature

_____

Signature

CERTIFICATION

Payroll disbursements for the pay period ending 11/04/17
Pay Date of 11/09/17
have been duly audited and are
hereby certified as correct.

Signed: Denise Collin 11/6/17
Denise Collin

Signed: _____
Signature

Signed: _____
Signature

Signed: _____
Signature

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VENDOR SET: 01 Casitas Municipal Water D
BANK: * ALL BANKS
DATE RANGE:11/02/2017 THRU 11/15/2017

VENDOR I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
C-CHECK	VOID CHECK	V	11/15/2017			028490		
C-CHECK	VOID CHECK	V	11/15/2017			028491		

* * T O T A L S * *	NO			INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	0			0.00	0.00	0.00
HAND CHECKS:	0			0.00	0.00	0.00
DRAFTS:	0			0.00	0.00	0.00
EFT:	0			0.00	0.00	0.00
NON CHECKS:	0			0.00	0.00	0.00
VOID CHECKS:	2	VOID DEBITS	0.00			
		VOID CREDITS	0.00	0.00	0.00	

TOTAL ERRORS: 0

		NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 01 BANK:	TOTALS:	2	0.00	0.00	0.00
BANK:	TOTALS:	2	0.00	0.00	0.00

VENDOR SET: 01 Casitas Municipal Water D
BANK: AP ACCOUNTS PAYABLE
DATE RANGE:11/02/2017 THRU 11/15/2017

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00049		STATE OF CALIFORNIA							
	I-T2 201711061281	State Withholding	D	11/08/2017	10,086.54		000000		10,086.54
00128		INTERNAL REVENUE SERVICE							
	I-T1 201711061281	Federal Withholding	D	11/08/2017	30,579.04		000000		
	I-T3 201711061281	FICA Withholding	D	11/08/2017	25,021.02		000000		
	I-T4 201711061281	Medicare Withholding	D	11/08/2017	6,947.88		000000		62,547.94
00187		CALPERS							
	I-PBB201711061281	PERS BUY BACK	D	11/08/2017	216.95		000000		
	I-PBP201711061281	PERS BUY BACK	D	11/08/2017	161.96		000000		
	I-PEB201711061281	PEPRA EMPLOYEES PORTION	D	11/08/2017	2,943.86		000000		
	I-PEM201711061281	PERS EMPLOYEE PORTION MGMT	D	11/08/2017	3,044.23		000000		
	I-PER201711061281	PERS EMPLOYEE PORTION	D	11/08/2017	6,724.98		000000		
	I-PRB201711061281	PEBRA EMPLOYER PORTION	D	11/08/2017	3,077.13		000000		
	I-PRR201711061281	PERS EMPLOYER PORTION	D	11/08/2017	10,848.63		000000		27,017.74
01666		AT & T							
	I-000010430562	Acct#9391062398	R	11/08/2017	107.24		028423		107.24
01153		RUSS BAGGERLY							
	I-Oct 17	Reimburse Mileage 10/17	R	11/08/2017	55.64		028424		55.64
10010		KEVIN R. CHAMPLIN							
	I-Oct 17	Reimburse Expenses 10/17	R	11/08/2017	72.78		028425		72.78
01055		Neil Cole							
	I-Oct 17	Reimburse Mileage 10/17	R	11/08/2017	71.16		028426		71.16
01483		CORVEL CORPORATION							
	I-6/11674867-2	Patient#95-2792379 DOS 7/28/17	R	11/08/2017	2.69		028427		2.69
02755		Vincent Godinez							
	I-Nov 17	Reimburse Expenses 11/17	R	11/08/2017	543.82		028428		543.82
01898		Eric Grabowski							
	I-Oct 17	Reimburse Expense 10/17	R	11/08/2017	919.37		028429		919.37
00126		CAROLE ILES							
	I-Oct 17	Reimburse Mileage 10/17	R	11/08/2017	41.20		028430		41.20
00625		OfficeTeam							
	I-49517922	Admin Temp	R	11/08/2017	548.64		028431		
	I-49517937	Admin Temp	R	11/08/2017	852.40		028431		
	I-49556425	Admin Temp	R	11/08/2017	324.15		028431		
	I-49577173	Admin Temp	R	11/08/2017	852.40		028431		2,577.59

VENDOR SET: 01 Casitas Municipal Water D
BANK: AP ACCOUNTS PAYABLE
DATE RANGE:11/02/2017 THRU 11/15/2017

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
01944		Luke Soholt							
	I-110617a	Dist. 4 Certificaton Renewal	R	11/08/2017	155.00		028432		
	I-110617b	Treatmant 4 Certification	R	11/08/2017	105.00		028432		260.00
00215		SOUTHERN CALIFORNIA EDISON							
	I-110317	Acct#2269631768	R	11/08/2017	23.07		028433		23.07
00257		VENTURA RIVER WATER DISTRICT							
	I-103117a	Acct#05-37500A	R	11/08/2017	264.98		028434		
	I-103117b	Acct#03-50100A	R	11/08/2017	42.94		028434		307.92
00102		FRANCHISE TAX BOARD							
	I-G03201711061281	Payroll Deduction	R	11/08/2017	100.00		028435		100.00
00124		ICMA RETIREMENT TRUST - 457							
	I-CUI201711061281	457 CATCH UP	R	11/08/2017	461.54		028436		
	I-DCI201711061281	DEFERRED COMP FLAT	R	11/08/2017	2,109.62		028436		
	I-DI%201711061281	DEFERRED COMP PERCENT	R	11/08/2017	89.81		028436		2,660.97
01960		Moringa Community							
	I-MOR201711061281	PAYROLL CONTRIBUTIONS	R	11/08/2017	16.75		028437		16.75
00985		NATIONWIDE RETIREMENT SOLUTION							
	I-DCN201711061281	DEFERRED COMP FLAT	R	11/08/2017	4,834.81		028438		
	I-DN%201711061281	DEFERRED COMP PERCENT	R	11/08/2017	342.14		028438		5,176.95
00180		S.E.I.U. - LOCAL 721							
	I-COP201711061281	SEIU 721 COPE	R	11/08/2017	42.00		028439		
	I-UND201711061281	UNION DUES	R	11/08/2017	741.50		028439		783.50
00230		UNITED WAY							
	I-UWY201711061281	PAYROLL CONTRIBUTIONS	R	11/08/2017	60.00		028440		60.00
01325		Aflac Worldwide Headquarters							
	I-957439	Supplemental Insurance 11/17	R	11/15/2017	3,403.56		028441		3,403.56
01817		ALLIED ELECTRONICS, INC.							
	I-9008547677	Hoffman Enclosures - EM	R	11/15/2017	427.43		028442		427.43
03044		Amazon Capital Services							
	C-11X7-J4M1-C144b	Accrue Use Tax	R	11/15/2017	1.17CR		028443		
	C-1P4Q-NJYD-4DX6b	Accrue Use Taax	R	11/15/2017	2.72CR		028443		
	C-1W6C-DDVW-6YX4b	Accrue Use Tax	R	11/15/2017	5.54CR		028443		
	D-11X7-J4M1-C144a	Accrue Use Tax	R	11/15/2017	1.17		028443		
	D-1P4Q-NJYD-4DX6a	Accure Use Tax	R	11/15/2017	2.72		028443		
	D-1W6C-DDVW-6YX4a	Accrue Use Tax	R	11/15/2017	5.54		028443		
	I-11X7-J4M1-C144	Bushing Kit - Cart CCB	R	11/15/2017	16.10		028443		
	I-143C-ND7D-6WJF	Paper Shredder - Cons	R	11/15/2017	217.15		028443		

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
	I-19DJ-WVVP-Y9YN	All Weather Notebooks - Fish	R	11/15/2017	44.70		028443		
	I-1P4Q-NJYD-4DX6	Battery Backup - EM	R	11/15/2017	37.50		028443		
	I-1W6C-DDVW-6YX4	Windshield - Cart EZ6	R	11/15/2017	76.38		028443		391.83
00029		AMERICAN TOWER CORP							
	I-2556118	Tower Rent-Red Mtn.Rincon Peak	R	11/15/2017	1,927.53		028444		1,927.53
00417		APPLIED INDUSTRIAL TECHNOLOGY							
	I-7011895988	Couplings for Ammonia Pump -TP	R	11/15/2017	41.33		028445		41.33
00014		AQUA-FLO SUPPLY							
	I-SI1116379	Gloves & Fittings - WP	R	11/15/2017	43.01		028446		
	I-SI1120130	PVC Fittings & Conduit - LCRA	R	11/15/2017	44.61		028446		
	I-SI1122978	Brass Fitting - UT	R	11/15/2017	13.07		028446		
	I-SI1122979	Brass Fittings - UT	R	11/15/2017	56.65		028446		
	I-SI1124081	PVC Fittings - WP	R	11/15/2017	64.68		028446		
	I-SI1124085	Galvanized Fittings - LCRA	R	11/15/2017	10.75		028446		
	I-SI1124086	PVC Fitting - LCRA	R	11/15/2017	0.36		028446		233.13
00030		B&R TOOL AND SUPPLY CO							
	I-1900905253	Pipe Wrenches - PL	R	11/15/2017	1,386.05		028447		
	I-1900905254	Cloth Rags - Whs	R	11/15/2017	417.45		028447		
	I-1900905719	Flashlights - TP	R	11/15/2017	64.63		028447		
	I-1900905720	Screwdriver Set - TP	R	11/15/2017	33.94		028447		
	I-1900905721	Pipe Wrench - TP	R	11/15/2017	64.53		028447		1,966.60
00679		BAKERSFIELD PIPE & SUPPLY INC							
	I-S2399792.001	Teflon Tape & Seal - PL	R	11/15/2017	40.32		028448		
	I-S2404654.001	Fittings - TP	R	11/15/2017	3.31		028448		43.63
03446		William Benedict							
	I-595224	Camping Cancellation - LCRA	R	11/15/2017	145.00		028449		145.00
03059		Brenntag Pacific Inc.							
	I-BPI784970	Chlorine for Ojai Sys. - TP	R	11/15/2017	1,059.72		028450		1,059.72
02300		California Door & Hardware							
	I-44396	Tempered Glass - Eng	R	11/15/2017	265.93		028451		265.93
03223		Canon Solutions America							
	I-902637897	Plotter - Eng	R	11/15/2017	8,273.50		028452		8,273.50
00055		CASITAS BOAT RENTALS							
	I-Oct 2017	Gas for Boats - LCRA	R	11/15/2017	1,040.53		028453		1,040.53

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
03021		Central Communications							
	I-171003147102	Call Center 11/17	R	11/15/2017	184.19		028454		184.19
03447		Sheryll Chavira							
	I-572746	Camping Cancellation - LCRA	R	11/15/2017	115.00		028455		115.00
01843		COASTAL COPY							
	I-757662	Copier Usage - LCRA	R	11/15/2017	279.20		028456		
	I-759019	Copier Usage - DO	R	11/15/2017	542.81		028456		822.01
00071		COMMANDER PRINTED PRODUCTS							
	I-105237	Chip Clips for Ojai Day - LCRA	R	11/15/2017	429.00		028457		
	I-105238	Tote Bags for Ojai Day - LCRA	R	11/15/2017	949.16		028457		
	I-105239	Tote Bags for Ojai Day - Cons	R	11/15/2017	396.83		028457		
	I-105377	Key Chains for Ojai Day - LCRA	R	11/15/2017	454.65		028457		2,229.64
00061		COMPUWAVE							
	I-SB02088186	Toner Cartridge - DO	R	11/15/2017	280.39		028458		280.39
00062		CONSOLIDATED ELECTRICAL							
	I-9009-760205	Processors, Modules - EM	R	11/15/2017	19,557.25		028459		
	I-9009-761260	Cables - EM	R	11/15/2017	1,455.23		028459		
	I-9009-761661	Rockwell Software Support - EM	R	11/15/2017	9,698.40		028459		30,710.88
02771		Core-Rosion Products							
	I-C2017463a	Clarifier Motor Mixer Shipping	R	11/15/2017	67.10		028460		67.10
00719		CORELOGIC INFORMATION SOLUTION							
	I-81842892	Realquest Subscription	R	11/15/2017	137.50		028461		137.50
01525		CPS HR CONSULTING							
	I-INV357543	Proj#E4129 - O&M Manager	R	11/15/2017	3,474.21		028462		3,474.21
03448		Amy Cummings							
	I-601204	Camping Cancellation - LCRA	R	11/15/2017	76.00		028463		76.00
01856		DATA FLOW							
	I-26856	Tax Forms - Admin	R	11/15/2017	263.18		028464		263.18
01764		DataProse, LLC							
	I-DP1703207	UB Mailing	R	11/15/2017	1,730.26		028465		1,730.26
00081		DELTA LIQUID ENERGY							
	I-051136	Propane - LCRA	R	11/15/2017	327.38		028466		327.38

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
02544		Department of Justice							
	I-268425	Fingerprinting - LCRA	R	11/15/2017	81.00		028467		81.00
00095		FAMCON PIPE & SUPPLY							
	I-196181	Service Line Parts - PL	R	11/15/2017	1,238.74		028468		
	I-196476	Gaskets,Grips,Tubing - PL	R	11/15/2017	923.42		028468		
	I-198413	Locking Devices - UT	R	11/15/2017	446.16		028468		
	I-198904	Threaded Coupling - EM	R	11/15/2017	46.92		028468		
	I-199059	Ball Corps & Coupling - EM	R	11/15/2017	630.63		028468		
	I-199083	Locking Devices - UT	R	11/15/2017	557.70		028468		3,843.57
00013		FERGUSON ENTERPRISES INC							
	I-5277842	Urinal Cartridges - LCRA	R	11/15/2017	1,303.82		028469		1,303.82
00099		FGL ENVIRONMENTAL							
	I-711763A	Lake Nutrient Monitoring 9/26	R	11/15/2017	1,288.00		028470		
	I-712124A	EPA 551&552 Monitoring 10/2/17	R	11/15/2017	344.00		028470		
	I-712125A	Manganese Monitoring 10/2/17	R	11/15/2017	30.00		028470		
	I-712126A	Nitrate Monitoring 10/3/17	R	11/15/2017	61.00		028470		
	I-712448A	Nitrate Monitoring 10/10/17	R	11/15/2017	43.00		028470		1,766.00
03440		Michael Flack							
	I-593317	Camping Cancellation - LCRA	R	11/15/2017	522.00		028471		522.00
00103		FRANK'S ROOTER & PUMPING							
	I-92139	Septic Tank Pump - LCRA	R	11/15/2017	427.50		028472		427.50
00106		FRONTIER PAINT							
	I-F0230450	Urethane Base - LCRA	R	11/15/2017	103.55		028473		103.55
01280		FRY'S ELECTRONICS, INC.							
	I-6912474a	Display Port - EM	R	11/15/2017	21.54		028474		
	I-6912474b	Battery Pack, Outlets - LCRA	R	11/15/2017	230.58		028474		252.12
02720		Garda CL West, Inc.							
	I-10345256	Armored Truck Service	R	11/15/2017	681.52		028475		681.52
02158		Google, Inc.							
	I-3385967354	Google Apps 10/17	R	11/15/2017	880.00		028476		880.00
00115		GRAINGER, INC							
	I-9596315334	Fire Extinguishers - LCRA	R	11/15/2017	529.38		028477		
	I-9602697477	Submersible Pump - TP	R	11/15/2017	275.00		028477		
	I-9603347197	Axial Fan - EM	R	11/15/2017	89.98		028477		
	I-9603582983	Pipe Strap - LCRA	R	11/15/2017	44.01		028477		
	I-9608833308	Glass Thermometer - Fish	R	11/15/2017	51.48		028477		989.85

VENDOR SET: 01 Casitas Municipal Water D
BANK: AP ACCOUNTS PAYABLE
DATE RANGE:11/02/2017 THRU 11/15/2017

VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
02217		Greg Rents							
	I-46847	Cement & Cart - PL	R	11/15/2017	183.38		028478		
	I-46915	Cement & Cart - PL	R	11/15/2017	70.24		028478		
	I-46926	Cement & Cart - PL	R	11/15/2017	102.95		028478		
	I-47107	Cement & Cart - PL	R	11/15/2017	69.71		028478		426.28
00121		HACH COMPANY							
	I-10698096	Hypochlorite Reagent - Lab	R	11/15/2017	278.85		028479		
	I-10702151	Reagents - Lab	R	11/15/2017	396.51		028479		675.36
00596		HOME DEPOT							
	I-5777309	Outdoor Wall Pack Light - LCRA	R	11/15/2017	64.34		028480		64.34
00127		INDUSTRIAL BOLT & SUPPLY							
	I-182595-1	Washers, Nuts, Caps - Maint	R	11/15/2017	67.29		028481		67.29
02344		Janitek Cleaning Solutions							
	I-29024A	Janitorial Services - DO	R	11/15/2017	1,550.00		028482		1,550.00
00131		JCI JONES CHEMICALS, INC							
	I-738833	Chlorine - TP, CM 738876	R	11/15/2017	1,650.00		028483		1,650.00
01022		KELLY CLEANING & SUPPLIES, INC							
	I-4527625	Janitorial Services - LCRA	R	11/15/2017	300.00		028484		300.00
00328		LIGHTNING RIDGE							
	I-10241702	Uniforms - WP	R	11/15/2017	1,293.00		028485		
	I-10241703	Uniforms - TP	R	11/15/2017	385.25		028485		
	I-10241708	Shirts - LCRA	R	11/15/2017	87.12		028485		
	I-10311702	Maintenance Uniforms - LCRA	R	11/15/2017	295.24		028485		2,060.61
02998		McCall's Meter Sales & Service							
	I-29897	Sensus Meter Flow Test - UT	R	11/15/2017	72.36		028486		72.36
03452		Kathryn McKinney							
	I-587948	Camping Cancellation - LCRA	R	11/15/2017	109.00		028487		109.00
00329		MCMASTER-CARR SUPPLY CO.							
	I-48866961	Tubing Connectors - TP	R	11/15/2017	387.90		028488		387.90
00151		MEINERS OAKS ACE HARDWARE							
	I-796837	Poultry Netting - PL	R	11/15/2017	16.01		028489		
	I-797919	Gloves - UT	R	11/15/2017	15.00		028489		
	I-798038	Gloves,Tray,Paint,Batteries-LC	R	11/15/2017	81.96		028489		
	I-798041	Tape,Bolts,Screws - LCRA	R	11/15/2017	77.97		028489		
	I-798196	Container, Rust Remover - Fish	R	11/15/2017	6.52		028489		
	I-798232	Plywood,Toilet Seat Ring-Maint	R	11/15/2017	78.57		028489		
	I-798280	Medium Hooks - Eng	R	11/15/2017	8.29		028489		

VENDOR SET: 01 Casitas Municipal Water D
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VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
	I-798749	Pipe Cutter,Elbows,Fittings-UT	R	11/15/2017	42.41		028489		
	I-798943	Primer,Seal,Door Stop - Maint	R	11/15/2017	27.51		028489		
	I-798944	Grinder Kit - WP	R	11/15/2017	24.39		028489		
	I-798948	Chlortabs - Maint	R	11/15/2017	17.12		028489		
	I-798975	Galvanized Fittings - LCRA	R	11/15/2017	58.39		028489		
	I-799124	Primer, Paint - WP	R	11/15/2017	9.15		028489		
	I-799178	Adapter,Seal Tape,PVC - TP	R	11/15/2017	2.25		028489		
	I-799293	Bolts,Screws,Faucet - LCRA	R	11/15/2017	40.59		028489		
	I-799649	Driver Set, Bit Set - TP	R	11/15/2017	40.58		028489		
	I-799655	Shovel - WP	R	11/15/2017	21.46		028489		
	I-799880	Tape,Sponges,Clorox - LCRA	R	11/15/2017	49.51		028489		
	I-799990	Supply Line - LCRA	R	11/15/2017	17.56		028489		
	I-800000	Wire Connector,Blade - LCRA	R	11/15/2017	25.77		028489		
	I-800037	PVC Tee - WP	R	11/15/2017	24.47		028489		
	I-800128	Plugs, Tee, Bolts, Screws-LCRA	R	11/15/2017	53.08		028489		
	I-800289	Cement - LCRA	R	11/15/2017	9.64		028489		
	I-800347	Spraypaint, PVC Elbow - WP	R	11/15/2017	12.81		028489		
	I-800807	Glue, Drive Guide - IT	R	11/15/2017	11.31		028489		772.32
00143		METTLER TOLEDO, INC.							
	I-654560617	Balanace Machine Calib.-Lab	R	11/15/2017	187.75		028492		187.75
00812		KEVIN NGUYEN							
	I-Oct 17	Reimburse Mileage 10/17	R	11/15/2017	42.80		028493		42.80
00163		OFFICE DEPOT							
	I-975130033001	Office Supplies - DO	R	11/15/2017	81.37		028494		
	I-975130127001	Waste Basket - DO	R	11/15/2017	3.60		028494		84.97
00625		OfficeTeam							
	I-49625821	Admin Temp	R	11/15/2017	628.65		028495		628.65
01570		Ojai Auto Supply LLC							
	I-413928	Oil - Unit CC9393	R	11/15/2017	16.26		028496		
	I-415928	Wiper Blades - Unit 51	R	11/15/2017	33.53		028496		
	I-416556	Antifreeze - Gar	R	11/15/2017	17.33		028496		
	I-416888	Fuel,Air,&Oil Filters-Unit 109	R	11/15/2017	168.51		028496		
	I-416971	Fuel,Oil,Air Filters -Unit 114	R	11/15/2017	96.86		028496		
	I-417192	Freon - Unit 4	R	11/15/2017	45.27		028496		
	I-418182	Battery Term - EM	R	11/15/2017	18.73		028496		396.49
00165		OJAI LUMBER CO, INC							
	I-1711-849421	Roofing,Nails,Cement - Maint	R	11/15/2017	61.64		028497		61.64

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VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00602		OJAI TRUE VALUE							
	I-51605	Batteries,Sterilite - Lab	R	11/15/2017	20.89		028498		20.89
00168		OJAI VALLEY NEWS							
	I-300017912	Consesrvation Ad 8/18-12/22	R	11/15/2017	55.00		028499		55.00
02917		Ojai Valley Organics							
	I-32355	Small Waste Pickup - Maint	R	11/15/2017	18.00		028500		18.00
00169		OJAI VALLEY SANITARY DISTRICT							
	I-19719	Cust # 20594	R	11/15/2017	168.84		028501		
	I-19793	Cust# 52921	R	11/15/2017	56.28		028501		225.12
03449		Graham Peace							
	I-543449	Reduction in Stay - LCRA	R	11/15/2017	50.00		028502		
	I-593332	Reduction in Stay - LCRA	R	11/15/2017	50.00		028502		100.00
02833		Praxair, Inc							
	I-79816146	Liquid Oxygen - TP	R	11/15/2017	2,221.65		028503		2,221.65
00619		PUMP CHECK							
	I-7113	Pump & Meter Testing - EM	R	11/15/2017	9,640.00		028504		9,640.00
00892		RICKLY HYDROLOGICAL, INC.							
	I-381258	Hook Gage - LCRA	R	11/15/2017	545.41		028505		545.41
00313		ROCK LONG'S AUTOMOTIVE							
	I-22217	Smog Inspection - Unit 8	R	11/15/2017	44.75		028506		44.75
03443		Scaltrol, Inc.							
	I-14013	Clear PC Sump - Gar	R	11/15/2017	34.14		028507		34.14
03450		Mary Smith							
	I-600781	Camping Cancellation - LCRA	R	11/15/2017	106.00		028508		106.00
02961		Roni Snow							
	I-593411	Camping Cancellation - LCRA	R	11/15/2017	195.00		028509		195.00
02003		Sostre Enterprises Inc.							
	I-3464	Website CMS/Fee Hosting	R	11/15/2017	249.00		028510		249.00
00215		SOUTHERN CALIFORNIA EDISON							
	I-110917	Acct#2397969643	R	11/15/2017	16,743.42		028511		16,743.42

VENDOR SET: 01 Casitas Municipal Water D
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VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
00050		STATE OF CALIFORNIA - EDD							
	I-L0356280480	Unemployment Insurance	R	11/15/2017	4,282.00		028512		4,282.00
01147		SUPERIOR GATE SYSTEMS							
	I-3894	Knox Swith for Gate - Maint	R	11/15/2017	385.00		028513		385.00
03451		Harold Sweet							
	I-594578	Camping Cancellation - LCRA	R	11/15/2017	95.00		028514		95.00
02643		Take Care by WageWorks							
	I-6476889	Reimburse Med/Dep Care	R	11/15/2017	274.50		028515		
	I-6482947	Reimburse Med/Dep Care	R	11/15/2017	305.00		028515		579.50
01954		Talley, Inc.							
	I-10289030	Scada Antennas - EM	R	11/15/2017	372.00		028516		372.00
01662		TYLER TECHNOLOGIES, INC.							
	I-025-204940	Monthly UB Online Fees	R	11/15/2017	153.00		028517		153.00
00225		UNDERGROUND SERVICE ALERT							
	I-1020170093	119 New Ticket Charges	R	11/15/2017	206.35		028518		206.35
00247		County of Ventura							
	I-250356	Encroachment Permits	R	11/15/2017	300.00		028519		300.00
02694		Ventura County Star							
	I-1766327	Board Comp 2017 Ad	R	11/15/2017	74.58		028520		74.58
00254		VENTURA LOCKSMITHS							
	I-B17383	Rekey - LCRA	R	11/15/2017	36.00		028521		36.00
09955		VENTURA WHOLESALE ELECTRIC							
	I-221399	Lens, Plug In - EM	R	11/15/2017	50.64		028522		50.64
01283		Verizon Wireless							
	I-9795653366	Monthly Cell Charges - DO	R	11/15/2017	1,884.48		028523		
	I-9795653901	Monthly Cell Charges - LCRA	R	11/15/2017	540.93		028523		2,425.41
03409		Matthew Vestuto							
	I-102717	Cultural Resource Monitoring	R	11/15/2017	648.00		028524		648.00
01516		VISTA FORD OF OXNARD							
	I-219236	2017 Ford Truck - UT	R	11/15/2017	65,170.01		028525		65,170.01

VENDOR SET: 01 Casitas Municipal Water D
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VENDOR	I.D.	NAME	STATUS	CHECK DATE	INVOICE AMOUNT	DISCOUNT	CHECK NO	CHECK STATUS	CHECK AMOUNT
03203		Water Systems Consulting, Inc.							
	I-2786	Ojai System Master Plan - Eng	R	11/15/2017	52,925.78		028526		52,925.78
02568		Win-911 Software							
	I-152X7667-20171231	WIN911 Software - TP	R	11/15/2017	595.00		028527		595.00
00277		ZEE MEDICAL SERVICE CO.							
	I-34-113159	First Aid Kits - Whs	R	11/15/2017	421.49		028528		421.49
1		MCGOVERN, JOHN E							
	I-000201711021280	Ref AR REFUND	R	11/15/2017	84.00		028529		84.00

* * T O T A L S * *	NO			INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
REGULAR CHECKS:	105			252,808.94	0.00	252,808.94
HAND CHECKS:	0			0.00	0.00	0.00
DRAFTS:	3			99,652.22	0.00	99,652.22
EFT:	0			0.00	0.00	0.00
NON CHECKS:	0			0.00	0.00	0.00
VOID CHECKS:	0	VOID DEBITS	0.00			
		VOID CREDITS	0.00	0.00	0.00	

TOTAL ERRORS: 0

	NO	INVOICE AMOUNT	DISCOUNTS	CHECK AMOUNT
VENDOR SET: 01 BANK: AP TOTALS:	108	352,461.16	0.00	352,461.16
BANK: AP TOTALS:	108	352,461.16	0.00	352,461.16
REPORT TOTALS:	108	352,461.16	0.00	352,461.16

MEMORANDUM

TO: Board of Directors

From: Steven E. Wickstrum, General Manager

RE: Draft Invasive Mussel Rapid Response Plan

Date: November 17, 2017

RECOMMENDATION:

It is recommended that the Board of Directors approve the draft Invasive Mussel Rapid Response Plan (RRP) and direct staff to seek input to the plan by the regulatory agencies.

BACKGROUND:

For approximately ten years the district has been actively protecting Lake Casitas from the invasion of quagga and zebra mussels. In 2008 the District implemented the Vessel Inspection and Quarantine Program and in 2015 the District contracted for the development of the Control and Vulnerability Study. The Study recommended the creation of a RRP that can be engaged if there should be a discovery of mussels. The Board of Directors requested that a RRP be developed and presented by staff.

The draft RRP has been developed to be a part of the Casitas Emergency Response Plan (EAP). The EAP incorporates a wide range of emergency events, response mechanisms that staff would follow, and communication tables that are common to all emergencies. A discovery of mussels would be responded to as though it were an emergency and the RRP can be easily found in the EAP, instead of some other file.

The RRP will be shared with the Department of Fish and Wildlife (DFW) and other regulatory agencies to receive additional input and clarification. According to DFW, they are unaware of any agency having an RRP. Casitas has found that Big Bear Municipal Water District has created an RRP and has shared their RRP with Casitas.

The District has observed the spread of quagga mussels to nearby Lake Piru and has concerns regarding any further spread of the mussels to the Ventura River watershed. The development of the RRP is motivating the effort to figure this situation out prior to it ever happening.

CASITAS MUNICIPAL WATER DISTRICT

INVASIVE MUSSEL RAPID RESPONSE PLAN

November 2017 - DRAFT

Summary:

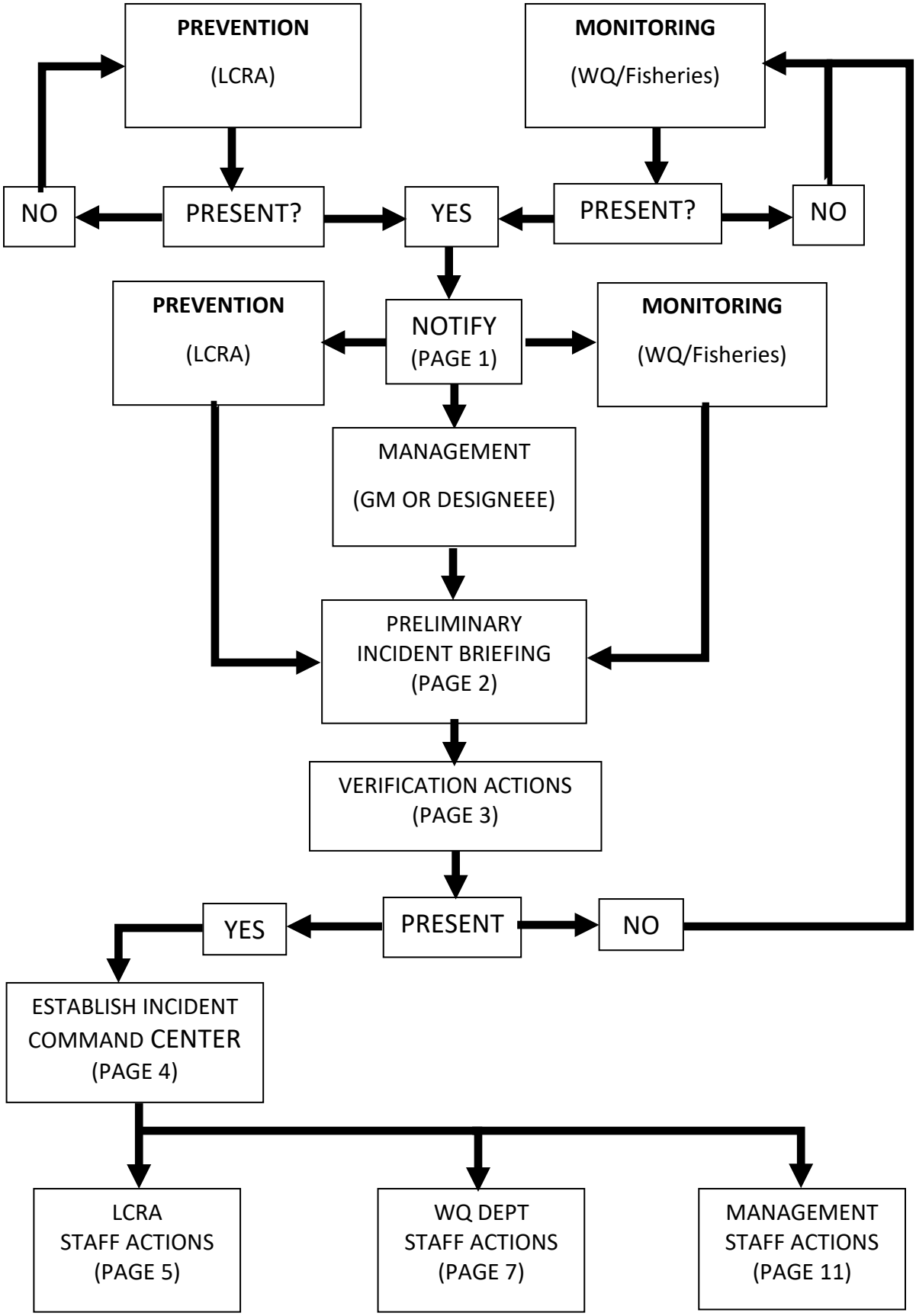
This Rapid Response Plan is the action to be taken should dreissenid mussels be discovered in Lake Casitas, despite the best efforts of all concerned. The objective of the Rapid Response Plan is to provide immediate step by step action plan with protocols for notifications, containment, control and eradication. The initial discovery and actions after verification will be managed as an emergency response through the establishment of an Incident Command Center (ICS) in compliance with National Incident Management System (NIMS). Through the ICS, actions will be taken to facilitate enhanced monitoring and control measures, notifications and public information.

In response to invasive mussels being found in the Colorado River system, Casitas Municipal Water District instituted an aggressive vessel quarantine program at the Lake Casitas Recreation Area in 2008. In 2015, vessel decontamination policies and procedures were adopted. The Lake Casitas Recreation Area staff performs a prevention function through the application of the vessel quarantine program. The District's Water Quality and Fisheries staff performs a monitoring function through routinely scheduled water quality monitoring and visual in-lake inspections at Lake Casitas and Matilija Reservoir to determine presence –absence of invasive mussels.

In 2016, the District contracted RNT Consulting Inc. to review the existing Quagga/Zebra mussel prevention protocols as well as the operations of Lake Casitas Reservoir to further strengthen the existing efforts to prevent an introduction of invasive dreissenid mussels. The July 13, 2016 Lake Casitas Vulnerability Assessment for Invasive Mussels and Control and Management Plan for Invasive Mussels Prevention was adopted by the Casitas Board of Directors. The information from that document has contributed the scientific information and methodology for this Rapid Response Plan.

INVASIVE MUSSEL RAPID RESPONSE PLAN

FLOW CHART



I. NOTIFICATION ACTIONS

Notification Contact numbers are listed in Appendix A

A. Suspicious or positive findings will be reported **immediately by staff** to the:
- General Manager or General Manager Designee; and
- Park Services Manager; and
- California Department of Fish and Wildlife; and
- USBR Reclamation
  - Detection Laboratory for Exotic Species (RDLES)
  - South Central Coast Area Office

Additional CMWD Staff that need to be notified are:
- CMWD Managers and Supervisors.
- CMWD Staff that will need to respond to the event.

B. The initial notification shall include a description of what is known at the time of the notification, including but not limited to:

a. What was found?
b. When was it found?
c. Where was it found?
d. How was it found?
e. Why is it important?
f. What has been done?
g. What is being done now and by whom?
h. Who has been contacted?
i. Where can more information be found?
j. What will be done in the future?

C. The General Manager is responsible for the notification of the Board of Directors when:
a. There is a positive discovery; and
b. A verification notice from the RDLES or CDFW laboratories; and
c. When the Response Team or Park Manager determines that actions require the immediate restriction of recreational use at Lake Casitas; and
d. The pertinent facts are compiled into a dated fact sheet that outlines what is known about the infestation and the response; and
e. Prior to public information being disseminated; and
f. The response is to be implemented.

II. PRELIMINARY INCIDENT BRIEFING

The main function of the preliminary incident briefing is to provide initial coordination of verification actions and to ensure that all relevant staff members have an understanding of the status of the incident. The briefing will also provide a forum to discuss further actions and resource needs should the verification results return as 'positive' for invasive mussels.

The briefing will be coordinated by management staff and will include the following staff members (or designees) as the Response Team:

1. General Manager
2. Water Quality Supervisor
3. Park Services Manager
4. Operations & Maintenance Manager
5. Public Affairs-Resource Manager
6. Treatment Plant Supervisor
7. Other staff members or agencies as may be appropriate

Upon conclusion of the briefing, the General Manager (or General Manager's designee) will then assess the situation, make assignment in accordance with this plan and other actions deemed necessary, and coordinate with ~~others such as~~ the Board of Directors, California Department Fish & Wildlife, and others as deemed necessary.

III. VERIFICATION ACTIONS

A. Verification – Verification will be undertaken by the District upon initial detection and may occur in either or both of two methods:
   1. Visual identification that can be verified in the field by a CDFW biologist; or
   2. Suspect positive microscopic results gathered by Water Quality department to be verified by CFW and RDLES lab analysis.
      - Unless otherwise directed by the CDFW, the handling of live mussels shall be directed by the CDFW biologist.
      - Verification results are to be reported to the Water Quality Department, and immediately reported to the General Manager.
      - Subsequent to the verification results, the General Manager will brief the Response Team and inform the Board of Directors.

B. Results Notification - The results of the verification actions will be received by the Water Quality Department as expediently as possible and will be immediately communicated to Management Staff.

C. Verification Response. Once verification of presence is confirmed, the LCRA, Water Quality and Management staff will begin to conduct their respective assignments and tasks which are identified by the Plan, under the direction of the Incident Command Center structure.

IV. Establishing the Incident Command Center (ICC)

A. Upon positive verification of invasive mussels, management staff will establish an (ICC) as provide in the District's Emergency Response Plan.
B. The purpose of the ICC is to:
    a. establish clear lines of communication;
    b. a central location for information gathering;
    c. facilitate decision making abilities and coordination; and
    d. provide information to the public;
    e. provide the tracking of financial aspects of the incident.
C. The location of the ICC will be determined by the General Manager (or Designee).
D. The ICC shall establish the following stages of response:
    a. Initial Response Stage
    b. Extended Response Stage
    c. Long Term Response Stage

E. In each response stage the ICC will establish the level of:
    a. Communications and public outreach efforts;
    b. Coordination with regulatory and scientific agencies;
    c. Contracting of consultants and aquatic pesticide applicator;
    d. Monitoring and testing schedules;
    e. Schedules for aquatic pesticide applications;
    f. Frequency of meetings and information dissemination;
    g. Changes of public access to infected waters;
    h. Evaluation of the need for an ongoing response Team and, as appropriate, disband the incident organization and transition to communications and coordination via normal operating procedures.

LAKE CASITAS RECREATION AREA STAFF ACTIONS

If mussels are confirmed as present in Lake Casitas, all efforts will be made to contain the mussels and keep them from spreading to other water bodies. This will be accomplished by managing transportation pathways, and continuing to educate boaters, anglers, construction and maintenance equipment operators and performing watercraft inspection and watercraft decontamination as required.

A. Public Outreach

Notify stakeholders, customers, concession, other agencies, and the public in coordination with Public Affairs Manager. These methods are likely to include the following activities:

- Widely distribute brochures, pamphlets, erect signage, install wayside exhibits, and distribute other educational information.
- Install and maintain educational information where targeted visitors will see it. Given concerns with transportation pathways, signs and information literature will be placed at all marinas, launch ramps, parking lots around the lake.
- Initiate local community outreach. Distribute educational information to local businesses.
- Train project staff in the messages that should be conveyed internally and externally.

B. Lake Quarantine Measures

Work with law enforcement and management partners (state and local agencies, water districts), to contain the infestation through quarantine of watercraft, boater and angler education, watercraft inspection, and decontamination procedures which are already in place.

LCRA Staff will:

- Halt boat entries and order all vessels to be removed from the lake.
- Set up temporary free parking/storage for vessels not moored and not in dry storage to encourage customers to keep the vessel on property.
- Inspections may take place, but no additional entry or re-entry of vessels will occur until:
  - Invasive mussel eradication tactics are in place.
  - Quarantine procedures are on-line.
  - Appropriate decontamination measures are in place. These measures will include, if available, thermal decontamination and at a minimum 'Clean-Drain-Dry' decontamination for vessels wanting to leave lake.
  - Quarantine procedures will continue until deemed lifted by the General Manager (or Designee).

C. Enhanced Inspections

Expand rigorous boat inspections which are currently in place for watercraft entering the lake. Should mussel be introduced into Lake Casitas the current procedures used to control boating on Lake Casitas will be applied to boats leaving the reservoir as well as entering it. This offers a high level of assurance of containment as the inspection and decontamination of boats leaving the reservoir will prevent the spread of dreissenid to other water bodies in California and possibly to other states via the boating vector.

WATER QUALITY DEPARTMENT STAFF ACTIONS

A. **Permits**. Prior to a discovery of an infestation, obtain the appropriate permits for pre-determined the application of aquatic pesticide product .

SWRCB NPDES Permit for Animal Aquatic Invasive Species.

SWRCB contact person: Gil Vasquez (916) 322-1400. $2062/FY year fee.

B. **Contract Applicators**. Prior to a discovery of an infestation, develop a list of consultants and applicator contractors that can be implemented during the incident and during in follow up actions.

Applicator 1: Contract with Clean Lakes, Inc. 31320 Via Colinas, #114, Westlake Village, CA - Thomas Moorhouse (Phone: 818-889-8691, Cell: 818-201-5982).

Applicator 2: _____

C. Measure/Assess the Extent of the Infestation

1. Delineate the mussel infestation as soon as the first mussel/veliger is found and verified. Determine the epicenter and the area of the infestation.

2. Contract underwater scuba professionals to examine submerged structures, such as large rocks, buoys and their chains and anchors, concrete/metal/wooden piers and pipes and hulls of moored boats moored to determine the locations of the mussel infestation.

3. Assess the prevailing wind and water current patterns of Lake Casitas to delineate the infestation.

4. Perform water quality sampling in either circumference or linear transects equidistant from the epicenter and proceed outward until mussels/veligers are no longer found. SCUBA divers may be used to search submerged surfaces and plankton hauls will be used to search for larvae. Particular attention will be paid at points on transects where prevailing winds/currents occur.

5. Prioritize areas of the lake to treat upon findings. If in fact only one bay is infested, it may be possible to curtain off the mouth into the main body of water to contain the infestation.

D. **Control**

1. Once containment of the mussel infestation is implemented and the size of the infestation assessed, a decision to implement an eradication protocol can be determined.

2. Consult with other federal and state agencies regarding compliance or permitting needs for eradication. Current and pending laws or regulations that contain provisions regarding access to affected properties for containment, treatment, and control or any legal or regulatory concerns related to treatment will also be considered during the decision making.

E. **Eradication**

Chemical treatment is the only practical way to achieve eradication in Lake Casitas should dreissenid mussels become established. The two primary chemicals used for eradication are potash and copper-based algaecides such as EarthTec QZ from Earth Science Laboratories, Inc.

Eradication using Potash.
Potassium compounds are toxic to most bivalves, including dreissenids and corbiculids. Acute treatment of 100 mg/L for two days at an ambient temperature of 15°C resulted in 100% mortality of dreissenid adult mussels. In summary, an eradication treatment using potash would not impact fish and would have minimal impact on the drinking water produced from Lake Casitas. Potash application will require additional approvals by the State.

Eradication using Copper Based Products.
Copper sulphate and the copper rich algaecide, Cutrine-Ultra® and EarthTec , have been reported to eliminate adult mussels while being used for algal control in various systems at levels of 30 to 50ppb as copper. In August of 2013, EarthTec was granted federal EPA approval for use against Zebra and Quagga mussels. State labels have been granted in all 27 states that have dreissenid mussels, including California.

Table 4.1 shows detailed mortality of adult Zebra mussels exposed to a copper rich algaecide EartchTec QC applied for a number of days. EarthTec is NSF-approved for drinking water and is frequently applied in potable water lakes, reservoirs and at the intake of water treatment plants for algae control.

Dose as EarthTec	Dose as element	Mortality after: 6 days	11 days	13 days	19 days	25 days
3 ppm	150 ppb	100%				
2 ppm	100 ppb	100%				
1 ppm	50 ppb	50%	100%			
0.6 ppm	30 ppb	15%	55%	70%	80%	pending

The District will need to consult and contract with a licensed aquatic pesticide applicator prior to the incident, and keep current with regulatory changes that may influence the success of eradication.

F. Long Term Monitoring

Should a dreissenid invasion occur, the monitoring program will be changed from current presence and absence detection to determining the level of infestation at different times of the year, the periods of reproduction and of settlement, and the periods of most and least intense infestation levels. Growth rates and longevities will also be part of the analyses. The monitoring program will be a combination of best available techniques and staff preference and availability. The following items will be part of the monitoring program:

- Periods of settlement
- Densities of larvae and adults
- Maximum sizes and biomasses of adults
- Development rates of larvae
- Growth rates of adults

The monitoring program will meet the California Fish and Game requirement for delineation of infestation, including both adult mussels and veligers. Further assessment of the control and eradication results may cause a change to future control and eradication actions.

Management Staff Actions

Response Team Meeting

Once invasive mussels are verified as present in Lake Casitas and the appropriate Incident Command Center activated, management staff will conduct a Response Team meeting.

A. The purpose of the Response Team meeting will be to initiate and coordinate the rapid response of Casitas departments, personnel and external agencies. This includes:

1. Water Quality Department staff actions
2. LCRA staff actions
3. Public Information Office staff actions
4. External agencies as deemed appropriate

B. The Response Teammeeting will be coordinated by management staff and will include the following staff members (or designees):

1. General Manager
2. Water Quality Supervisor
3. Park Services Manager
4. Operations & Maintenance Manager
5. Public Affairs-Resource Manager
6. Treatment Plant Supervisor
7. Other staff members and agencies as may be appropriate

C. Public outreach and education in relation to the invasive mussel incident will be conducted through the Public Affairs Manager in conformance with the '*Casitas MWD Invasive Mussel Communication Plan'* located in Appendix B.

D. Infrastructure Protection will be initiated in conformance with the *'Infrastructure Protection Measures'* in Appendix C.

D. Follow-up tactics meetings will be conducted as necessary to allow for the continued evaluation of rapid responses and to initiate possible changes in the response. This will be an essential function of the ICC.

APPENDIX A - CONTACT LIST

California Department of Fish and Wildlife		
Eloise Tavares Environmental Scientist Quagga Liaison for Casitas	562-342-7155	Eloise.Tavares@wildlife.ca.gov
Edward J. Hard, Chief Environmental Program Manager I (Managerial) M-10 Aquatic Invasive Species Branch Division of Boating and Waterways California State Parks	916.327.1865 Desk 916.628.5495 Mobile	One Capitol Mall, Suite 500 Sacramento, CA 95814 http://www.dbw.ca.gov/Environmental/ edward.hard@parks.ca.gov
Dominique Norton Senior Environmental Scientist (Specialist), Wildlife	916-203-4499	Dominique.Norton@wildlife.ca.gov
D. Russell Black Environmental Scientist Reservoir Research Program South Coast Region Department of Fish and Wildlife	Office (858) 467-4262 Cell (858) 860- 4000	
John Obrien Senior Biologist	(562)-370-8641	John.OBrien@wildlife.ca.gov.
CalTip 24 hour hot line to report in progress violations	1-800-334-2258	
Jim Snider, UC Davis Bodega Bay (send sample for identification overnight delivery)	(707) 875-2066	James.snider@wildlife.ca.gov Bodega Marine Lab 2099 Westshore Rd. Bodega Bay, CA 94923-0247
Bureau of Reclamation		
Stacy Brown Land Use and Resource Planning Specialist Bureau of Reclamation	559-487-5408	South-Central California Area Office 1243 N Street, Fresno, CA 93721

		sbrown@usbr.gov
Michael Inthavong Land Use and Resources Planning Specialist, SCC-450	559-487-5049	Bureau of Reclamation, South-Central California Area Office 1243 "N" St., Fresno, CA 93721 minthavong@usbr.gov
Denise M. Hosler Environmental Applications and Research Group	Phone: 303-445-2195 Fax: 303-445-6328 Cell: 303-250-9166	Bureau of Reclamation, Denver Federal Center, Bldg. 56, Rm 2010 P.O. Box 25007 (86-68220) Denver, CO 80225-0007 e-mail: Dhosler@usbr.gov
QID (the private company we contract with that tracks quagga infestation in western USA)		
Marshall Pike Vice President Business Development	PH 530-529-1512 CELL 530-949-9451	www.quaggainspections.com< http://www.quaggainspections.com/>
Lake Piru (United Water Conversation District)		
Clayton W. Strahan Senior Park Service Officer Lake Piru Recreation Area	O: (805) 317-8990 C: (805) 625-4897	Claytons@unitedwater.org
Mauricio Guardado General Manager	805-525-4431	mauricio@unitedwater.org
Big Bear Lake (Big Bear Municipal Water District)		
Mike Stephenson General Manager	909-866-5796	mstephenson@bbmwd.net
California Department of Fish and Wildlife for in-progress violations	CalTIP line 1-888-334-2258, 24 hours a day, seven days a week.	

APPENDIX B - COMMUNICATION PLAN

Introduction

Benefits of an invasive mussel communication plan include providing consistent message to all agencies, partners, and the public, as well as keeping all stakeholders informed and educated on the invasive mussel incident and the ongoing management of them at Lake Casitas.

Key Communication Goals:

- Assure public of actionable efforts to maintain water quality and reliability;
- Inform recreational boaters on restrictions and changes in procedures;
- Provide required information and updates to regulators and outside agencies;
- Inform staff of essential recreational and utility operational changes and concerns;

Initial Action:

Incident Briefing to Senior Management/Response Team Participants

Discuss and identify all facts related to discovery. Collect any visuals if possible for more effective communication (photographs/videos)

Public Affairs Manager Initial Tasks:

- Develop fact sheet that outlines what is currently known:
  - What was found?
  - When was it found?
  - Where was it found?
  - How was it found?
  - Why is it important?
  - What has been done?
  - What is being done now and by whom?
  - Who has been contacted?
  - Where can more information be found?
  - What will be done in the future?

- Develop key messages to communicate to stakeholders:
  - Invasive mussels discovered at Lake Casitas
  - Casitas is implementing measures to protect water quality and reliability
  - Implementation of rapid response plan aimed at eradicating mussels
  - Immediate Restriction of all boats into the Lake Casitas Recreation area as well as onto Lake Casitas.

- Establish and maintain communications with key stakeholders:
    - Create talking points
    - Develop briefing statement
    - Issue news releases
    - Develop website landing page
    - Communicate on social media platforms

Outreach to All Targeted Audiences

- CMWD Utility and recreational customers of Casitas – *Public Affairs Manager* to post article on website and social media platforms. *Recreational employee* to post on recreation sites.

- Board of Directors – *General Manager* - Send email to all board members explaining findings and actions

- Casitas Employees – *Public Affairs Manager* - Send email to all employees explaining issue

- Neighboring reservoirs/partnering agencies – *Recreation Manager* to call/email, list agencies such as boating organizations, concessionaires, businesses, government agencies, non-profit organizations, special interest groups, other recreation and water agencies.

- Regulators – *who is* to call/email, list persons to contact

- News Media – *Public Affairs Manager* will send out press release to media list. Public Affairs Manager will follow up with calls/emails to reporters at the Ojai Valley News, Ventura County Star, KEYT TV, KVTA radio, and KCLU radio.

General Public Outreach: Venue Specifics

Casitas Website

Description: Public Affairs Manager to create incident page at the top of the website, dedicated to providing up-to-date information about the invasive mussel status.

Objective: To provide basic information about what Casitas is doing to address introduction of invasive mussels in the lake.

Social Media

Provide regular postings to include visuals on Facebook, Twitter, and Instagram. Develop incident hashtag (#) such as #QuaggaLakeCasitas. Monitor and respond to comments on a regular basis.

Recreation Brochure

Description: A brochure, created in-house, which includes information about boating requirements.

Objective: To provide a brief easy-to-understand educational brochure about controlling invasive mussels in the Lake Casitas.

Ongoing Communications to all targeted audiences

Continue to update targeted audiences on activities to eradicate mussels, changes in boating requirements, changes in cost and operational issues, and monitoring.

- Develop temporary sign posting for Recreation
- Provide handouts to vehicles entering Recreation

Develop materials for outreach at community events (Ojai Day)

APPENDIX C - INFRASTRUCTURE PROTECTION MEASURES

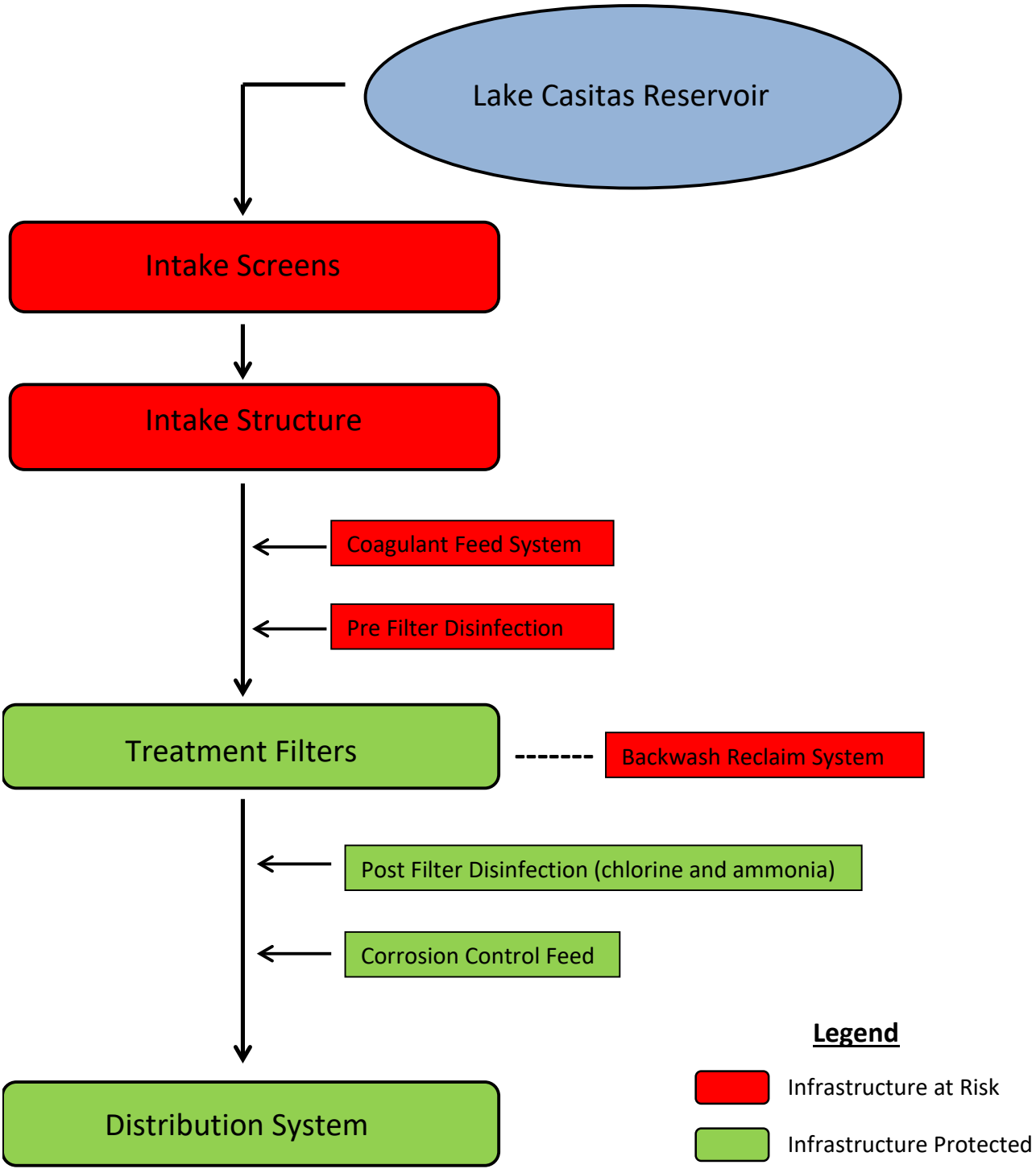
Overview: As concluded in the 2016 Lake Casitas Vulnerability Assessment, the introduction of dreissenid mussels into Casitas reservoir would also pose a significant risk to the dam intake structure and associated conveyance piping. Given the severity of the risk and in order to further develop readiness planning, Casitas operations staff have begun work on both identifying the specific assets at risk and evaluating the best available control methods for mitigating the impact on the critical infrastructure.

Infrastructure Assessment: In addition to the intake structure and conveyance piping identified in the Vulnerability assessment, a follow-up assessment on the remaining Casitas treatment and distribution facilities was performed by operations staff. It was determined that the coagulant feed system, pre filter chlorination, and portions of the backwash reclaim system are also at risk. Post filter treatment facilities and the entire CMWD distribution system are considered to be adequately protected. (see attached risk matrix chart)

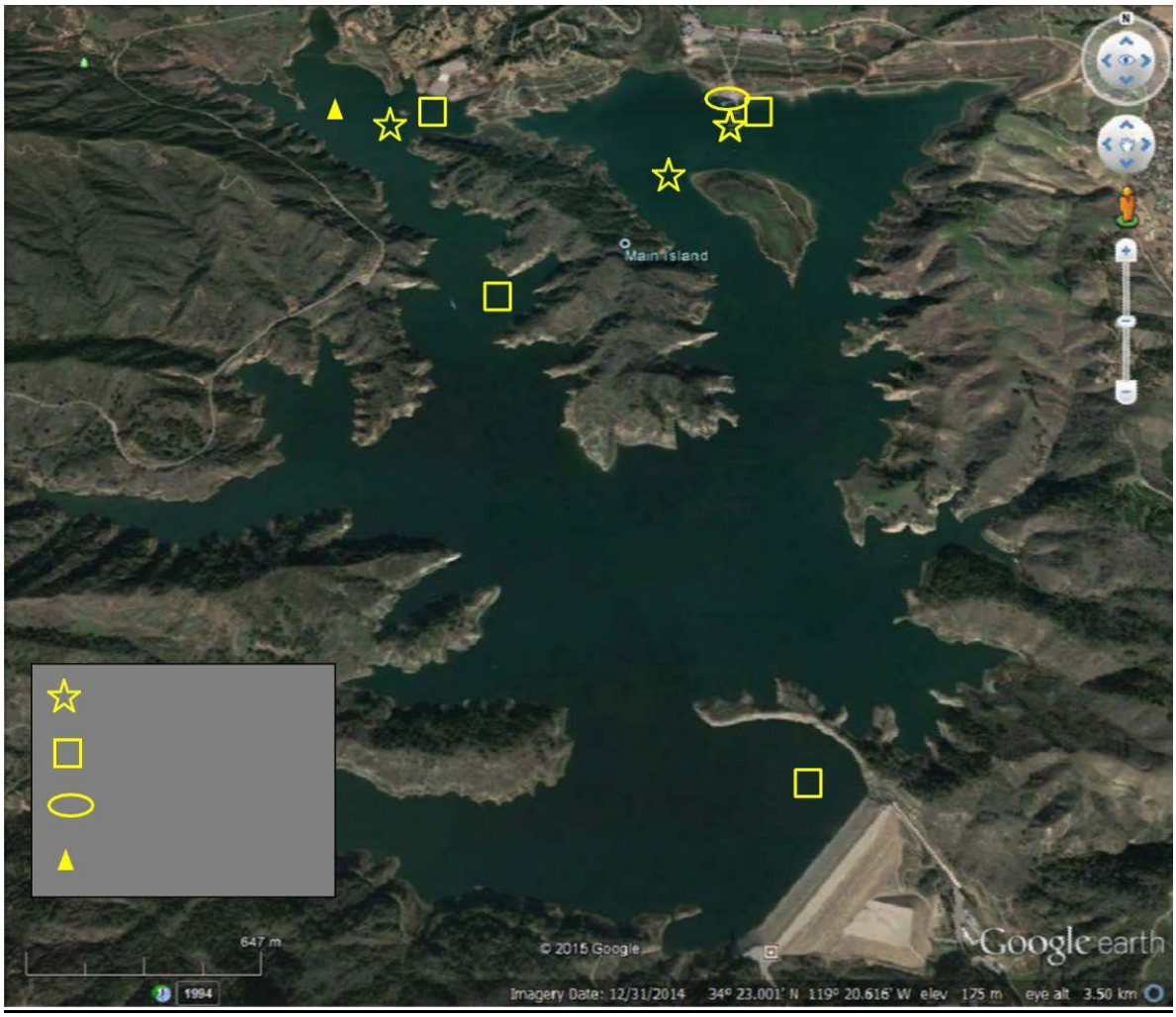
Recommended Control Options: Based on a preliminary review of current facility operations, existing mussel data and research, water quality impacts and prospective cost effectiveness, the following were selected as potential control options. It should be noted that the below recommendations may be subject to change based on additional assessments and research.

- Mechanical Cleaning – applicable to the intake screen and intake structure piping; inclusive of blasting and scraping the intake screens and pigging of the intake structure conveyance piping.
- Foul Release Coatings – applicable to the intake screens; foul release coatings prevent and/or reduce the strength of mussel attachment. At the present time, non toxic silicone foul release coatings are the most promising. Considerable research has taken place over the past decade, including a comprehensive report prepared by the USBR titled “Coatings for Mussel Control from Six Years of Field Testing. http://www.usbr.gov/mussels/docs/MERL2014-64Coatings.pdf
- Chemical Oxidation Treatment (Chlorination) – applicable to the intake structure and treatment plant conveyance piping; continuous or intermittent feed at an estimated dosage rate of .5 to 2.0 mg/l.
- Chemical Oxidation Treatment (Potassium Permanganate) – applicable to the intake structure and treatment plant conveyance piping; continuous or intermittent feed at an estimated dosage rate of 1.0 to 2.0 mg/l.
- Potassium (Potash) – applicable to the intake structure and treatment plant conveyance piping; as a “non pass through” treatment option. Existing research has demonstrated that a dosage rates of 100mg/l with a two day detention time is acutely lethal to mussels.

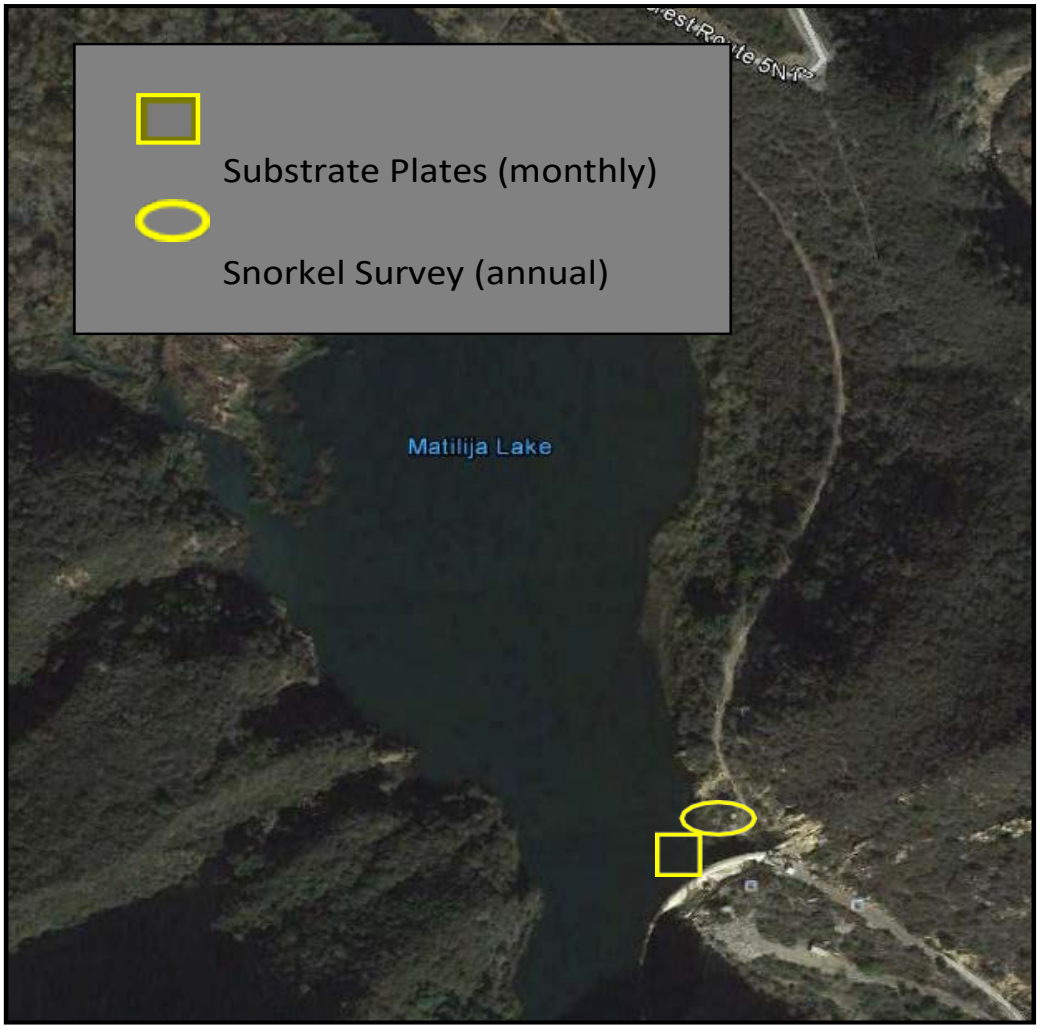
Intake Structure and Treatment Facilities



APPENDIX D - MAPS



Lake Casitas



Matilija Reservoir

CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM

TO: STEVE WICKSTRUM, GENERAL MANAGER

FROM: TODD EVANS, ASSISTANT ENGINEER

SUBJECT: SEWER STUDY FOR LAKE CASITAS RECREATIONAL

DATE: NOVEMBER 17, 2017

RECOMMENDATION:

It is recommended that the Board of Directors direct staff to begin discussions with Ojai Valley Sanitary District (OVSD) about a possible direct connect to OVSD collection system.

BACKGROUND AND DISCUSSION:

The District has long desired to connect the sewer system at the Lake Casitas Recreational Area into the Ojai Valley Sanitation District system. The District put out a Request For Qualifications (RFQ), conducted interviews and selected Hasan Consultants of Ventura to investigate this feasibility.

Hasan Consultants were tasked with: assessing the current state of the existing sewer system, identifying alternative systems, identifying liabilities and benefits for the current system and the proposed alternatives, and preparing initial budgets for the alternatives.

The report recommends a hybrid system that will improve public safety by reducing/eliminating truck trips outside of recreation area and reduce spiking at the waste treatment plant thereby benefiting both Casitas and OVSD. The payback period for the hybrid system is between 8 and 19 years, depending on the option selected. None of the options provide for the replacement of the existing restrooms and holding tanks.

Included with this memo is a copy of the Final Report for your review.

Final Report

SEWER FEASIBILITY STUDY
LAKE CASITAS RECREATIONAL AREA

CASITAS MUNICIPAL WATER DISTRICT

HASAN CONSULTANTS

June 2017

HASAN CONSULTANTS
Civil Engineering • Environmental Engineering/Planning

June 30, 2017

Casitas Municipal Water District
1055 North Ventura Ave.
Oak View, CA 93022

Attn: Mr. Todd Evans
Assistant Engineer

Subject: LCRA Sewer Feasibility Study Final Report

Dear Mr. Evans:
Hasan Consultants is thankful to Casitas Municipal Water District for giving us the opportunity to serve on LCRA Sewer Feasibility Study. CMWD is now able to finalize its intent to connect to Ojai Valley Sanitation District's facilities.

The last project we completed for you was crossing a large canyon involving a water main. The directional drilling used for the project was praised by local and national media as an example of the District's continuous effort to save its customers money through innovation. The project was also featured on the cover of *National Driller Magazine*, February 2013, and articles appeared on other trenchless technology magazines.

Another project we completed for you was on backwash filter residue. These projects gave us tremendous understanding and appreciation of the staff members at CMWD. The cooperation we received is outstanding. Whatever background material we needed was provided to us in no time, any interview we requested with operators was provided quickly and review of submitted materials were conducted in a very reasonable amount time-all have contributed to the success of the current project. For us, you have been an exceptional project manager!

Our outstanding team to serve the CMWD on this sewer feasibility project included three renowned wastewater experts in Southern California--**Mark Capron**, **Mohammed Hasan** and **John Mundy**. We feel gratefulness for allowing us this accomplishment.

You can call me with any question at anytime at (805) 218-5574.

Sincerely,

Mohammed Hasan

Mohammed A. Hasan, dual M.S., P.E., R.E.A., F.ASCE, PWLF
Principal

Enclosure

2436 E. Thompson Blvd., P. O. Box 6385, Ventura, CA 93006

Casitas Municipal Water District
Lake Casitas Recreational Area

Wastewater Discharge Facilities Options
Preliminary Engineering Study

Hasan Consultants
2436 E. Thompson Boulevard
Ventura, CA 93003
June 2017

Casitas Municipal Water District

Board Members

Mary Bergen, Director
Jim Word, Director
Pete Kaiser, Director
Bill Hicks, Director
Russ Baggerly, Director

General Manager
Steve Wickstrum

Engineering Manager
Neil Cole

Project Manager
Todd Evans

Hasan Consultants

Senior Team Members
Mohammed A. Hasan
John R. Mundy
Mark E. Capron

Executive Summary

Since the early 60's Casitas Municipal Water District has been pondering the evaluation of the various sewage facilities at Lake Casitas to make the efficient collection and disposal of sewage generated at the site. Board actions and negotiations along with staff reports indicate a strong desire to consolidate operations to make the system more efficient and economical. Two reports, one by Boyle Engineering in 1976, and another by District's Principal Engineer in 1998, reviewed various scenarios and alternatives for direct transmission and disposal of sewage to the Ojai Valley Sanitation District (OVSD).

Boyle estimated peak flow of approximately 400,000 gallons per day (GPD) of wastewater discharge from LCRA. This was based on 200 GPD per acre times 320 acres times a factor of 5 based on peak visitor counts. The Casitas report estimated a peak flow of approximately 40,000 GPD based on LCRA trucked wastewater flows and 3,000 GPD backwash water. Hasan Consultants' estimates a peak flow of 39,540 GPD by 2040. This estimate was based on trucked wastewater flow, a future population increase based on county projections, and adding 5,000 gpd backwash water should the District decide to dispose of this water to OVSD. The overall decrease in flow since 1976 is due to the reduction of visitors to the lake and the installation water conserving fixtures in recent years.

In August of 2016, Hasan Consultants of Ventura was retained by the Casitas Municipal Water District to perform a preliminary engineering study to identify the facilities and associated cost necessary to discharge wastewater from the LCRA to Ojai Valley Sanitation District (OVSD). This investigation identified current and future wastewater generation, pipeline alignments and cost, and compared the benefit of reduced trucking operations to the cost estimates for pipeline construction.

Three different pipeline alignments using open cut and directional drill construction were identified for connection to the nearest OVSD pipeline. Directional drilling provides the best possible alignment and is recommended. The pipeline would begin near the current recreational vehicle storage yard and connect to OVSD pipeline on Santa Ana Road at Haley Ranch. A 4-inch welded High Density Polyethylene pipe will provide sufficient capacity for carrying wastewater. A 10,000 gallon equalization tank is necessary to balance discharge flow to OVSD and provide holding capacity for trucking activities during the day. Estimated cost for the improvements are between $425,000 and $1,090,000. These costs can be recouped between 8 to 18.8 years with reduced trucking cost. This analysis does not take into account any cost related to annexation or purchase of capacity in OVSD facilities.

Table of Contents

Section 1
Purpose of this Report

The Casitas Municipal Water District (District) was formed in 1952 under the Municipal Water District Act of the State of California. The District's primary function is to provide supplemental potable water, collected from the watershed surrounding Lake Casitas, and supplied to the communities of Ojai, Meiners Oaks, Casitas Springs, western portions of the City of Ventura and areas north of Ventura along Highway 101 commonly called the Rincon. Water demand from the District varies ranging from 15,000 to 23,000 acre-feet each year.

In addition to providing a potable water supply, Lake Casitas and its associated facilities support recreational opportunities within the District such as camping, fishing, and boating. These facilities, commonly known as the Lake Casitas Recreational Area (LCRA) provide lake recreation services to more than 750,000 people each year.

Because swimming is not allowed in the lake due to public health standards for public drinking water supplies, the District also operates a water feature on the lake property. This facility is open each year from Memorial Day through Labor Day weekend supporting more than 76,000 recreational swimmers each year.

Other lake facilities include outdoor restrooms, showers, stores, a restaurant, office facilities and two recreational vehicle waste disposal sites. All of these facilities, except the 5,000 gallons per day of backwash water from the water park, generate domestic sewage.

Hasan Consultants was selected to evaluate three areas:

1) Review the current wastewater generation and disposal activities at the recreational area

2) Identify potential locations and associated construction cost estimates for the construction of three wastewater pipeline disposal options for connection to the Ojai Valley Sanitation District (OVSD) sewer collection facilities

3) Compare the continued offsite trucking operations cost to the recommended pipeline alternative. This review will assist the District in determining the current and future disposal alternatives to meet its long-term wastewater disposal needs within the recreational area

Section 2
Prior Studies

Since 1976, the District has considered options for collecting, transporting and treating wastewater from the LCRA. Prior studies and reports have documented recommendations but no action to move forward has taken place. This section will provide a brief overview of the work completed in those prior studies.

Boyle Engineering

In a transmittal memorandum dated December 21, 1976 Boyle Engineering (Boyle) submitted to the District a draft of a preliminary engineering study looking at pipeline alternatives for discharging wastewater from the LCRA to the OVSD sewer system. At that time, Boyle estimated a future peak wastewater flow of approximately 400,000 gallons per day generated within the 320 acre LCRA.

Boyle did not look at on-site collection facilities, but did indicate that these could be phased in over a ten-year period. Boyle identified three alignment alternatives with a common connection point located at Burnham Road and Santa Ana Road. While the alignments were similar, they varied in length, type of pipe to include gravity and force mains, and possible pumping facilities. Capital cost estimates, in 1976 dollars, ranged from $400,000 to $1,004,000. This study is included in the Appendix.

Casitas Memorandum

A memorandum dated August 12, 1998 was prepared by the Principal Civil Engineer and addressed to the General Manager. It provided an overview of the following:

- Current wastewater handling practices at LCRA.
- Some history related to annexation and connection to the OVSD facilities.
- Current and future loadings.
- Collection alternatives, and;
- Three future wastewater handling and disposal alternatives.

The disposal alternatives included a direct connection to the OVSD with two other options including an onsite package treatment plant and a lagoon treatment system. Estimated future peak wastewater flows were estimated to be 40,000 gallons per day. No cost estimates for proposed facilities were provided. This memorandum is included in the Appendix.

Section 3
Wastewater Collection Operations

Sanitary Waste

As part of the LCRA operations, sewage is generated from the camping area restrooms, administrative buildings, shower buildings, recreational vehicle holding tanks, and onsite stores and restaurant. Since they are not connected by a common collection system, the sewage is collected by a 3,500-gallon pumper truck from storage pits at various sites throughout the recreational area. Each truck load is disposed at the OVSD Wastewater Treatment Plant, some 7.2 miles from the recreational area. On average 500 tanker trips are made each year with an average peak of 170 trips during the months of July and August and an average low of 50 trips from January through February.

The Casitas water park facility provides a water feature for visitors. The facility filters its pool water and generates an average of 5,000 gallons per day, with occasional peaks days of 20,000 gallons to maintain water quality. This water is currently disposed of by percolating it into an adjacent leach field. Alternatives for use of the backwash water include recycling onsite with additional treatment, flushing of facilities recommended in this report or disposed of in the OVSD system through facilities not identified in this study.

Section 4
Wastewater Flow

July 2011 through June 2016

As previously mentioned, more than 750,000 people visit the recreational facilities each year to enjoy camping, fishing and day use activities such as biking and hiking. Wastewater generated by these recreational visitors varies based on the time of year. An average of 9,000 gallons of wastewater is generated each day during the peak months of July and August and approximately 3,000 gallons each day is generated during the low months of January and February. These average daily flows equate to a flow that ranges from 6 to 2 gallons per minute over a twenty-four-hour period. The highest bimonthly peak period was in July/August 2013, with an average daily flow of 10,367 gallons.

For the five peak bimonthly periods of July 2011 through July 2015, flow averaged 3.76 gallons per capita per day. The five bimonthly low flow periods for Jan 2012 through January 2016 averaged 2.84 gallons per capita per day. Comparing this gallon per capita factor of the peak

period over the low period, 1.32 more gallons per capita are generated in July and August versus January and February of each year.

Figure 1 shows the variation of the number of visitors to the recreational area between July 2011 and June 2016. Peak visitation to the recreational area occurs between July and August of each year.

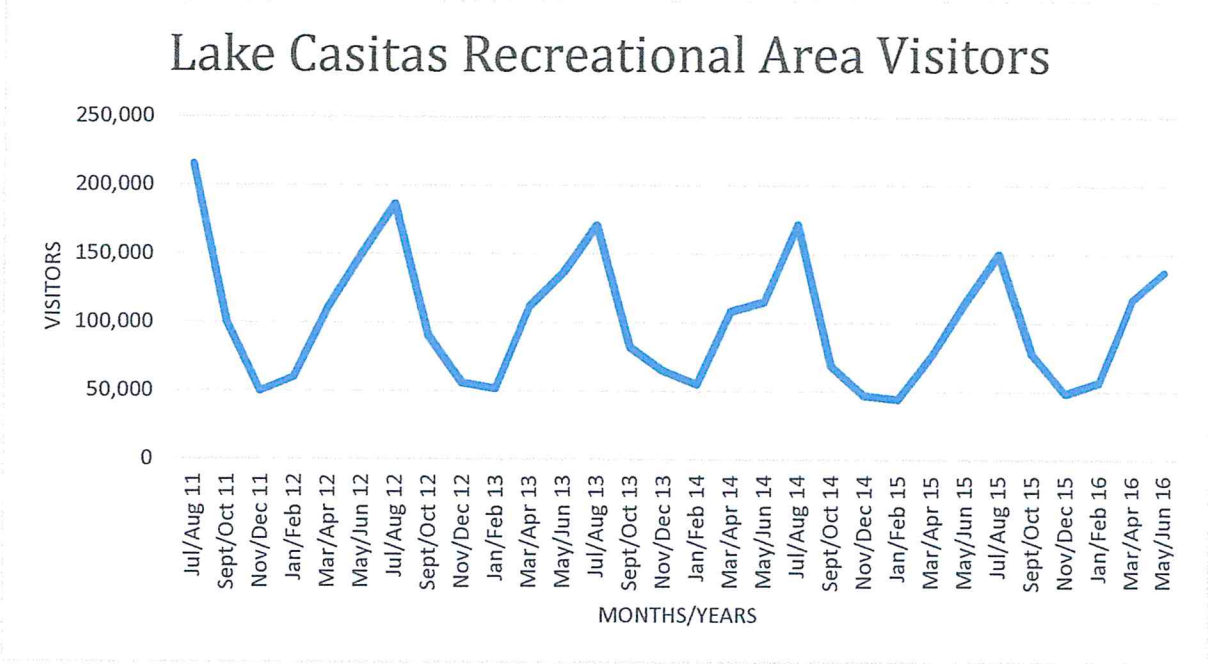


Figure 1: Variation of recreational visitors to LRCA from July 2011 to June 2016.

Future Flow Estimates

While the number of visitors have declined approximately 30% over the last six years, it is prudent to size facilities for the potential increase of visitors during for major events and future peak period months. These types of events may include fishing tournaments, concerts, car shows and future Olympic events. Further, disposal of the backwash water from the water park facility should also be considered in sizing facilities.

Due to the decrease in LCRA recorded attendance during the last six years an increase in the number of the visitors to the facility through 2040 is based on a county wide growth estimate. This Ventura County population growth rate from 2010-2015 can be found at the website: www.census.gov/quickfacts/table/PST045215/06111.

The table at census.gov shows a 3.3% population increase from April 2010 to July 2015. This is an annual average increase of 0.55% over the 6-year period. Applying this annual percentage to

the peak LCRA July/August 2011 attendance of 215,464 increases the estimated visitor count to 244,434 for July/August 2040.

This increase will generate an average peak period flow estimate of 14,824 gallons per day. This attendance estimate is only used to determine pipe size for future increased wastewater flow, should it occur from LCRA. It is good engineering practice to provide some level of excess capacity due to unknown flow changes that may occur in the future.

Because the onsite sewage pits within the LCRA will not be connected to a common sewer line, as outlined under Options 1 through 3, trucking wastewater within the LCRA is still necessary. To limit overtime for trucking, an eight-hour discharge period will be used. Therefore, the pipeline and a receiving station need to be sized to accommodate the daily flow collected within an eight-hour period. This time limitation will result in flow for the year 2040 of 14,824 gallons per day at an estimated flow rate of 30 gallons per minute over an eight hour period.

Year	Estimated Increased Visitors	Est Peak GPD for July/Aug
2018	216,649	13,139
2020	219,039	13,284
2025	225,129	13,653
2030	231,388	14,033
2035	237,822	14,423
2040	244,434	14,824

Table 1: Estimated Peak Day Flow LCRA @ 3.76 GPD/C Through 2040.

Peak Flow

Since peak day flows are not available a peak day was determined by reviewing the Monthly Load Count reports. The peak number of day loads appears to be seven on August 2, 2013. The average load count per day is three, based on a peak period in July and August 2013. The peak load count is 2.33 times higher than the average day. When applying this factor to the average gallons per day estimate this equates to a total one day peak flow of 34,540 gallons or a flow rate of 72 gallons per minute over an eight hour period.

The Water Park generates approximately 5,000 gallons per day of backwash water. This equates to approximately 10.3 gallons per minute over an eight-hour period. The backwash water is currently percolated in the soils adjacent to the maintenance facility yard. In the interim Casitas could use some of the backwash water to flush the facilities discharging to OVSD. Should the District wish to direct discharge this water to OVSD facilities, it will need to construct a pipeline from the backwash tanks connecting to one of the pipeline options reviewed in this report. An estimated cost to Ojai Valley Sanitation District for acceptance of backwash water was not included in the scope of this report.

Now that a peak flow number in gallons per minute has been developed, it is used to determine the appropriate pipe size for Options 1 through 3. Table 2 shows the estimated gallons per minute, over eight hours, to accommodate sewer flow in 2040 and backwash flows in the future, if desired.

Estimated Average Daily flow GPD - 2040	Peak Day Flow Factor	Estimated 2040 Peak Day Flow GPD	Estimated 2040 Peak Flow GPM	Estimated Backwash Flow GPD	Estimated Backwash Flow GPM	Total GPM for 2040
14,824	2.33	34, 540	72	5,000	10.3	82.3

Table 2: Total Gallons per Minute for Pipe Sizing over 8 hours of Flow.

Section 5

Flow rate comparison with previous estimates

The 1976 Boyle Engineering report estimated maximum day flow at 400,000 gpd with three methods:

1. Flow per acre of park area – 200 gallons per day per acre applied to 320 acres for estimated 320,000 gallons on the maximum day.
2. Flow derived in gallons per visitor day – 10 gallons per visitor day applied to 25,000 visitors to estimate 250,000 gallons on the maximum day.
3. Flow calculated from chemical toilet pumping records, based on converting chemical toilet pumping records into then standard 6 gallons per flush to estimate 390,000 gallons on the maximum day.

The 1998 District memorandum suggested maximum wastewater production of approximately 40,000 gallons per day. This estimate includes waterpark filter backwash at 3,000 gallons per day (gpd) and discusses the need to consider surge tanks to buffer the peak instantaneous flows. In comparison filter backwash has averaged close to 5,000 gpd including two days of 20,000 gpd during the summer of 2016.

Hydraulic and material considerations

Since the 1970's many kinds of sewers have developed. At the time of the Boyle Engineering report had 8-inch gravity or larger pipes with a 4-foot diameter manhole for access and to add air every 300 feet. This gravity flow sewer is laid on a gentle slope and designed to flow less than two thirds full. One objective is for the flowing water to draw air down through a hole in the manhole lid. The air helps to prevent septic conditions. Many parameters of grade and pipeline diameter had to be carefully adjusted. Boyle recommended open-cut installation of pipe and manholes up to 50 feet deep. This form of construction would be too expensive for LCRA.

Hasan Consultants recommends a new but proven single-user sewer design where the pipe can flow full under pressure as a force main but the motive force is gravity. The pipe is welded high-density polyethylene (HDPE). Flexible, yet strong and tough, HDPE is most compatible with horizontal directional drilling and is also life-cycle cost-effective in open cut installations. Access for removing blockages is through pressure-tight cleanouts (or "pig" entry points), which are the same diameter as the pipe and spaced thousands of feet apart. CMWD has used this same construction for its water distribution system.

This style of gravity flow can syphon through low points. However, when transporting stored/trucked wastes, it will require design features to prevent offensive odors, particularly at the OVSD connection point.

Pipe size, route and associated facilities

Hasan Consultants recommends nominal 4-inch welded HDPE pipe for all three of the sewer options desired by the LCRA in this study. In addition a 10,000 gallon below grade holding tank, with associated discharge and odor controls, will be necessary to retain trucked wastewater during the day to allow for flow pacing during off-peak hours. This will prevent the discharge from LCRA causing any potential stress or overflow in the OVSD system.

Options 1 and 2 are for pipe to the nearest gravity flow location on Lake Casitas property. Option 1 is open cut and Option 2 is horizontal directionally drilled. The 190-foot elevation drop over the 3,500 feet of pipe to the nearest gravity location allows gravity flow near 170,000 gpd (240 gpm) for the 3-inch pipe.

Option 3 is for the furthest gravity location on Lake Casitas property. The furthest gravity would drop about 50 feet over about 4,000 feet of pipe before reaching the steep section. Gravity in a 3-inch pipe would allow near 80,000 gpd (110 gpm) while a 4-inch pipe would allow 170,000 gpd (232 gpm).

The minimum recommended sewer velocity to keep solids in suspension in the sewer is two feet per second (fps) as steeper slopes and higher velocities can leave solids in low points in the sewer. A steady 10,000 gpd is 0.31 fps in 3-inch pipe or 0.18 fps in 4-inch pipe. Pipe size any larger will have lower velocities and potentially cause retention of solids resulting in odor problems. It is recommended that with a 3 or 4 inch a pulse of backwash water with at least 2 fps be regularly used (at least once a day) to prevent solids build up and odor problems.

Figures 2 and 3 show the possible paths, ground profile, and pipe profile for the three construction options. The shortest and least expensive path is Option 2, the directionally drilled pipe. The route is adjusted to avoid being directly under a structure even though it would generally be many feet below private property. Hasan Consultants did not include the cost of acquiring an easement from the property owner in its cost estimate.

Option 1, open cut is primarily in the off-asphalt right-of-way on the west side of Santa Ana Road. Option 3, extending to the furthest gravity location can be a latter phase, which joins to either Option 1 or 2.

At some future date, LCRA may want to extend the sewer line to the maintenance building. Figure 7, on Page 21, illustrates this alignment. The pipe from the maintenance building to the furthest gravity location will require a force main and pump due to the topography. Each of several existing wastewater holding tanks may require grinder pumps to reduce the solids for transport in the gravity line.

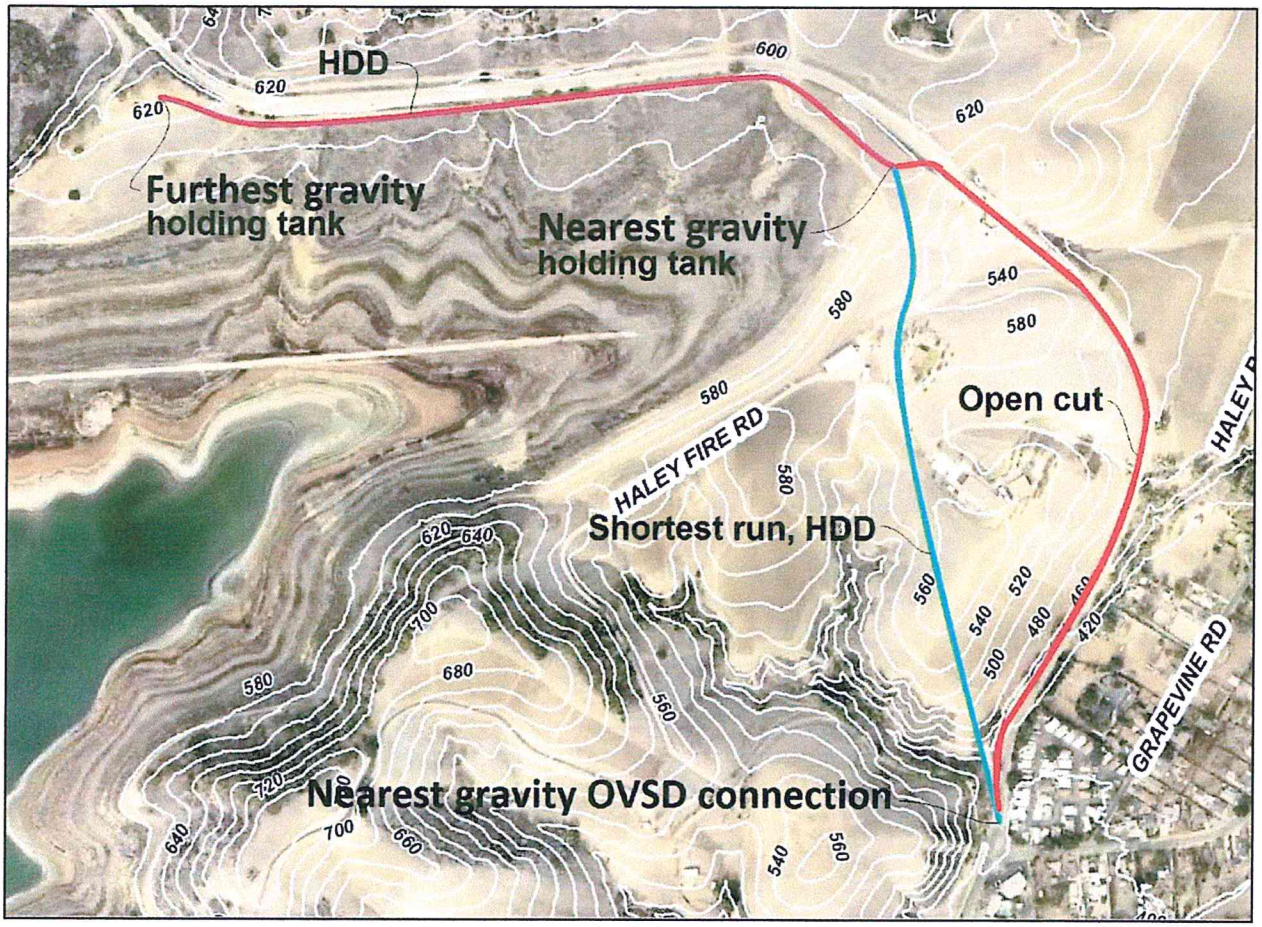


Figure 2: Aerial map view of pipe routes corresponding to pipe profiles.

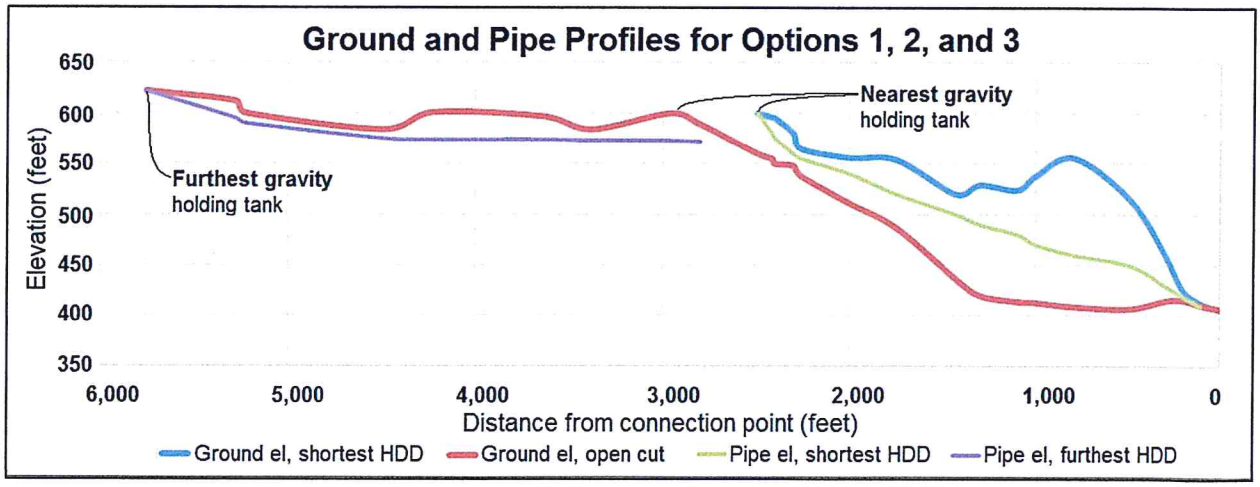


Figure 3: Possible ground and pipe profile (Open cut pipe is 4 feet below ground elevation).

The pipeline route of Figure 2 is similar to the Boyle Engineering Report Alternative 1, although the Boyle report included a pump station and pipe extending from the Maintenance Building. This alignment maintains 200 feet of horizontal distance from the lake high water line. It looks possible to keep the pipe running from the furthest to the nearest locations with at least 10-foot vertical distance above the lake's high water elevation of 567 feet. OVSD has extended the connection point into Santa Ana Road, closer than the intersection of Grapevine and Burnham Roads available in 1976.

Future Considerations

Olympic Events – A 4-inch pipe would support flow from 75,000 visitors in a day.

Waterpark operations – There appears to be an opportunity to save water and money with adjustments to the waterpark's water treatment system. For example, filtering and reusing the backwash water would save about 750,000 gallons each summer.

Recycling water – The 1998 CMWD memorandum discusses two options:

1. Direct connection to OVSD (this study)
2. A package treatment plant, perhaps like the Thatcher School treatment plant

Treatment options and the need for upstream water reuse have also evolved since 1998. LCRA wastewater could be treated onsite to percolation/irrigation quality for about the same capital cost and half the operating cost as the furthest gravity connection to OVSD.

Section 6

Cost Analysis

Cost for gravity-flow options 1 through 3, plus option 4, a force main to extend from the Maintenance Building to the nearest gravity flow point are presented below. Options 1-3 are presented as outlined in the Scope of Work:

Option 1. – Open cut from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake. (Abbreviated as "nearest gravity" in the tables below.)

Option 2. – Directionally drill (HDD) a pipeline from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake.

Option 3. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the furthest point inside the park while maintaining enough grade to avoid the need for a lift station. (Abbreviated as "furthest gravity" in the tables below.)

Table 3 provides a quick reference for comparing costs and construction times between options. Observations:

- There is relatively little cost difference between 3 and 4-inch pipe.
- Option 2 is less, but its costs do not include negotiating for HDD under private property.
- Option 3 requires significantly more money while saving only 1-mile on each round trip truck trip.
- If the initial construction extends from the Maintenance Building with a force main to the point of gravity flow, the construction avoids the cost of the receiving station. The cost will be slightly higher if the construction is phased.

Evaluated Options	Project Costs	Construction Time (months)
Option 1a - Nearest gravity open-cut, 3-inch	$480,000	3
Option 1b - Nearest gravity open-cut, 4-inch	$500,000	3
Option 2a - Nearest gravity HDD, 3-inch	$440,000	3
Option 2b - Nearest gravity HDD, 4-inch	$460,000	3
Option 3a - Furthest gravity mixed, 3-inch	$700,000	4
Option 3b - Furthest gravity mixed, 4-inch	$740,000	4
Option 4. - Maintenance Building with force main, 4-inch	$1,090,000	8

Table 3: Cost Alternatives summary, Options 1-3 and on to Maintenance Building.

Tables 3 through 10 show more details of each option's cost. The unit costs for 3 and 4-inch HDPE pipe, both open cut and horizontal directional drilling, are based primarily on recent bids for similar work at Carpinteria Sanitary District. Options 1-3 have identical receiving stations at the top of the gravity flow for the truck to dump. This pre-supposes a sophisticated receiving station allowing flow to be "metered" to Ojai Valley Sanitary District (OVSD) to time periods when there is ample capacity in the OVSD collection system. The sophisticated receiving station incorporates odor control features coordinated with odor control at the receiving end.

Option 1a. – Open cut from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake.				
4' deep trench pipeline on side of road	Units	Unit cost	Quantity	Extended
3" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$55	3,000	$165,000
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$345,000
Contingency	20%			$69,000
Engineering & permitting	20%			$69,000
Project total, rounded				**$480,000**

Table 4: Option 1a, Shortest open cut with 3-inch pipe.

Option 1b. – Open cut from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake.				
4' deep trench pipeline on side of road	Units	Unit cost	Quantity	Extended
4" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$60	3,000	$180,000
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$360,000
Contingency	20%			$72,000
Engineering & permitting	20%			$72,000
Project total, rounded				**$500,000**

Table 5: Option 1b, Shortest open cut with 4-inch pipe.

Option 2a. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake.				
One 2,500' long HDD	Units	Unit cost	Quantity	Extended
3" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$55	2,500	$137,500
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$317,500
Contingency	20%			$63,500
Engineering & permitting	20%			$63,500
Project total, rounded				**$440,000**

Table 6: Option 2a, Shortest HDD with 3-inch pipe.

Option 2b. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake.				
One 2,500' long HDD	Units	Unit cost	Quantity	Extended
4" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$60	2,500	$150,000
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$330,000
Contingency	20%			$66,000
Engineering & permitting	20%			$66,000
Project total, rounded				**$460,000**

Table 7: Option 2b, Shortest HDD with 4-inch pipe.

Option 3 adds 2,800 feet of HDD to 3,000 feet of open cut at the edge of Santa Ana Road (Options 1a and 1b). For this situation, the unit cost of HDD is the same as the unit cost of open cut. However, the 2,800 is quite deep (open cut unit costs for this 2,800 feet would be higher).

The mostly shallow trench for the 3,000 feet on the edge of Santa Ana Road may be least expensive as a blend of HDD and open cut. Designing both open cut and HDD for contractors to select their preferred construction technique is likely to be cost-effective.

Option 3a. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the furthest point inside the park while maintaining enough grade to not result in the need for a lift station.				
One 3,000' HDD with 3,000' open-cut	Units	Unit cost	Quantity	Extended
3" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$55	2,800	$154,000
	LF	$55	3,000	$165,000
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$499,000
Contingency	20%			$99,800
Engineering & permitting	20%			$99,800
Project total, rounded				**$700,000**

Table 8: Option 3a, Longest gravity flow, mixed HDD and open cut with 3-inch pipe.

Option 3b. = Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the furthest point inside the park while maintaining enough grade to not result in the need for a lift station.				
One 3,000' HDD with 3,000' open-cut	Units	Unit cost	Quantity	Extended
4" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$60	2,800	$168,000
	LF	$60	3,000	$180,000
Buried 10,000-gal receiving tank at top of pipe with odor control, 500-gal flush tank, might need mixing, time operated valve, solar PV, etc.	each	$150,000	1	$150,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$528,000
Contingency	20%			$105,600
Engineering & permitting	20%			$105,600
Project total, rounded				**$740,000**

Table 9: Option 3b, Longest gravity flow, mixed HDD and open cut with 4-inch pipe.

The force main from the Maintenance Building to the receiving station would be 6,200 feet of shallow open cut. The unit cost of $45/ft. reflects quicker construction through un-paved areas on lake property.

Option 4. - Open cut and directional drill to Maint. Bldg. Use grinder pump at each existing storage point.				
One 3,000' HDD with 9,000' open cut	Units	Unit cost	Quantity	Extended
4" force main, HDPE including air releases, pavement, cleanouts, bonds, profit, safety, etc.	LF	$60	2,800	$168,000
	LF	$60	3,000	$180,000
	LF	$50	6,200	$310,000
Grinder pump installations	each	$40,000	3	$120,000
Connection to OVSD with odor control system	each	$30,000	1	$30,000
Construction total				$808,000
Contingency	20%			$161,600
Engineering & permitting	15%			$121,200
Project total, rounded				**$1,090,000**

Table 10: Force main extending from the Maintenance Building to the nearest start of gravity flow with 4-inch pipe.

The estimates in the above Tables do not reflect the cost of annexation and connection fees to the OVSD or any easement acquisition cost.

Receiving Station Basin Size

Considering an 82.3 gallon per minute flow, it is recommended a basin is designed to accommodate the detention of two hours of flow. This is approximately 10,000 gallons of storage volume. Providing for this amount of basin capacity allows the onsite trucking operations plenty of time to collect sewage from the onsite facilities within the LCRA and provides additional capacity for major events. This capacity, along with control valves, also allows wastewater to be discharged over several hours, thereby minimizing any flow or odor impacts on OVSD facilities. Further, to address possible retention of solids over periods of use of backwash water from the water park, this process could be used to flush the basin and to clear downstream piping of any solids settlement.

Trucking Cost

As previously mentioned sewage is collected from the LCRA with a 3,500-gallon tanker truck and disposed of at the OVSD Wastewater Treatment Plant. The average number of truck loads per year is 500 with a peak bimonthly average of 170 and a low bimonthly average of 50. Total truck loads per year have ranged between a peak of 528 in 2012/13 and a low of 484 in 2011/12. The estimated cost per trip for trucking wastewater to the OVSD is as follows (Assumes a 60-minute round trip.)

Activity	Staffing Cost	Equip. Cost [1]	Total Cost per Trip
Hourly Rate	$31.00	$51.25	
Hours/Trip	1.0	1.0	
Cost/Activity	$31.00	$51.25	$82.25

Table 11: Cost per Truck Trip to Haul Wastewater to Ojai Valley Sanitation District.

[1] *Equipment hourly rental rates are based on 4,000 gallon tanker truck, Federal Emergency Management Agency "Schedule of Equipment Rates, 2016. Rates can be found at: www.fema.gov.schedule-equipment--rates.*

Based on Table 11, annual trucking cost can range from $39,810 (484 loads 2011/12) to $43,430 per year (528 loads 2012/13). The single highest bimonthly peak period was in July/August 2013 with 186 truckloads. This calculates to an estimated cost of $15,300 for that period. Using the 500 truckloads per year the average annual trucking cost is estimated at $41,125 in 2017. Estimates for increased trucking cost are discussed below.

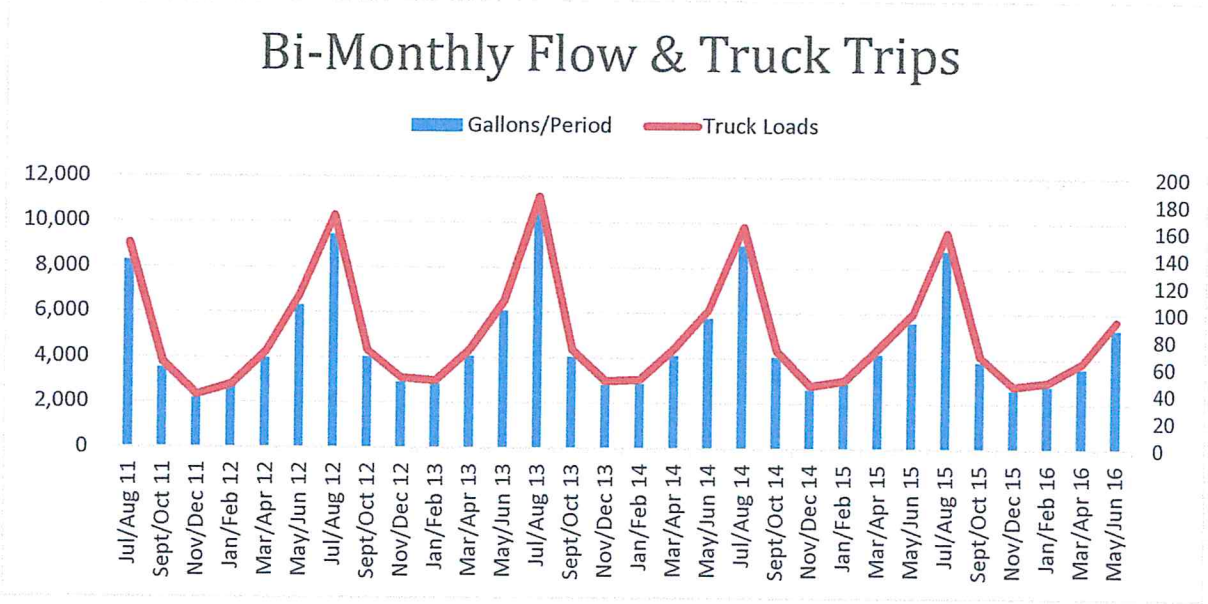


Figure 4: Bi-monthly sewage collected and number of truck loads for disposal.

Future Trucking Cost

The estimated projected cost of trucking provided herein assumes a pipeline is not constructed and increased disposal trips are generated due to increased daily and peak flows from the recreational area. Trucking cost will also continue to rise due to inflation for staffing, equipment and mileage.

Over 22 years, with a 2% inflation factor, estimated annual trucking cost will rise to $72,352 from the estimated 2018 cost of $41,454. Estimated total trucking cost over the 22-year period will be $1,276,648. This assumes the number of average truck trips per year will increase through 2040 and costs are adjusted for inflation.

Based on the estimates for future sewage flows in this Section, under Figure 5, estimated average truck loads will increase from 504 per year to 569 by year 2040. This number was calculated by increasing the average 2011 through 2015-year visitor population of 608,607 by a population increase factor of 0.55% per year over 22 years, multiplying the annual increased population by 2.80 gallons per capita/day consumption and dividing by 3,400 gallons average per truck load.

The benefits of reduced offsite trucking include reduced liability, staff hours that can be reassigned to other activities, time lengthened between equipment replacement and environmental benefits of reduced fossil fuels, air pollution and noise pollution.

Year	Estimated Visitor Population	Estimated Truck Trips	Annual Cost [1]
2018	611,954	504	$ 41,454
2020	618,704	510	$ 43,642
2025	635,907	524	$ 49,507
2030	653,588	538	$ 56,120
2035	671,760	553	$ 63,689
2040	690,438	569	$ 72,352
	Total Cost Through 2040		$ 1,276,648

Table 12: Estimated Offsite Cost of Trucking through 2040.

(1) @$82.25/load w/2% Inflation

Section 7

Cost Benefit Analysis

Table 13 compares the cost of construction with the cost of reduced trucking if a wastewater disposal lateral from LCRA is connected to the OVSD Sewer System. The payback period in years is based on current dollar estimates.

Option	Project Cost	Average Yearly Trucking Cost over 22 Years	Project Payback Period in Years (1)
Option 1a. - Nearest gravity open-cut, 3-inch	$480,000	$58,030	8.0
Option 1b. - Nearest gravity open-cut, 4-inch	$500,000	$58,030	8.6
Option 2a. - Nearest gravity HDD, 3-inch	$440,000	$58,030	7.6
Option 2b. - Nearest gravity HDD, 4-inch	$460,000	$58,030	7.9
Option 3a. - Furthest gravity mixed, 3-inch	$700,000	$58,030	12
Option 3b. - Furthest gravity mixed, 4-inch	$740,000	$58,030	12.8
Option 4. – Maint. Bldg. with force main, 4 inch	$1,090,000	$58,030	18.8
No Project Cost – Continued Offsite Trucking	$1,276,648	$58,030	22

Table 13: Construction Cost Compared to Reduced Trucking Cost.

(1) Payback: Calculated by dividing Project cost by 22 year average trucking cost (2017 Dollars).

Section 8

Recommendation

The District requested that the following pipeline options be evaluated to provide for disposal of sewage from the LCRA.

Options 1a&b. – Open cut from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake. Include approximate time to construct, type of materials and cost estimate.

Options 2a&b. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake. Include approximate time to construct, type of materials and cost estimate.

Options 3a&b. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the furthest point inside the park while maintaining enough grade to avoid the need for a lift station. Include approximate time to construct, type of materials and cost estimate.

Alignments for Option 1-3 are shown on Figure 2. Figure 3 shows the ground and profile elevation for Option 1-3.

Option 4 - Maintenance Building with a 4" force main.

This option, as depicted in Figure 5, was included to demonstrate an alignment and cost to allow for discharge of filter backwash water to OVSD. The water can be used to assist in flushing of the discharge line. It will also eliminate the need for the leach field thereby allowing this area to be used for future parking, buildings or storage.

Areas of Work not addressed in this report:

The following items were not addressed in this report as they are beyond scope of work – CEQA, OVSD Connection fees, Annexation fees, annual changes in OVSD bills due to reduced trucking operations, current and increased cost of OVSD sewage disposal due to addition of backwash water and/or additional sewage generation, increased cost associated with any classification of industrial waste and associated fees and sampling cost. No evaluation of OVSD facilities ability to accept sewage flows from recreational area. If requested, Hasan Consultants can address/prepare these extra items plus any permitting at a very reasonable cost.

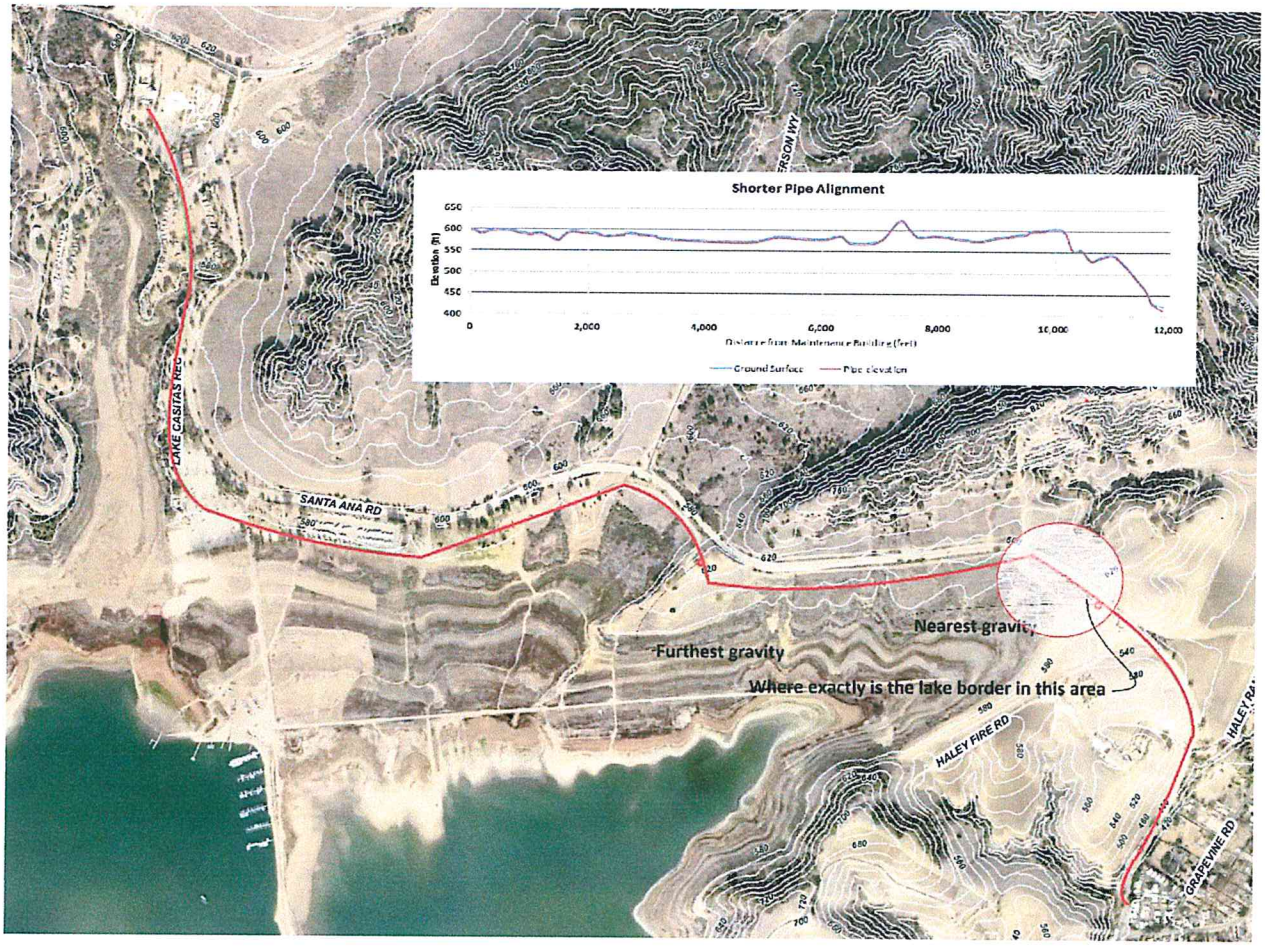


Figure 5: Pipeline alignment from Maintenance Yard to connection to OVSD.

APPENDIX

Appendix A

Approved Scope of Work

The Scope of Work presented below was approved by the District and defines the focus of this study. The pipeline options evaluated in this report under Task 2 provide the District three alternatives to dispose of sewage from the recreational area via a pipeline connection to the OVSD facilities. Should the District choose to implement one of these options, it will reduce trucking operations resulting in lower fuel and maintenance cost, labor hours that can be redirected to general maintenance activities, reduced chances of onsite spills reaching the lake, improved facilities for disposal, and reduced liability for offsite operations of trucking.

Task 1. Collection and Review Information

The District will provide Hasan Consultants the all written and electronic documents as follows:

District policies and procedures for wastewater handling

1. Contract documents with OVSD.
2. Mapping and construction documents for occupied buildings, restrooms, RV dump tanks, Water Park, and backwash and reclamation facilities such as filters, filtered water holding tanks and estimated amount of backwash water generated.
3. Any prior studies related to the LCRA consistent with this project.
4. Estimated number of day visitors, average number of campers, number and type of monthly recreational activities. If planning studies are available, provide that information to District.
5. Estimated wastewater generated either in gallons or by the number of monthly truck loads.
6. Backwash water quantities for consideration of disposal to OVSD.

Hasan Consultants will:

1. Meet with District staff to review the information provided as well as to determine any outstanding data or information that is needed.
2. Review and evaluate the current site conditions.
3. Review wastewater handling processes and cost of disposal.
4. Review other operating and facilities cost that may affect wastewater disposal

Task 2. Cost Benefit Analysis

Hassan Consultants will develop sewage disposal options and associated cost with the following disposal alternatives as requested by Casitas:

Option 1. – Open cut from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake. Approximate time to construct and cost estimate.

Option 2. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the closest point on the lake property, the turnaround at the east end of the lake. Approximate time to construct and cost estimate.

Option 3. – Directionally drill a pipeline from the nearest connection point on Santa Ana Road to the furthest point inside the park while maintaining enough grade to avoid the need for a lift station. Provide approximate time and cost for construction.

Task 3. Recommended Option of Wastewater Disposal Alternatives

Hasan Consultants will prepare an analysis of wastewater disposal alternatives as identified in Task 2 and recommend an option that appears to meet the objectives of the District. These alternatives may include, but are not limited to the following:

1. Identify pipelines and associated facilities for connection to OVSD.
2. Determine flow characteristics and recommended facility size for wastewater disposal.
3. Prepare maps, schematics and cost estimates for each alternative.
4. Prepare a discussion of alternatives for inclusion in the final report.

Task 4. Final Report/Deliverables

Hasan Consultants will prepare a final report that will include the following elements:

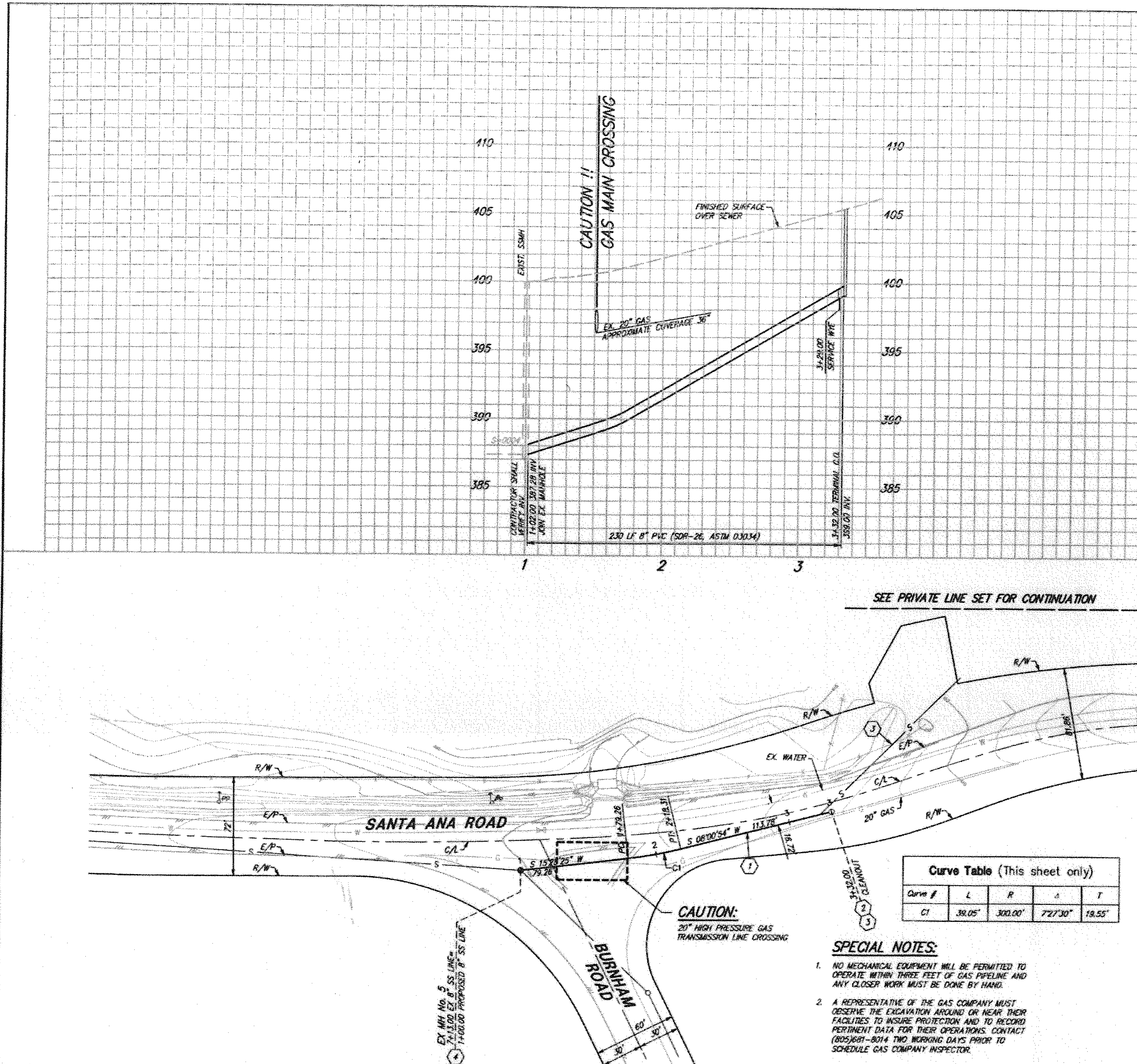
1. Executive Summary outlining the work completed and recommendations.
2. Discussion and Matrix of the Alternatives reviewed and cost estimate.
3. Recommend an alternative based on meeting the goals of District.

Ventura County
Resource Management Agency
Information Systems GIS Services
Map created on 03/23/2015
Imagery: Pictometry©, February 2015
Topography: 2005 LiDAR

RMAgis

2016 Aerial Imagery
2005 LiDAR

0 250 500 1,000 Feet 1" = 500'



Curve Table (This sheet only)				
Curve #	L	R	Δ	T
C1	39.05'	300.00'	7°27'30"	19.55'

SPECIAL NOTES:

1. NO MECHANICAL EQUIPMENT WILL BE PERMITTED TO OPERATE WITHIN THREE FEET OF GAS PIPELINE AND ANY CLOSER WORK MUST BE DONE BY HAND.
2. A REPRESENTATIVE OF THE GAS COMPANY MUST OBSERVE THE EXCAVATION AROUND OR NEAR THEIR FACILITIES TO INSURE PROTECTION AND TO RECORD PERTINENT DATA FOR THEIR OPERATIONS. CONTACT (805)681-8014 TWO WORKING DAYS PRIOR TO SCHEDULE GAS COMPANY INSPECTOR.

40' 20' 0' 40' 80'
GRAPHIC SCALE: 1"=40'

CONSTRUCTION NOTES

1. INSTALL 8" PVC SEWER LINE PER O.V.S.D. STANDARDS. TRENCH BACKFILL PER DETAIL ON COVER SHEET.
2. INSTALL TERMINAL CLEANOUT PER SPPWC STD PLAN No. 204-1.
3. INSTALL 6" PVC SEWER SERVICE PER O.V.S.D. STDS.
4. CONNECT TO EX. MANHOLE PER SPPWC STD PLAN No. 208-1.

NOTE:

CONTRACTOR SHALL VERIFY INVERT ELEVATION AT POINT OF CONNECTION PRIOR TO BREAKING INTO EXISTING MANHOLE. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN THIS PLAN AND ACTUAL INVERT

1988 DATUM

REGISTERED PROFESSIONAL ENGINEER DONALD M. JENSEN No. C046404 Exp. 3-31-2011 CIVIL STATE OF CALIFORNIA

"AS-BUILT"

SEPT 2010

40' 20' 0' 40' 80'
GRAPHIC SCALE: 1"=40'

A.P. No.: 060-0-150-185

REVISION DESCRIPTION APP. DATE

JENSEN DESIGN & SURVEY, INC
1672 DONLON STREET VENTURA, CALIF. 93003
PHONE 805/654-6977
FAX 805/654-6979
DONALD M. JENSEN RCE 046404 (EXP 3-31-2011) 9/28/10 DATE

REVIEWED: OJAI VALLEY SANITARY DISTRICT DISTRICT MANAGER
BY: John K Correa 9-30-10
JOHN K. CORREA DATE

OJAI VALLEY SANITARY DISTRICT
1072 TICO ROAD OJAI, CALIFORNIA 93023

SPEC. NO. –
PROJ. NO. –

C.U.P. LU08-0011
SEWER IMPROVEMENT PLAN & PROFILE
SINE QUA NON WINERY
10801 SANTA ANA ROAD

SHEET 2 OF 2
DRAWING NO.

LCRA - Sewage Plan
2.2.2
APPENDIX D

CASITAS MUNICIPAL WATER DISTRICT
MEMORANDUM

DATE: August 12, 1998

TO: General Manager

FROM: Principal Civil Engineer

SUBJECT: Preliminary Overview - Wastewater Handling - Lake Casitas Recreation Area

Over the course of operating the Lake Casitas Recreation Area for the past thirty-nine years and providing a variety of recreational experiences to the public, the District has developed several practices for the handling of wastewater that is generated by the public. In general, these wastewater handling practices have prevented contamination of the adjacent drinking water supplies of Lake Casitas. With the pressure to provide alternative and additional recreational facilities at the Lake Casitas Recreation Area, there is a need to evaluate the current wastewater handling practices and to look at other methods that can safely and appropriately to deal with present and reasonably anticipated wastewater loadings. This memorandum is a general overview of current practices and the alternatives that may be available to the District. Further consideration and evaluation of the alternatives is recommended to be conducted prior to the implementation of any alternative. There are significant environmental and health considerations associated with the handling and discharge of wastewater.

Current Practices

The present method of handling sewage waste at the Lake Casitas Recreation Area is the individual collection of the wastes in holding tanks at each chemical toilet, pit toilet, RV dump station, fish sink and floating restroom. As needed, the wastes are pumped from holding tanks to the District's 1,500 gallon tanker truck, and hauled to either the Ojai Valley Sanitation District Wastewater Treatment plant (a 5-mile one way trip) or the Montalvo Plant (a 23-mile one way trip).

The District has recently moved to make the pit toilets into low flush toilets. While this has improved the aesthetics of the toilet and lessened the amount of other trash that is entering the waste stream, it has increased the volume of wastewater that is generated by the toilet use.

The shower house facility presently discharges to a leach field. The leachate has not been noted to reach Lake Casitas, although the area of the leach field is noted to be green and lush with plant life. The District has tried to install leach fields in other areas of the park, particularly near the main gate, but these fields were found to be inadequate due to the poor percolation of the soils found in those areas.

The current practices have the following key problems:

- Objectional aesthetics, customers dislike using pit and chemical toilets, odors and flies;
- Trash mixed into sewage, difficult or undesirable to treat at the plants;
- Potential for over flow into the environment;
- Equipment breakdowns, cost for contract pumping and disposal;
- Additional facilities place a strain on resources, labor and truck hauling;
- The collection points are not centralized, time required to travel to collection points.

In 1996, the District did request to be annexed into the Ojai Valley Sanitation District. This request was rejected by the OVSD Board. Letters from the Environmental Coalition and the Friends of the Ventura River objected to the request, citing that the annexation would result in service to more than the existing facilities. The OVSD was also in process of increasing its fees for connection. Other issues that OVID had with the waste discharge from the recreation area are that the proposal to discharge at Burnham Road may have a significant odor impact on that neighborhood. If so, OVSD may require additional treatment in the Casitas system or be forced to discontinue sewer service to the park. The District has not pursued annexation and service with the OVSD since 1996.

Present Loadings

The District has gathered historical data on the number of trips taken by the tanker truck to Montalvo and OVSD treatment plants. The data prior to 1998 did not involve the use of low flush toilet water contribution to the haul loading. On the average month, approximately 33 trips were made to the OVSD plant and two trips were made to the Montalvo plant. The peak month appears to be July, when approximately 45 trips have been made to the OVSD plant. Based on the peak loading month and 1,500 gallons per truck load, an average of 2,200 gallons per day is generated at the recreation area. During busy weekends and with the contribution of flush toilets at the existing restrooms, the volume of wastewater may be as high as 5,000 gallons per day.

Reasonably Anticipated Loadings

The reasonably anticipated wastewater loads are approximated in Table 1, attached to this memorandum. The facilities listed are those which have been preliminarily discussed at some time or another by staff, Board, master plans and the public. The data shows a maximum wastewater production of approximately 40,000 gallons per day.

Additional calculation of the peak instantaneous loading for the purpose of treatment facility sizing should be refined prior to implementing the treatment system. It is anticipated that the main factor to the peak loading is the filter backwashing or draining of the water playground or lazy river. It is assumed that this high flow surge events will be buffered by a surge tank to reduce the impacts to any system that is implemented by the District. Other factors include the rate at which central pump stations contribute to the treatment system.

Wastewater Collection Alternatives

The variation of terrain and the remoteness of facilities dictates that a combination of gravity and forced main collection systems should be considered for the various facilities of the recreation area. The concept is to use gravity system where elevation changes do provide fall to centralized collection points, and from the collection points, pumping into forced main systems will be required to move the wastewater to the point of treatment (and/or discharge).

Generally, the collection points will be one or more adequately sized underground tanks from which wastewater is pumped into the force main system. The collection points will require electrical power for pumps and telemetry. A major consideration for the collection point is that of preventing an accidental overflow of the collection point into Lake Casitas. The risk of accidental contamination of Lake Casitas is unacceptable and should be reduced to as close to a zero occurrence as possible. The site should include adequately designed tanks, pumping systems, and overflow storage to prevent an overflow release to the lake.

The District will need to assess the level of resources needed to operate and maintain the wastewater collection system. Adequate and proper maintenance of the system is essential for lessening the risk of system failure, but responsible monitoring the collection sites on a regular basis should be conducted to spot problems before they occur. The District may also have to determine the need for additional operator certifications to operate and maintain the wastewater system.

Wastewater Treatment and Discharge Alternatives

Once the wastewater is collected by the District, there appears to be three options that may be considered to treat the wastewater. One option is to pursue the direct connection to the Ojai Valley Sanitation District collection and treatment system. A second option is to apply a package plant treatment system that results in separate water and sludge waste streams. Each of these waste streams must then be addressed by the application of a discharge system. A third option, the application of lagoon treatment system, is not considered as a viable option at this time due to the land and water quality constraints of the local environment. The third option is therefore not discussed any further in this memorandum. Each of the two options has a characteristic waste stream which can be discharged in a corresponding variety of ways, given correct application and approvals by regulating agencies.

- **Service Connection to Ojai Valley Sanitation District Facilities**

The OVSD is responsible for the collection and treatment of sanitary sewage that is generated within its district boundaries. The two closest points of connection at (1) at the corner of Burnham Road and, and (2) on Highway 150 in front of the main entrance to Ranch Matilija.

At this time, the LCRA is not within the OVSD boundaries. An attempt was made in 1996 to annex a portion of the LCRA, and for reasons previously stated, the annexation was not approved by the OVSD Board. Annexation would have to be gained in order to receive a service connection. In the meantime, OVSD connection fees have increased from $1,700 to approximately $3,600 per equivalent residential unit (ERU). One ERU is equal to 210 gallons per day. The minimum and maximum ERU for the LCRA are 24 and 190, respectively. One approach is to pay a specified connection charge, meter the discharge volume, and pay according to the actual volume.

The sewer connection points do pose some problems for the discharge of LCRA waste. The key issue is the release of strong odors from the LCRA forced main. The length of sewer main and the potential for anaerobic conditions may contribute to fouling the air at the connection point. If residents complained about the increase in odors, the result may be discontinuance of LCRA sewer service or the application of a requirement for pretreatment by Casitas.

- **Wastewater package treatment plant at the LCRA**

The District has visited the wastewater package plant that is presently being operated by Thacher School. Said plant is capable of handling 30,000 gallons per day. A similar type package plant could adequately treat the types of sewage being generated by the LCRA. The extended aeration-activated sludge plant that Thacher School has applied produces an excellent treated water stream and a musty odor sludge. Their water stream is discharged into the alluvial gravels of the Ojai basin and the sludge is pumped and hauled to disposal on an as-need basis. The process does have electrical power requirements to run the aeration system. Odor generation can occur with the pre-treatment process and occasional plant upsets. Key issues for the use of a package plant at LCRA are plant siting, discharge requirements, overflow protection, operation and maintenance.

Package plant siting is a challenge because of the need to limit the public exposure to odors that might be generated by the plant and protect lake water quality from spill contamination. Most areas of the LCRA are being used by the public, thus lessening the number of site candidates. The plant will require approximately 1/4 acre of land. It is suggested that the potential candidate sites could be (1) the upper maintenance yard, and (2) Casitas Reservoir Watershed (CRW) lands. The siting of the package plant in the upper maintenance yard does offer a small buffer from the public view and has electrical and water utilities in the area, will change the current use of an existing operational area, may have some odor impact on nearby campgrounds. The use of CRW lands is subject to the discretion of the Bureau of Reclamation and the interpretation of the Act through which said lands were acquired by the United States. The Bureau is in the process of preparing

a resource management plan for CRW lands, but will not have a plan finalized until year 2001. Lands which may be solicited for use are the located generally south of State Highway 150.

Operation of such a plant will require an experienced and licensed operator, or the contracting of a qualified operator. Maintenance requires regular attention in order to avoid plant upsets and malfunction. Once constructed, there must be a firm commitment to proper operation, maintenance and monitoring of the plant. When operated properly, the plant may require occasional adjustments and cleaning. The plant may also be designed with parallel trains to allow for the large loading differences that occur between summer and winter operational periods.

- **Waste stream discharge**

Depending upon the treatment strategy that is pursued by the District, there are four types of waste streams that need to be handled by the waste discharge systems. The four types of waste streams are (1) untreated sewage, (2) waste generated by portable chemical toilets (3) treated sewage water, and (4) treated sewage sludge. The waste streams generated by chemical toilets and treated sludge may remain an item that is transported to the local wastewater treatment facilities. The following is an overview of the waste discharge systems that may be applicable for the untreated and treated wastewater generated by the LCRA.

1) Connection to the OVSD collection system.

This system is for discharging either the untreated sewage or the treated sewage water stream. Elements of the system include obtaining an annexation to OVSD, payment of connection fees, the installation of a long service lateral, possible pretreatment to eliminate septic odors at the connection point, payment of monthly service fees. There are two possible routes for the service lateral.

One route is along the north shore of Lake Casitas, down Santa Ana Road, across the property owned by Mr. Haley, down Grapevine Road to its intersection with Burnham Road. The length is 12,900 feet was estimated in 1997 by Boyle Engineering to cost approximately $556,100. Applying an ENR index, the same project may cost as much as $1,200,000.

A second alternative route is to install a 9800-foot long pressure sewer pipeline from the LCRA main gate, along State Highway 150 to the manhole that is directly in front of the Rancho Matilija entrance. Based on the same cost per lineal foot as the North Shore pipeline alternative, $93 per lineal foot, the estimated cost is approximately $912,000.

2) Seepage pits and leach fields.

The concept of seepage pits and/or leach field is based on soil infiltration and evapotransporation of treated wastewater. The volume of discharge that can be applied to this type of system is directly related to the rate of infiltration and evapotransporation.

If the volume of discharge exceeds the capability of the system, an overflow condition can result.

The LCRA is known to have a very tight clay soil that has an extremely low percolation rate. Evapotranspiration would be the main consumer of the water in the LCRA. Application of this type of system would require an extensive installation of leach fields and/or seepage pits to accommodate the even the average volume of discharge. The peak day volumes will have to be considered in the design to prevent surface runoff to Lake Casitas.

An approach that may be considered is to combine the controlled reuse of treated sewage water to do subsurface irrigation of green areas around the LCRA, with a supplemental discharge system.

3) Constructed wetlands and aquatic plant system.

The discharge of treated wastewater into a constructed wetland and aquatic plant system has been applied in many areas of the country where land is available, water characteristics promote aquatic growth, and environmental benefits can be gained by the discharge. The effluent from a package treatment plant, as previously described, may be capable of being discharging to a designated land area where the wastewater is allowed to flow, pool, be aerated and provide the remaining nutrients to aquatic habitats.

The limiting factor to this process on the LCRA is the lack of land to perform such a discharge without impacting present land uses in the LCRA and water quality of Lake Casitas. There may be some areas of the adjacent Casitas Reservoir Watershed that may be suitable for a constructed wetlands and aquatic plant system. The use of adjacent CRW lands would require approvals from the United States and the support of the public. The use of CRW lands must match the criteria stated by Congress, for recreation and protection of water quality, and any further requirements or standards that are developed by the Bureau of Reclamation's Resource Management Plan. Such a project in the CRW may provide environmental benefits, educational and recreational experiences, and meet water quality protection goals established by Congress. In addition to the District's involvement and interest, this project may be supported by the local communities and environmental groups, State and Federal agencies.

4) Reclaim water use.

The use of reclaim water implies that the wastewater is treated to a higher quality and applied to certain designated beneficial uses that are safeguarded against contamination of potable sources. There may be some opportunity to use limited amounts of reclaimed water in the LCRA. The LCRA consumes approximately 110 acre-feet of water per year. The majority of use is due to the irrigation of grass. The use of reclaim water for items

such as flush toilets and subsurface irrigation systems may lessen the LCRA's impact on water supplies.

The treatment system may include the package treatment plant, but the plant's effluent may be required to go through the process of filtration, ozone, reverse osmosis, or other treatment process in order to attain desired water quality parameters for reclaim water. In addition, a parallel reclaim water pipeline system would have to be constructed to all points of use. This system would have to be kept segregated from the existing potable water supply and signs would have to be implemented to warn against human exposure or improper use of the reclaim water.

Because there may be other wastewater volumes that are not generated through reclaim water use, a supplemental discharge system should accompany the reclaim system. For instance, the backwashing of a filter at the water playground will generate 3,500 gallons of wastewater. The 3,500 gallons are replaced by potable water, yet it contributes 3,500 gallons to the discharge of the wastewater plant. If there is not a reclaim water demand for this same 3,500 gallons of treated water, the water must be discharged or stored somewhere to prevent overflow conditions at the treatment plant. The supplemental discharge could be to any one of the other three discharge systems previously discussed in this memorandum.

The use of reclaim water is something that can be further investigated with Jeff Stone, Department of Health Services, section leader for reclaim water use in California.

Conclusion

The wastewater system is a critical path item for many of the proposed facilities that are being considered to be implemented at the Lake Casitas Recreation Area. The discharge of wastewater is a complex problem when faced with strict water quality protection and regulatory requirements, minimal available lands, long distances to transport the waste, and high cost for capital improvements to handle wastewater. Careful planning and attention to details is required on the wastewater management within the LCRA environment. There is a need for further investigation of the regulatory requirements, opportunities for joint benefit projects, project capital and O&M cost impacts for each wastewater and discharge system. This task should be undertaken by the District before there is a final selection of the system.

If there is a desire to move forward on the handling of wastewater, please discuss this issue with me.

APPENDIX E

ACT. INFO.
☐ ☐ CM&CE
☐ ☐ ADM
☐ ☐ ADMIN
☐ ☐ ENGR
☐ ☐ O & M
☐ ☐ PARK
☐ ☐ ———
☐ ☐ FILE

Boyle Engineering Corporation

consulting engineers / architects

21 South California Street
P.O. Box 1748
Ventura, California 93001

805 / 648-5871

CASITAS MUNICIPAL WATER DISTRICT
Attention Mr. Mario Tognazzini
Assistant Chief Engineer
Post Office Box 37
Oak View, California 93022

December 21, 1976

Lake Casitas Recreation Area Sewer
Preliminary Report - Rough Draft

Transmitted herewith is our rough draft of the preliminary report of the proposed Lake Casitas Recreation Area Sewer project.

The intent of this submittal is to provide you an opportunity to review and comment prior to finalizing the report.

Upon the District's decision of an alternate route or horizontal alignment, the plan and profile half-tone mylar sheets can be completed by Western Aerial to reflect the approved alignment.

BOYLE ENGINEERING CORPORATION

George T. Berg

George T. Berg, P.E.
Principal Civil Engineer

et

Enclosure

E-C05-100-00

RECEIVED
CASITAS MUNICIPAL
WATER DISTRICT
DEC 23 1976
AM PM

CASITAS MUNICIPAL WATER DISTRICT
Ventura County, California

LAKE CASITAS RECREATION AREA

PRELIMINARY REPORT

INTRODUCTION

The Lake Casitas Recreational Area is situated approximately five miles southwesterly of the City of Ojai in the County of Ventura. The center of the Los Angeles metropolitan area is approximately 75 miles distant. The Lake Casitas Recreational Area is a regional recreation resource of high value because of its location near heavily populated areas and because it is one of the very few fresh water lakes in this section of California. This recreational facility presently accommodates primarily camping, including trailer spaces, boating, fishing and picnicking activities adjacent to this man-made lake.

This recreational area is considered to be an extremely important and popular facility, with climatic conditions allowing year-round use. During the fiscal years 1974-75 and 1975-76 the facility enjoyed 1,716,700 and 1,799,800 visitor days respectively. During the month of May of these two years 327,500 and 257,100 visitor days were experienced.

The Lake Casitas Recreation Area encompasses approximately 320 acres, land which is owned by the U.S. Bureau of Reclamation. The facility itself is operated and managed by the Casitas Municipal Water District under a lease agreement with the U.S. Bureau of Reclamation.

The present recreational facilities are currently being sewered by a combination septic tank/leach field and chemical toilets. The Casitas Municipal Water District, however, is desirous of ultimately eliminating this present sewering system by connecting directly to a sanitary sewer system. This can be accomplished by the construction of approximately 15,000 feet maximum of sewer main between the Lake Casitas Recreational Area and the Oak View Sanitary District's 24-inch trunk line in Burnham Road.

SERVICE AREA

The service area of the proposed project includes specifically the existing Lake Casitas recreational areas only and does not include any of the open space areas around the lake, as designated by the Casitas Reservoir Open Space Act. It should be emphasized that the proposed project is intended to serve exclusively the recreational services and needs of the Lake Casitas Recreation Area. The sewering of properties or areas adjacent to Santa Ana Road and Grapevine Road between Lake Casitas and the terminal point of the project is not anticipated.

PROJECT DESCRIPTION

To achieve the ultimate objective of sewering the Lake Casitas Recreational Area by a sanitary sewer system, it is proposed to construct a sewer line between the recreational area and an existing 24-inch sewer line in Burnham Road. The beginning point of the project will be near an existing maintenance yard located about 750 feet inside and north of the entrance to the lake area. The terminal point of the project is situated at the intersection of Burnham Road and Grapevine Road, at which point the sewer will connect to an existing manhole.

It is not the intent to develop and construct the entire on-site sewer collection system at this time. The on-site collection system will most likely be programmed or phased over a 10 year period as financing becomes available. The facilities that will initially be connected to the proposed sewer main include the maintenance yard, the entrance office building, the interpretive building, and comfort stations along the east side of the Santa Ana inlet and in the vicinity of the entrance building.

The construction of this sewer main will reduce and eventually eliminate most of the undesirable and costly disposal and handling of waste materials from this recreational area, and at the same time create a more convenient and sanitary recreational area. Any potential health hazards from the existing leach system would also be reduced or eliminated.

For purposes of this report three alternative horizontal alignments were analyzed. Common to all three alternates were the starting and terminating points of this sewer facility. Plates 1 and 2 reflect the approximate horizontal alignments of these three alternatives. Also common to all three alternates is the proposal to construct an in-line flowmeter at approximately Station 47+00.

Alternate 1 - From the beginning point this alignment, with 8 and 12-inch gravity sewer, would extend for a distance of about 1500 feet either within the park or in Santa Ana Road itself, and then generally within the limits of the park to about Station 108+00 where a pump station would be constructed along with an alarm system and a nominal emergency overflow facility. From the pump station approximately 3500 feet of 6-inch force main would follow within Santa Ana Road right-of-way limits to Station 73+00. The remaining 5000 feet, 4450 feet of

8-inch and 550 feet of 12-inch, would be a gravity system within Santa Ana Road and Grapevine Road right-of-way limits. However, a section of approximately 530 feet between Santa Ana Road and Grapevine Road would cross private property, requiring an easement. The total length of this alternate equals about 13,000 feet.

Except for a 450 foot section of sewer main towards the upper end of the system, this alignment would maintain a horizontal distance of over 200 feet from the lake high water line elevation of 567 feet. A 10-foot vertical distance between the lake water line elevation of 567 feet and the sewer line invert is also maintained.

Alternate 2 - This alternate is an all gravity system and, except for an additional 1900 linear feet of sewer line proposed constructed within the park downstream of Station 108+00, is identical in horizontal alignment to Alternate 1. This alternate would require trench excavations ranging in depth from 40 to 50 feet for a distance of nearly 0.5 miles, which in turn would result in having to reconstruct 0.5 miles of Santa Ana Road plus constructing an equal amount of detour road during the construction phase in order to maintain vehicular traffic to and from the lake. The total length of this alternate equals slightly over 13,000 feet. As in Alternate 1, an easement would be required between Santa Ana Road and Grapevine Road.

The horizontal and vertical distances between the lake high water line and the sewer main would be similar to Alternate 1.

Alternate 3 - This alternate also proposes an all gravity system, but the horizontal alignment deviates from Alternate 2 above by following the lake front to avoid the excessive cuts of that alternate. Alternate 3 alignment is similar to Alternate 2 from the maintenance yard to approximately Station 91+00; from this point the alignment continues on park property to Station 85+00 where the sewer main extends within Santa Ana Road a distance of about 600 feet and then returns to park property. The alignment would remain within the park to approximately Station 47+00 at which point it returns to Santa Ana Road. From Station 47+00 to the terminal point the horizontal alignment is identical to Alternates 1 and 2.

With respect to the State Health Department's recommended guideline of maintaining a 200 foot horizontal clearance between the sewer line and the high water line of the lake, it should be noted that between Station 91+00 and Station 47+00 approximately 4000 horizontal feet of sewer main would be within 100 feet of the lake, and in a number of locations would fall within 30 to 50 feet of the lake high water line elevation of 567 feet. For a distance of 2300 feet upstream of Station 47+00, the invert of the proposed sewer would be at or slightly below the high water line. The State Health Department's guidelines suggest the sewer line invert is to be maintained at least 10 feet vertically above the lake high water line. However, by letter of December 13, 1976, the State Health Department has allowed a deviation from these guidelines contingent upon using Class 150 pressure pipe, installing an alarm system, bolting down manhole covers and constructing a comminutor or bar rack at the upper end of the sewer main system.

The total project length equals about 15,000 linear feet.

DESIGN CRITERIA

In addition to the criteria listed in this section, the County of Ventura, Department of Public Works' "Sewerage Manual" will be adhered to.

Design Flows - In establishing the design flows for the proposed sewer system, three different approaches were utilized. A relatively close correlation between these three methods was achieved, as follows:

(1) Flow per Acre of Park Area - For parks and recreation areas in Santa Barbara County and Orange County, a factor of 200 gallons per day per acre of park area has been used. The estimated area of Lake Casitas Recreation Area to be served by the sewer system is 320 acres. Park visitor records for 1975 indicate the peak day to be about five times the average visitor day. By using this factor, the maximum daily flow would be 320,000 gallons per day.

(2) Flow Derived in Gallons per Visitor Day - Records of sewage flows from the recreation area at Lake Cachuma in Santa Barbara County indicate a figure of 10 gallons per visitor-day as per a 1969 study. Assuming a maximum of 25,000 visitors at Lake Casitas for any one day, the peak day flow would equal 250,000 gallons.

(3) Flows Calculated from Chemical Toilet Pumping Records - Chemical toilet pumping records for the recreation area in 1975 were studied and correlated with expected discharge flows if flush toilets were used. This relationship was developed and the peak day flows were as follows:

a. For standard flush toilets with 6 gallons per flush the maximum day flow is 390,000 gallons.

b. For low flush toilets (4 gallons per flush) 260,000 gallons per day.

Using the figure of 320,000 gallons per day from method (1) above, and allowing a 25% increase for inflows, infiltration and increased park usage, the design flow capacity would be 400,000 gallons per day. It is recommended that the District retain capacity in the Sewage Treatment Plant for a maximum day flow of 0.4 MGD. This would equal a flow of 0.62 cfs or 280 gpm.

The peak hour flow is expected to be 1.75 times the maximum day or 490 gpm which would be used for pump station design.

This flow assumes the park use to continue much the same as at present and does not allow for additional acreage of development for recreation.

Hydraulic Considerations - Determinations of sewer line sizes were based jointly on minimum sewer line slopes to reduce deep trench excavations and maintain lake/sewer line vertical separation and on Manning's formula using the following criteria:

1. Roughness coefficient - n = .013
2. Depth of flow at peak equal to 0.5 diameter for 8-inch diameter.
3. Depth of flow at peak equal to 0.67 diameter for 12-inch diameter.
4. Minimum sewer line slopes:

   8-inch - .004 ft/ft
   12-inch - .002 ft/ft

Sewer Manholes - Manhole structures will be located at all abrupt changes in horizontal and vertical alignment and at all junctions. A manhole will be located at least every 400 feet.

MATERIAL REQUIREMENTS

Pipe - Due to the necessary minimum sewer main longitudinal slopes and the close proximity of Lake Casitas to the sewer main, it is extremely important to provide a leak-proof installation and select corrosion resistant pipe materials. Mechanical compression joints must be used to provide positive protection against both infiltration and exfiltration as well as sufficient flexibility to adjust to the trench bedding. The joints will be non-rigid and the joint sealer will be restrained against lateral and axial movement.

Manholes - Standard 4-foot diameter concrete sewer manholes will be utilized, with the exception that all manholes upstream of Station 47+00 of Alternate 3 will have the sewer manhole covers bolted down.

Alternate 1 - Pipe materials recommended for the gravity portion of this alternate is vitrified clay pipe (VCP) and polyvinyl chloride (PVC) Class 150 for the force main. As an option to the PVC pipe, ductile iron pipe could be considered.

Alternate 2 - Alternate 2 would be comprised of vitrified clay pipe exclusively.

Alternate 3 - For this alternate a combination of both vitrified clay pipe (VCP) and polyvinyl chloride (PVC) Class 150 is recommended. Approximately 5000 linear feet of PVC pipe would be installed adjacent to Lake Casitas where the proposed sewer line would encroach within 200 feet of the lake high water line elevation of 567 feet. The remaining 10,000 feet of the sewer would be standard VCP. As an alternate to the PVC pipe, ductile iron pipe could be considered.

The use of the PVC Class 150 pipe, or equal, adjacent to the lake as proposed under this Alternate 3 has received approval by the State Health Department.

SOILS INVESTIGATION

A soils investigation relating primarily to Alternates 1 and 2 has been accomplished by Earth Systems Consultants, Inc. A total of six exploratory borings were drilled at approximately equal intervals throughout the alignment. The results and recommendations of this soils investigation have been documented in a report titled "Soils Investigation for Lake Casitas Park Sewer in Ventura County, California," dated November 29, 1976.

This soils report was initiated and developed prior to Alternate 3 becoming a consideration; therefore, in order to complete the soils analysis with respect to Alternate 3, it is recommended that two supplementary borings adjacent to the lake be made.

CONSTRUCTION COSTS

Capital improvement costs including operation and maintenance for a 20 year period have been estimated for each of the three alternates based on 1976 construction and maintenance costs and 1977 projected power costs. In other words, the operation and maintenance costs have not been escalated over this 20 year time frame. The costs as tabulated below were developed using the pipe materials recommended in the section "Material Requirements," namely, vitrified clay pipe (VCP) and polyvinyl chloride (PVC).

Replacing the PVC pipe in Alternate 3 with ductile iron pipe will increase the total cost of this alternate to $548,300.

The operations and maintenance costs of the pump station were determined assuming replacement of minor parts only; in other words, the life expectancy of the pump and motor was assumed to be over 20 years.

COST SUMMARY - (1976/77 Prices)

Alternate	Capital Cost	Annual O&M		O&M - 20 Years		20 Yr. Life Total Cost
		Pump Sta.	Pipeline	Pump Sta.	Pipeline	
1	$ 400,600	$6,000	$1,225	$120,000	$24,500	$ 545,100
2	1,004,000	--	1,225	--	24,500	1,028,500
3	510,000	--	1,415	--	28,300	538,300

RECOMMENDATIONS

Considering the initial investment only, Alternate 1 becomes the most favorable alternative. The capital improvement cost of Alternate 1 is $400,600 vs $510,000 for Alternate 3, a difference of about $110,000. However, considering the operation and maintenance costs over a period of 20 years, the total cost for Alternate 1 equals $545,100 vs $538,300 for Alternate 3; in other words, Alternate 3 now becomes more favorable. The reversal of this cost picture is accounted for by the added operations and maintenance costs of Alternate 1 due to the pump station. Noting that the above costs represent 1976/77 prices, it is most probable that the actual 20-year cost differential between Alternates 1 and 3 would be substantially greater than what the above figures reflect if operations and maintenance costs, and especially power, were escalated over the 20-year period.

Additionally, if the pump and motor of Alternate 1 required replacement in less than 20 years, which is probable, the cost of this alternate would increase further.

Being of the opinion that an all gravity sewer system is superior to a pump station/force main system as it relates, especially to the maintenance itself, it is recommended that Alternate 3 be selected for construction--this even though the initial investment is higher than Alternate 1. Viewing the project, however, over a 20 year time period, the economics do justify Alternate 3, although only slightly. But realizing that all the costs, as developed above, are based on 1976/77 prices only, the actual 20-year cost advantage of Alternate 3 over Alternate 1 is appreciably greater than the above numbers indicate.

APPENDIX F

SOILS INVESTIGATION
FOR
LAKE CASITAS PARK SEWER
IN
VENTURA COUNTY, CALIFORNIA

for
Casitas Municipal Water District
P. O. Box 37
Oak View, California 93022

Engineer
Boyle Engineering Corporation
21 South California Street
Ventura, California 93001

November 1976
B-8229-V01

EARTH SYSTEMS CONSULTANTS INC.
Consultants in the Applied Earth Sciences

76-11-169
November 29, 1976 Job No. B-8173-S01

Boyle Engineering Corporation
P.O. Box 1748
Ventura, California 93001

Attn: Mr. George Berg

Gentlemen:

Submitted herewith are six copies of our report entitled, "Soils Investigation, Lake Casitas Park Sewer," Ventura, California in accordance with our agreement, dated October 19, 1976.

The scope of the investigation is in compliance with the Specifications prepared by your office and our proposal. The work was coordinated with Mr. George Berg of your office.

Exploratory borings were drilled approximately at the locations as indicated on the plan. In some test holes the depth was limited by excessive rock, namely #1, and in several of the test holes, samples could not be obtained at certain depths because of the rock or cemented nature of the soils.

The criteria for this investigation was the use of a force main in the pipe depths in the range of ten (10) to fifteen (15) feet below ground surface. It is understood that consideration is being given to a gravity line which would require depths in excess of forty (40) feet in some areas of the alignment. In order to evaluate the deeper lines, the affected areas should be the subject of further investigation, either deep test holes or seismograph analysis, or both. It is our opinion that deep excavations would be possible; however, some difficult ripping will be encountered and it is possible that some blasting may be required.

This report contains our findings and our recommendations for construction of the sewer line insofar as soil conditions affect that construction.

We will be happy to discuss our findings and recommendations with your office.

Respectfully submitted,

EARTH SYSTEMS CONSULTANTS

Norman G. Hallin
C. E. 7370
Project Manager

NGH/cec

Copies: 6 - Boyle Engineering
6 - file

November 29, 1976

76-11-169
Job No. B-8173-S01

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76-11-169
Job No. B-8173-S01

SECTION I

INTRODUCTION

This report presents the results of a soils investigation performed along the alignment of the proposed Lake Casitas Park Sewer in Ventura County, California. The investigation was made in compliance with the requirements established by Boyle Engineering Corporation. Specific information concerning the project was furnished by Mr. George Berg of Boyle Engineering.

The general layout plan of the park sewer was furnished this office by the engineer and a sketch showing the line is a part of this report. Flow lines were not established; however, it was understood that the line would be a maximum depth of ten (10) to fifteen (15) feet.

The Lake Casitas Park Sewer consists of the following line and at the time of the investigation, all of the lines were planned to be within the public right-of-way.

Starting at a point inside the park entrance off of Santa Ana Road, then out of the park onto Santa Ana Road and along Santa Ana Road south, then east and then south again to the intersection with Burnham Road and up Burnham Road a short distance.

The recommendations contained herein are our considered opinions based upon careful field observations at the test borings and upon the results of laboratory tests performed upon the samples obtained from the borings.

The approximate locations of soil test borings are shown on the accompanying site plan. Graphic logs of borings, partial summary of laboratory test data and description of locations of test borings are shown on Plates B1 through 6. Consolidation data curves for selected samples are shown on Plates C1 and C2. Direct shear test data for remolded samples of representative soils that were encountered in the borings is shown on Plate D1. Maximum density-optimum moisture curves for the representative samples of the soils encountered in the borings are indicated on Plates E1 through 3. Maximum density-optimum moisture was determined in accordance with ASTM D 1557-70, Method A or C, modified to three (3) layers.

The test results are listed in tabular form as follows:

Soil Classification

Maximum Density-Optimum Moisture

Expansion Index

Sand Equivalent

Grain Size

Direct Shear

Chemical Analysis.

SECTION II

SUMMARY

Six (6) six (6) inch diameter exploratory borings were drilled with a truck-mounted continuous auger drilling rig. Borings were spaced approximately as indicated on the sketch and were drilled and logged to depths varying from twelve (12) feet for Test Hole #1 to twenty-one (21) feet for Test Hole #4.

Undisturbed samples at various depths and bulk samples of each soil type were obtained from each boring. The general soil types as revealed by the boring logs varied from clays to sands. At the southerly end of the proposed line, there is a clay shale becoming a cemented claystone which in turn turns to a siltstone and then sandstone. Some areas along the alignment are liable to be in a relatively unstable clay shale, especially where the bedding planes are near the excavation slope. Other areas are liable to be a massive sandstone which will vary in hardness up to a very hard sandstone. In most cases, the excavation can be accomplished with a large backhoe. A trencher probably will not be practical except in the softer areas because of cobble beds and the harder sandstone and siltstone materials. The graphic representation of the logs of borings presented on Plates B2 through B6 gives a more detailed presentation of the soil profile. A more detailed discussion of pertinent aspects of the investigation is presented below.

SECTION III

CONCLUSIONS AND RECOMMENDATIONS

1. Soils encountered are classified mainly as clayey sands, silty sands, sandy clays and silty clays.

2. Relative densities range from ninety percent (90%) to ninety-nine percent (99%) of maximum density with most areas being over ninety percent (90%).

3. Pipe bedding material will have to be imported.

4. Trench excavation material will be suitable for use as backfill provided the wetter soils are dried or blended with drier soils.

5. In order to achieve relative densities in trench backfill in the range of eighty-five percent (85%) to ninety percent (90%), the use of mechanical means of compaction will be required. Hydraulic densification probably will not achieve the desired degree of compaction.

6. Excavation will require a large backhoe type equipment. Some cobbles and gravels will be encountered and cementation of the soils will make some of the excavation relatively difficult.

7. The minimum for trench shoring should conform to the current industrial safety requirements or as designed by a registered civil engineer. Full sheeting should not be required in any areas of the trench.

8. Where the project is inside street rights-of-way, sloping of the trenches may not be practical. Where sloping is possible, the spoil from trench excavation adjacent to unshored cuts should be placed a distance at least equal to the trench depth and equipment and materials should be kept the same distance away. The design of shoring must take into account any surcharge loading such as equipment, materials, etc.

9. Based on the test results included in this report, the slope stability safety factor for trenches ten (10) feet deep and using a slope of 3/4 to 1 is generally above 1.5.

10. Heaving of the trench bottom may occur to a minor degree in some of the clay soils, especially if additional moisture is allowed into the soils while the trench is open.

11. Ground water is not expected to be encountered.

12. Settlement under the proposed loading should be minimal.

13. Adequate shear strength is available to provide structural support for the conduit and estimated imposed traffic loads.

14. Soil extract analyses indicate that chemicals harmful to concrete and steel are not present in significant quantities. The use of Type 2 cement is indicated for concrete construction.

15. Soil expansiveness should not be a critical factor in the project design and construction.

SECTION IV

DETAILED DISCUSSION

A. Ground Water and Chemical Analyses

Ground water was not encountered in any of the borings to the depth explored and no ground water would be expected unless some might appear near the bottom if the forty (40) or fifty (50) foot cuts for a gravity line are used.

It should be noted that the test borings were drilled during a period of minimal rainfall. It can be anticipated that trench excavation after an extended period of rainfall may encounter higher moisture contents in some areas; however, any increase is not expected to be enough to be detrimental.

Chemical analyses were performed on the three (3) representative soil types encountered in the test holes. Results are presented in the tabular listing of test results in this report.

The analyses indicate that Type 2 cement would be satisfactory for concrete construction.

B. Density and Classification - Backfill and Bedding

The majority of the soils encountered within the proposed depths of excavation are classified as clayey sands, silty sands, sandy clays and sandy silts.

In-place densities are generally high to very high with some looseness in the shallow soils. Blow counts in obtaining samples confirm the general hardness of the soils. In most areas the overburden or mantle material outside the present roadway will be less dense than the underlying soils.

The moisture contents of the materials to be excavated are generally near optimum moisture; however, the soils in Test Holes #4 and #5 showed a relatively high moisture content. Soils excavated from the areas of #4 and #5 may require some drying or blending with drier materials before being used as backfill. No trash or foreign materials of consequence were encountered in the borings; however, should any be encountered, the material will have to be wasted or cleaned of the deleterious materials.

None of the materials encountered in the test holes are considered suitable for bedding material and any bedding or select backfill material will have to be imported. The native material with the cobbles removed and cemented pieces broken up will be satisfactory for backfill material.

C. Trench Excavation and Stability

Trench excavation by a trencher may not be feasible and a large backhoe may be required. Some cobbles may be encountered and the cemented areas will result in difficult excavation. Some very hard areas may be encountered.

Vertical trench excavations probably can be made safely without shoring although the Construction Safety Orders will govern and require the minimum shoring. A 3/4 to 1 slope will provide a safe excavation in accordance with the Safety Orders. Steeper slopes will be safe; however, special analysis will be required in order to verify the factor of safety to comply with the State requirements.

Where traffic, construction equipment and supplies, structural considerations and other surcharge loads may be imposed on the trench walls, additional shoring, bracing or sheeting may be required. This consideration may be critical if the trench is located within the present travelled way.

Trench stability analyses based on a ten (10) foot depth and 3/4 to 1 slope indicates all of the area would be stable.

D. Bearing Capacity, Settlement and Expansion

In general, the bearing capacity of subgrade soils is considered adequate for the loads to be imposed. The conduit full of water will be less than the weight of the displaced soil and bearing failure should not occur for this reason.

It is possible the conduit cover is to be minimal and the box or pipe subjected to vehicular loading which would be transmitted almost directly to the underlying soil. Direct shear test data gives the result and using this data, the allowable bearing value would be in the range of 1750 pounds per square foot.

Long-term consolidation is not anticipated to occur. Settlement, which will be minor, will result from recompression of soil which has rebounded after the overburden is excavated.

The soils which are considered to be most expansive, based upon the field investigation, were tested by the Expansion Index method. Soils so tested were found to be in the medium-low to medium range of expansiveness. No special problems are anticipated from this condition.

EARTH SYSTEMS CONSULTANTS

Norman G. Haliin
C. E. 7370
Project Manager

NGH/cec

November 29, 1976

76-11-169
Job No. B-8173-S01

IN-PLACE DENSITIES

Hole and Depth	Dry Density	% Moisture	Relative Density
1 @ 1.0	99.1	9.5	82
3.0	108.7	9.5	93
5.0	108.3	10.9	92
2 @ 1.0	105.9	9.2	92
3.0	112.7	13.4	98
5.0	113.9	10.1	99
10.0	110.2	5.8	96
3 @ 3.0	105.4	10.0	89
5.0	105.2	11.4	89
10.0	108.0	10.7	91
15.0	110.9	11.0	94
4 @ 1.0	103.2	19.6	91
3.0	103.5	20.2	91
5.0	108.9	18.8	95
10.0	107.5	19.2	97
15.0	107.2	15.3	97
5 @ 1.0	100.5	24.2	91
3.0	101.6	22.1	92
5.0	103.4	16.6	93
10.0	108.0	15.1	97
15.0	100.2	12.9	90
6 @ 1.0	100.2	15.1	91
3.0	104.2	14.5	94

November 29, 1976

76-11-169
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TEST RESULTS

Soil Classification:

A1 Red brown clayey silty fine to medium sand
A2 Brown clayey sand with rock
A3 Red brown clayey silty fine to medium sand
B1 Red brown fine to medium sandy silt
B2 Red brown sandy clayey silt
C1 Dark brown silty clay
C2 Red brown clayey sandy silt
C3 Red brown fine to medium sandy silty clay
C4 Medium brown slightly sandy clay
C5 Grey clay

Soil	Maximum Density	Optimum Moisture	Expansion Index	Sand Equivalent
A1	117.8 pcf	12.1%	5	5
A2	120.0	12.1	17	12
A3	115.3	13.1	7	4
B1	121.4	6.8	10	
B2	118.8	10.4	57	
C1	114.5	12.9	68	
C2	111.7	13.9	29	
C3	111.3	13.6	37	
C4	110.9	14.7	64	
C5	112.1	16.1	79	

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Grain Size:

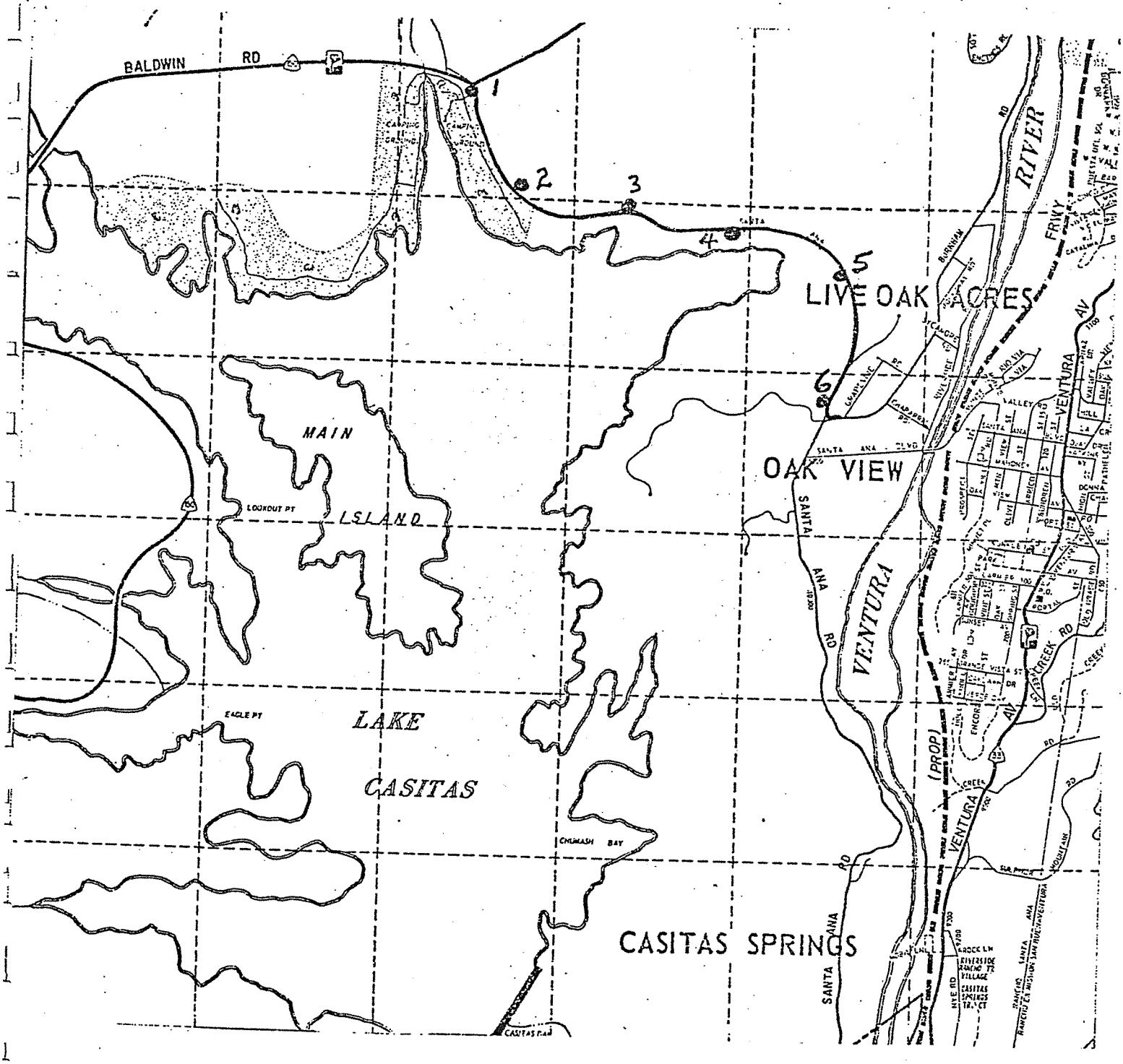
Soil	Rock	Sand	Silt	Clay
B1	8.8	48.7	28.3	14.2
B2	1.0	26.7	28.9	43.4
C1	3.3	35.6	23.9	37.2
C2	1.5	58.6	29.0	10.9
C3	13.4	34.5	22.9	29.2
C4	4.8	14.4	31.4	49.4
C5	2.4	16.1	33.6	47.9

Direct Shear - Remolded Samples:

	A1	B1	C1
ø	31.6°	27.1	23.3
C	116 psf	113	308

Chemical Analysis:

Sample	Soluble Sulphates	
	%	PPM
A1	0.02	201
B1	0.02	182
C1	0.005	48


BALDWIN RD
1
2
3
4
5
6
LIVE OAK ACRES
OAK VIEW
MAIN
LOOKOUT PT
LSLAND
EAGLE PT
LAKE
CASITAS
CHUMASH BAY
CASITAS SPRINGS
SANTA ANA RD
VENTURA
RIVER
FRWY
VENTURA AV
(PROP)
VENTURA
CREEK RD
SANTA ANA RD
SANTA
CASITAS PIER

LOG OF BORING
FOR

DATE 10/29/76 BORING NO. 1 LOCATION: Inside Park 125' NW of gate

DEPTH, FEET	SYMBOL	CORE	BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
			15	Red brown fine to medium sandy silt 1.0-	99.1	9.5	B1	82	Loose
			75	3.0-	108.7	9.5		93	
5			100	Red brown clayey fine to medium sand with rock 5.0-	108.3	10.9	A1	92	Hard
				Brown clayey sand with rock (cemented)			A2		Rock below 7.0
10									--- no sample - rock
									No free water
									Refusal @ 12.0

LOG OF BORING
FOR

DATE 10/29/76 BORING NO. 2 LOCATION: Per Plan

DEPTH, FEET	SYMBOL	CORE	BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
			70		1.0- 105.9	9.2		92	
			70	Red brown clayey silty fine to medium sand (cemented)	3.0- 112.7	13.4		98	Hard
5			75		5.0- 113.9	10.1	A3	99	
									Rock below 8.0
10			200		10.0- 110.2	5.8		96	
				Red brown silty fine to coarse sand with rock			A4		Firm
									No free water
15									Bottom @ 15.0 on rock

LOG OF BORING
FOR

DATE 10/29/76 BORING NO. 3 LOCATION: Per Plan

DEPTH, FEET	SYMBOL	CORE BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
								Some rock in upper 2.0'
		200	3.0-	105.4	10.0		89	
5		200	5.0-	105.2	11.4		89	
			Red brown fine to medium sandy clayey silt (cemented)			B2		Hard
10		300	10.0-	108.0	10.7		91	
15		150	15.0-	110.9	11.0		94	No free water
								Bottom @ 16.0.

LOG OF BORING
FOR

DATE 10/29/76 BORING NO. 4 LOCATION: Per Plan

DEPTH, FEET	SYMBOL	CORE	BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
			25	1.0- Dark brown silty clay	103.2	19.6		91	
			37	3.0-	103.5	20.2	CL	91	
5			44	5.0-	108.9	18.8		95	
				Red brown clayey sandy silt			C2		
10			60	10.0-	107.5	19.2		97	
				Red brown fine to medium sandy silty clay (cemented)			C3		
15			75	15.0-	107.2	15.3		97	
20									No free water Bottom @ 21.0

LOG OF BORING
FOR

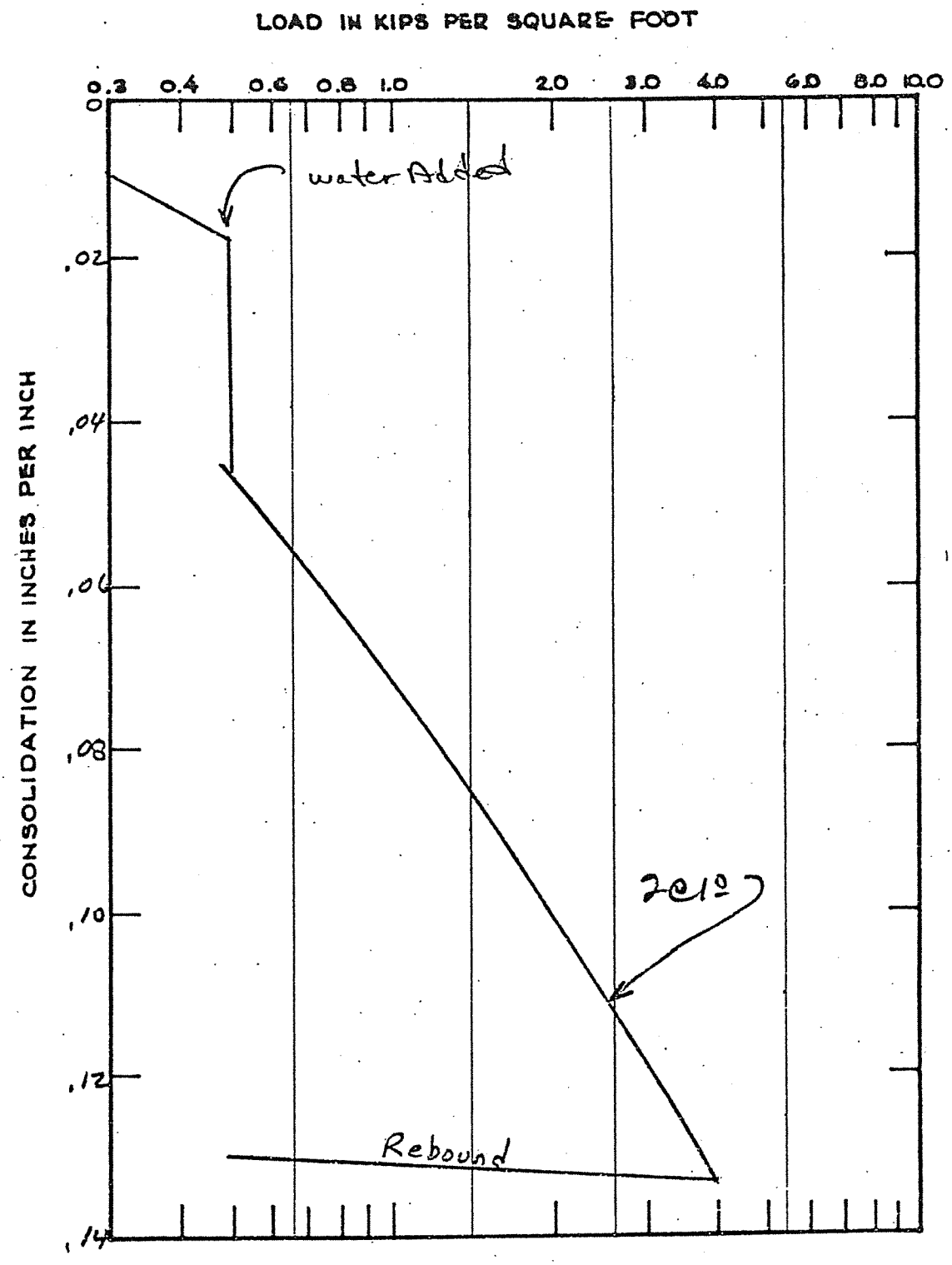
DATE 10/29/76 BORING NO. 5 LOCATION: Per Plan

DEPTH, FEET	SYMBOL	CORE	BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
			50	1.0- Medium brown slightly sandy clay	100.5	24.2	C4	91	
			55	3.0-	101.6	22.1		92	
5			150	5.0- Grey clay	103.4	16.6		93	
10			75	10.0-	108.0	15.1	C5	97	
15			150	15.0-	100.2	12.9		90	No free water
									Bottom @ 16.0

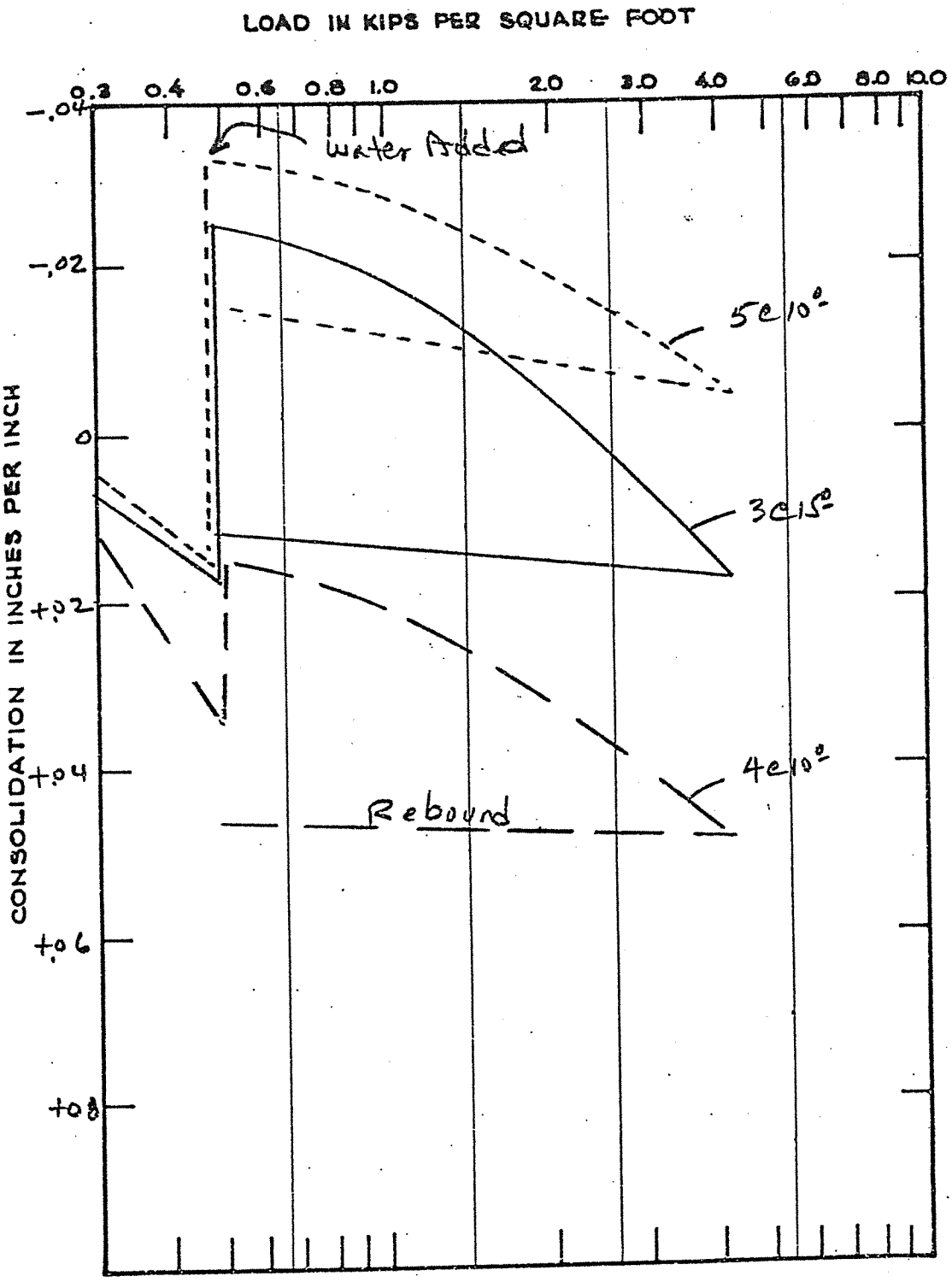
LOG OF BORING
FOR

DATE 10/29/76 BORING NO. 6 LOCATION: Per Plan

DEPTH, FEET	SYMBOL	CORE BLOWS/FT	DESCRIPTION	UNIT DRY WT. LB/CU. FT.	MOISTURE PERCENT	SOIL TYPE	RELATIVE COMPACTION PERCENT	REMARKS AND ANALYSIS
		36	1.0- Medium brown sandy clay	100.2	15.1	C3	91	
		50	3.0-	104.2	14.5		94	
5			5.0- sample lost - too hard					
			Sandy clay shale					Hard
10			10.0- sample lost - too hard					
15								No free water Bottom @ 15.0



CONSOLIDATION DATA



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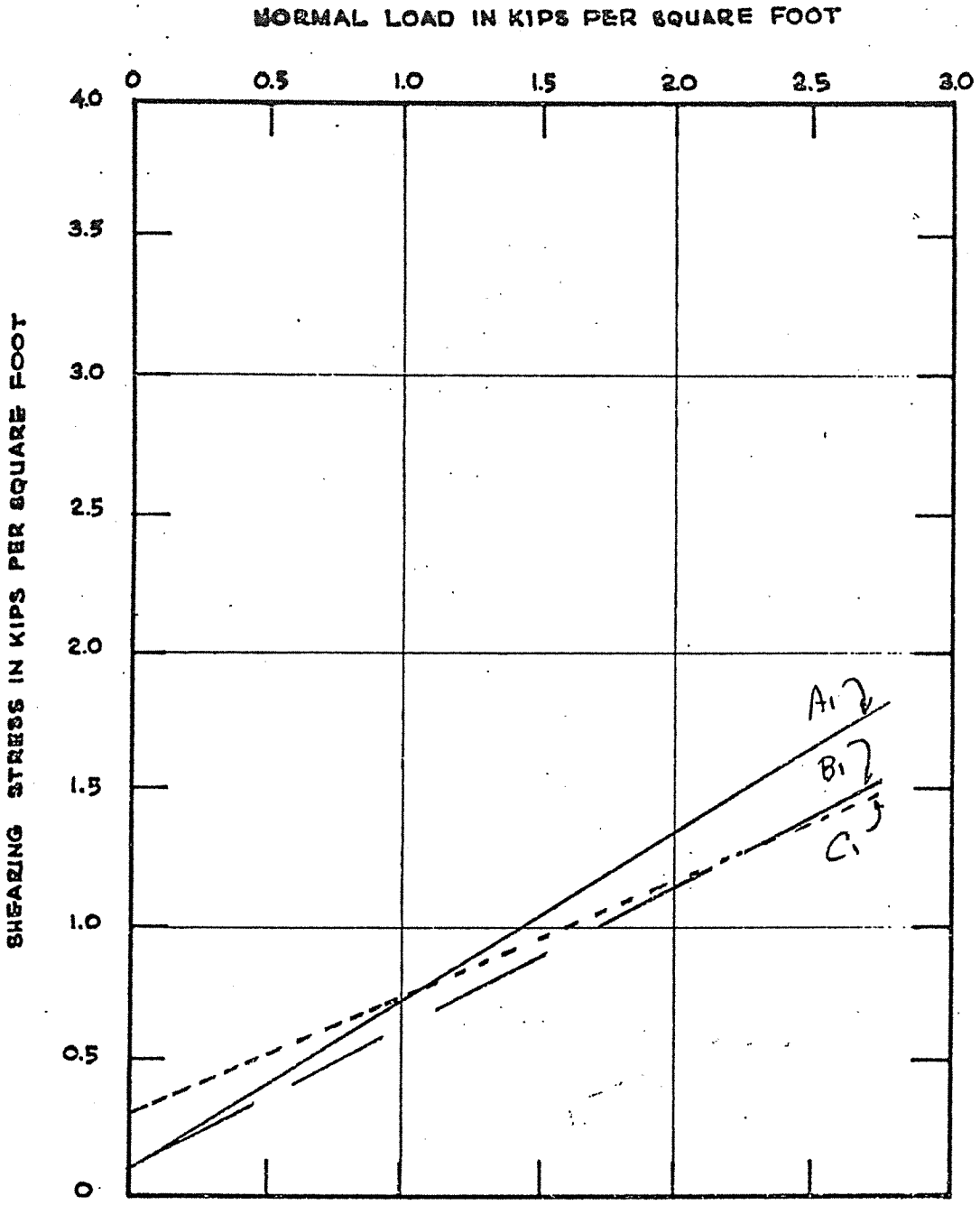
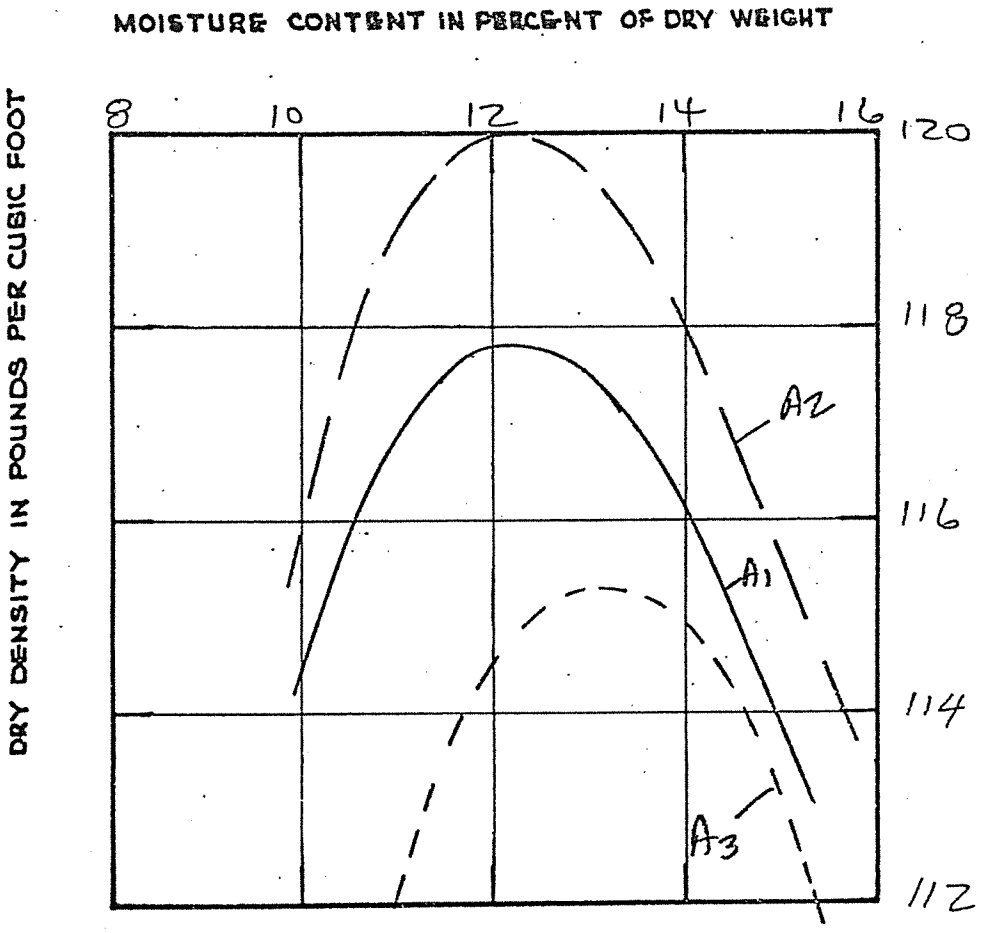


DIRECT SHEAR DATA

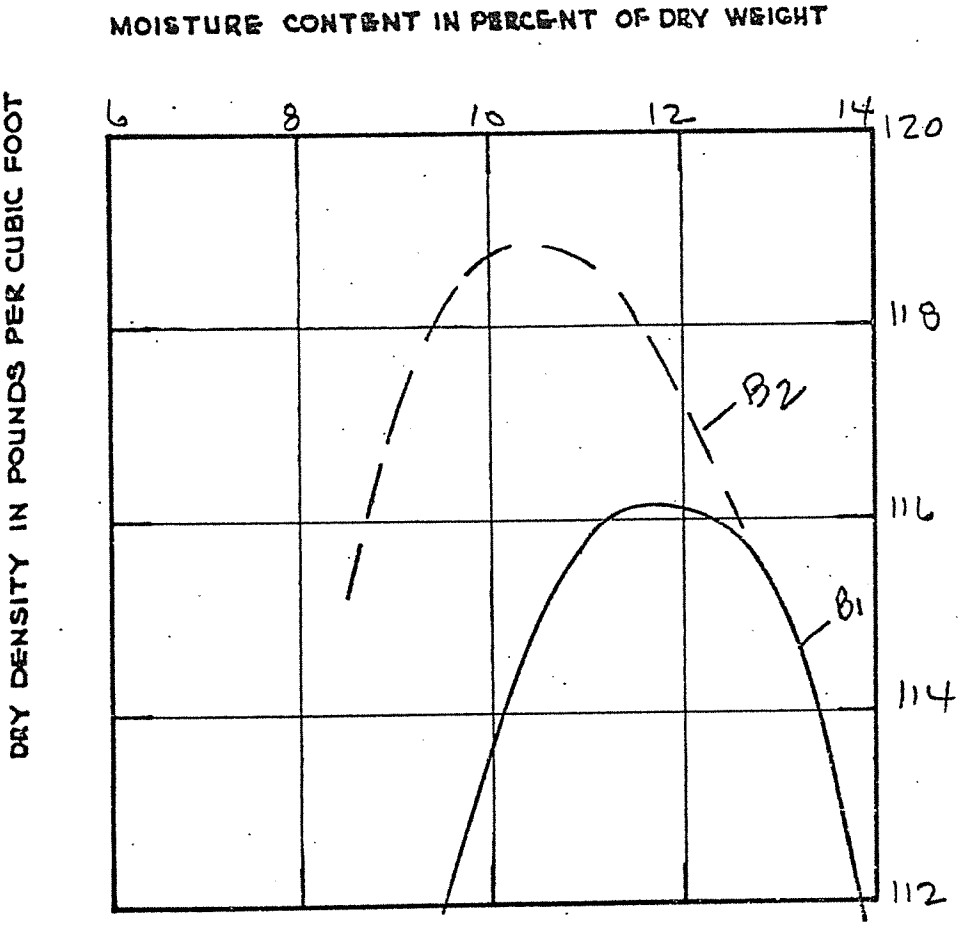


METHOD OF COMPACTION.

ASTM D1557 -70 method A or C modified to 3 layers

SOIL TYPE	MAXIMUM DENSITY	OPTIMUM MOISTURE
A_1	117.8 Pcf	12.1 %
A_2	120.0 pcf	12.1 %
A_3	115.3 pcf	13.1 %

MAXIMUM DENSITY - OPTIMUM MOISTURE CURVES

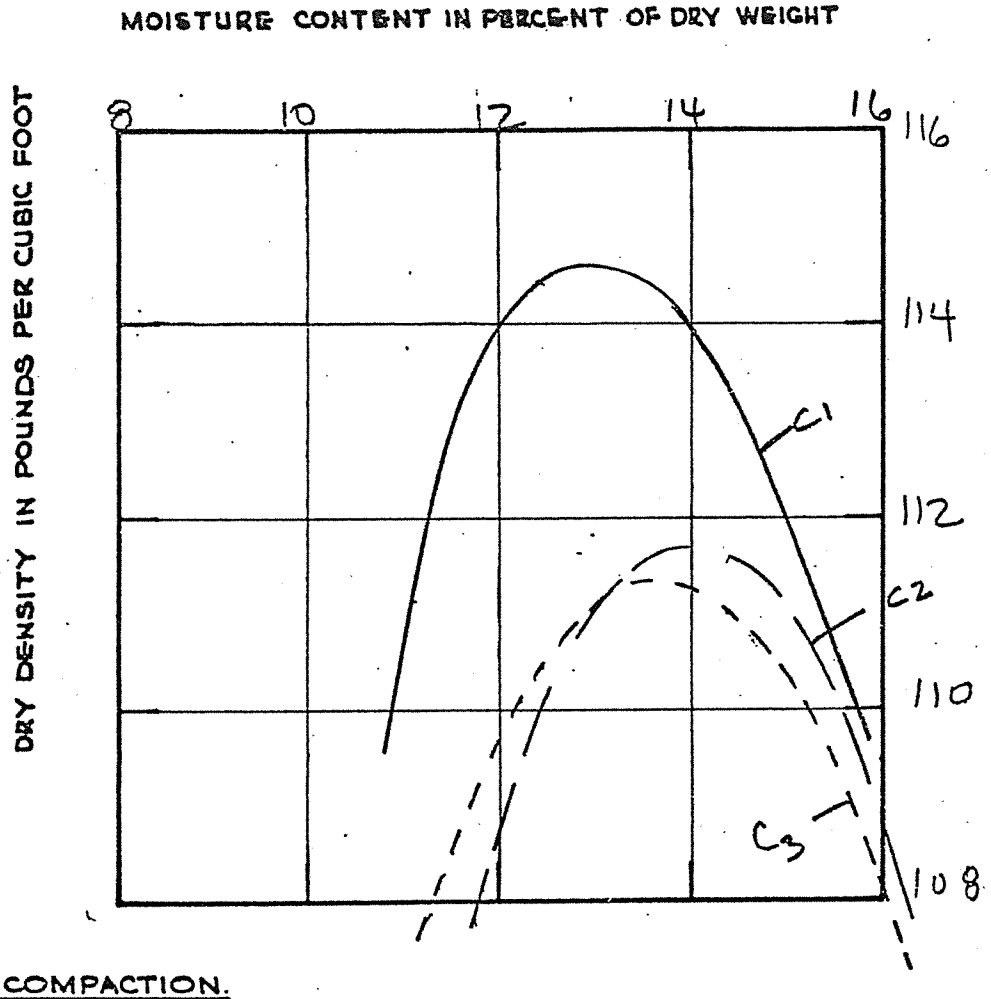


METHOD OF COMPACTION.

ASTM D 1557 -70 Method A or C Modified to 3 Layers

SOIL TYPE	MAXIMUM DENSITY	OPTIMUM MOISTURE
B_1	116.1 Pcf	11.7%
B_2	118.8 Pcf	10.4%

MAXIMUM DENSITY - OPTIMUM MOISTURE CURVES



METHOD OF COMPACTION.

ASTM D 1557 –70 Method Arc Modified to 3 layers

SOIL TYPE	MAXIMUM DENSITY	OPTIMUM MOISTURE
C_1	114.5 pcf	12.9 %
C_2	111.7 pcf	13.9 %
C_3	111.3 pcf	13.6 %

MAXIMUM DENSITY – OPTIMUM MOISTURE CURVES

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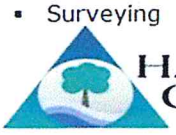

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Civil Engineering • Environmental Engineering/Planning

CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM

TO: STEVE WICKSTRUM, GENERAL MANAGER

FROM: NEIL COLE, PRINCIPAL CIVIL ENGINEER

SUBJECT: DISTRICT OFFICE LIGHTING REPLACEMENT, SPECIFICATION 17-396

DATE: NOVEMBER 15, 2017

RECOMMENDATION:

It is recommended that the Board of Directors:

1. Accept the withdrawal of the bid proposal from Vitality Construction Inc due to an error

2. Adopt the resolution accepting the proposal submitted by the lowest responsive and responsible bidder and award the contract for the construction of the District Office Lighting Replacement, Specification 17-396 to Oilfield Electric Company in the amount of $103,900.00.

3. Authorize the President of the Board to execute the agreement for said work and the Board authorize staff to proceed with the administration of the contract.

BACKGROUND AND DISCUSSION:

The T-12 florescent tubes used in some of the current office lights will no longer be available in the near future. This project will replace the existing T-12 light fixtures with LED fixtures and automated controls. The new system is designed to be in compliance with Title 24 requirements. The project also includes painting the ceiling tiles on the first (main) floor. The bid proposal did include an alternate item to replace the ceiling tiles on the first floor. The alternate item is not recommended due to the cost of the work.

The project was advertised through F.W. Dodge and on the District's web site. Three firms completed a site visit. Three firms submitted proposals. The bid results are

FIRM	AMOUNT	Alternate Bid Item
Vitality Construction Inc	$27,340.30	18,396.00
Oilfield Electric	$103,900.00	77,400.00
Smith Electric Service	$121,006.00	79,212.00

Vitality Construction has requested that their bid be withdrawn. Oilfield Electric Company has successfully completed several projects for Casitas. Their contractor license is current and they are currently registered with DIR. The project is Categorically Exempt from CEQA under Section 15301(a). The FY 2017-18 Capital Budget includes $150,000 to complete the replacement of this portion of the office lighting.

CASITAS MUNICIPAL WATER DISTRICT

RESOLUTION AWARDING A CONTRACT
DISTRICT OFFICE LIGHTING REPLACEMENT
SPECIFICATION 17-396

WHEREAS, the District invited bids from qualified contractors for the above-referenced project, and

WHEREAS, some of the lighting in the District Office is obsolete, and

WHEREAS, the District received three bids,

WHEREAS, the low apparent bidder, Vitality Construction Inc. has requested that their bid be withdrawn due to an error,

WHEREAS, the second lowest bidder, Oilfield Electric Company, submitted a bid of $103,900.00.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Casitas Municipal Water District as follows:

1. Accept Vitality Construction Inc. request to withdraw their bid proposal.

2. That the bid from Oilfield Electric Company in the amount of $103,900.00 be accepted to construct District Office Lighting Replacement, Specification 17-396 and a contract awarded.

3. That staff is hereby authorized and directed to proceed with the administration of the contract.

ADOPTED this 22nd day of November, 2017.

_____
Russ Baggerly, President
Casitas Municipal Water District

ATTEST:

_____
Bill Hicks, Secretary
Casitas Municipal Water District

CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM

TO: STEVE WICKSTRUM, GENERAL MANAGER

FROM: NEIL COLE, PRINCIPAL CIVIL ENGINEER

SUBJECT: AUTHORIZE THE GENERAL MANAGER TO APPROVE UP TO $100,000 IN ADDITIONAL ASPHALT PAVING WORK DURING FISCAL YEAR 2017-18

DATE: NOVEMBER 15, 2017

RECOMMENDATION:

It is recommended that the Board of Directors authorize the General Manager to approve up to $100,000 in additional asphalt paving work during Fiscal Year 2017-18.

BACKGROUND AND DISCUSSION:

The Board of Directors awarded the annual paving project to BSN Construction, Inc. in the amount of $40,914 at the August 23, 2017 meeting. At the September 27, 2017 meeting, the Board authorized an additional $60,000 in asphalt paving work.

The request is for authorization for up to an additional $100,000, bringing the total potential contract amount to $200,914. Even this may not be enough to cover all of the asphalt patch work required this year. The original $40,914 project was to repair patches from leaks and to raise valve cans for work that had taken place to the legacy Casitas system over the previous 6 months. So far in FY 2017-18, there have been 11 asphalt patches (all but 1 included in the original contract) within the legacy Casitas system and 40 in the Ojai system. There are an additional 2 known locations within the Ojai system that are likely to require asphalt patches. The cost for the patches that have been authorized so far this year is $99,004.43.

With the acquisition of the Ojai system, Casitas has experienced an average of 2-3 leaks per week. Each of the leak repairs requires timely asphalt patching. While it is hoped that the frequency of the leaks and the subsequent need for asphalt repair will subside over the 7 months remaining in FY 2017-18, the frequency may not subside. Being able to move forward with the patches in a timely manner, with a minimum of delays and administration costs, while receiving a fair price for the asphalt work, is in the best interest of the rate paying public.

$55,000 was included in the FY 2017-18 Budget for this work. This estimate was based on previous year's patching requirements before the acquisition of the Ojai system. It is recommended that the portion of the work related to the Ojai System be included as part of the Community Facilities District 2013-01 (Ojai) bond proceeds.

This project is Categorically Exempt from CEQA under Section 15301 (c).

CASITAS MUNICIPAL WATER DISTRICT
INTEROFFICE MEMORANDUM

TO: BOARD OF DIRECTORS

FROM: STEVEN E. WICKSTRUM, GENERAL MANAGER

SUBJECT: ADOPT RESOLUTION APPROVING RECORDS RETENTION AND DESTRUCTION POLICY.

DATE: NOVEMBER 15, 2017

RECOMMENDATION:

It is recommended that the Board of Directors repeal Resolution No. 90-5 and adopt the Records Retention and Destruction Policy and attachments attached hereto as Exhibit A in order to comply with the government regulations now in effect.

BACKGROUND AND DISCUSSION:

On January 10, 1990, by Resolution No. 90-5, the District approved a Records Retention Policy in accordance with guidelines prepared by the Association of California Water Agencies, the State Controller's Office and the Controller's Office Advisory Committee to regulate the retention and destruction of documents and files. Subsequently, on January 1, 2005, significant amendments were made to Government Code sections covering those procedures for special districts becoming effective pursuant to Assembly Bill 474 ("AB 474").

In order to comply with the new regulations, the District has developed a new policy which has been reviewed by District Counsel and it is recommended that this new policy be adopted by the Board.

It should be noted that only the first page of the Records Retention Schedule is included as an example in accordance with the recommendation of the Executive Committee at their meeting on November 14, 2017, due to the extremely large number of pages that comprise the actual Schedule. Contact Rebekah Vieira if you desire to see the complete Records Retention Schedule.

CASITAS MUNICIPAL WATER DISTRICT

RESOLUTION NO.

**RESOLUTION REPEALING RESOLUTION NO. 90-5
AND ADOPTING A NEW
RECORDS RETENTION & DESTRUCTION POLICY
AND RETENTION SCHEDULE**

WHEREAS, on January 10, 1990, the District approved Resolution No. 90-5 which adopted a Records Retention Policy in accordance with guidelines prepared by the Association of California Water Agencies, the State Controller's Office and the Controller's Office Advisory Committee to regulate the retention and destruction of documents and files, and

WHEREAS, on January 1, 2005, significant amendments to Government Code sections 60201 and 60203, the sections that provide procedures for regulating the retention and destruction of records for special districts, became effective pursuant to Assembly Bill 474 ("AB 474"), establishing new requirements for retaining and disposing of special district records; and

WHEREAS, Amended Code Section 60201 authorizes special districts to adopt a records retention schedule that complies with the Local Government Records Management Guidelines issued by the California Secretary of State pursuant to Code Section 12236; and

WHEREAS, the District has determined that it is necessary to update the previously adopted policy to comply with the California Secretary of State Local Government Records Management Guidelines, as required under AB 474; and

WHEREAS, the District has determined that the repeal of Resolution No. 90-5 and adoption of an updated Records Retention and Destruction Policy and Retention Schedule will enable the District to comply with the provisions of the amended Government Code Sections 60201 through 60203, and

WHEREAS, any records destroyed pursuant to the District's new Records Retention and Destruction Policy and Records Retention Schedule will not adversely affect the District or the public.

NOW THEREFORE BE IT RESOLVED by the Board of Directors of the Casitas Municipal Water District as follows:

1. The Records Retention and Destruction Policy and attachments attached hereto as Exhibit A and incorporated herein by reference, are adopted as the policy of the Board of Directors.

2. The records of the District are hereby authorized to be destroyed as provided by Sections 60200 through 60203 of the Government Code and in accordance with the Records Retention Schedule hereinabove referred to, including duplicate records.

3. The General Manager of the District and/or his/her designee is hereby authorized to implement the policy which is the subject of this resolution and additionally, is authorized to add and incorporate additional series with appropriate retention and destruction designations as may become necessary in the future.

4, Resolution No. 90-5 is hereby repealed.

ADOPTED this _____ day of _____, 2017.

_____
President,
Casitas Municipal Water District

ATTEST:

_____
Secretary,
Casitas Municipal Water District

EXHIBIT A

CASITAS MUNICIPAL WATER DISTRICT
RECORDS RETENTION AND DESTRUCTION POLICY

I. PURPOSE

The purpose of this Records Retention and Destruction Policy is to: provide guidelines to staff regarding the retention or destruction of records of the Casitas Municipal Water District; provide for how records are to be identified, maintained, safeguarded, and destroyed; ensure records can be retrieved promptly and accurately; and ensure compliance with all applicable legal and regulatory requirements.

II. DEFINITIONS

A. "***Destruction Date***" shall mean the date after which the destruction of a Record may be authorized according to the provisions of this Policy.

B. "***District***" shall mean the Casitas Municipal Water District.

C. "***District Records Retention Schedule***" shall mean the schedule, attached to this Policy as Attachment A, setting forth how long the District's various types of Records must be retained.

D. "***Permanent Record***" shall mean any Record that may not be destroyed and must be retained indefinitely.

E. "***Record***" shall mean any writing containing information relating to the conduct of the District prepared, owned, used, or retained by the District, regardless of its physical form or characteristics.

F. "***Records Retention Officer***" or "***Officer***" shall mean the individual appointed by the District's General Manager to implement and carry out this Policy.

G. "***Retention Period***" shall mean the period of time for which a Record must be stored by the District pursuant to this Policy or State law.

H. "***Schedule***" shall mean the District's Records Retention Policy Schedule.

I. "***Series Code***" shall mean the sequence of digits and numerals assigned to a Record or group of Records based on their characteristics.

J. "***Vault***" shall mean the file storage area located in the basement of the District's headquarters at 1055 Ventura Avenue, Oak View, California, 93001.

III. GENERAL PROVISIONS

A. The District's General Manager shall designate the Officer.

B. The Officer shall be responsible for overseeing the implementation and ongoing administration of this policy. The Officer shall assist Staff in complying with the provisions of this Policy and the Schedule. The Officer shall ensure Staff is made aware of any updates or changes to this Policy or the Schedule.

C. The Schedule, as it may be amended from time to time, is attached hereto as "Attachment A" and incorporated into this Policy by reference.

D. The head of each Department shall designate one member of its Staff to periodically review the Department's current records. The designated Staff member shall review their Department's records at least once annually but not more frequently than every six months.

E. The designated Staff member shall determine if a Record is current, should be stored, or should be destroyed. Current Records shall be retained by the Department. Records that are to be Stored shall be handled according to Section 3 of this Policy. Records that are to be destroyed shall be handled according to Section 4 of this Policy.

IV. RECORD STORAGE PROCEDURES

A. Each Department shall be responsible for preparing any of its Records designated for storage in the following manner:

1. Mark Records designated for storage with their Series Code and Destruction Date.

2. Place Records designated for storage in banker file boxes; boxes shall measure 15" long, 12" wide, and 10" high; files shall be placed upright into boxes.

3. Mark boxes containing Records designated for storage with the Series Codes and Destruction Dates of the Records contained therein; Destruction Dates shall be marked in red; permanent Records shall be marked in orange.

4. Request Officer to designate a location in the Vault where the Records are to be stored prior to their being transferred to the Vault.

B. Records that are not currently in use shall be stored in the Vault. With the permission of the Officer, Records may be stored at the District's various satellite locations (e.g. Treatment Plant, Recreation Area, Pump Plants, etc.) where doing so furthers operational efficiency.

C. All Records stored in the Vault shall be contained in banger file boxes or file cabinet drawers with their labeling clearly visible at all times.

D. Each Department shall keep and regularly maintain a detailed inventory of Records stored in the Vault. This inventory shall include the Series Code, Destruction Date, and location of the Record within the Vault.

V. RECORD DESTRUCTION PROCEDURES

A. The District may destroy any original version of a Record without retaining a copy as long as the retention and destruction of the Record complies with this Policy and the Schedule, except where the retention of a Record is expressly required by State law. (*Gov. Code § 60201*)

B. The District may destroy, at any time, rough drafts, notes, working papers (except for audits) that are not retained by the District in the ordinary course of business, including temporary or transitory documents used only for controlling the flow of work (e.g. "Post-it" notes) because such documents are not Records.

C. The District shall not destroy any of the following records:

1. Records relating to the formation, change of organization, or reorganization of the District;

2. Ordinances, Resolutions and District Meeting Minutes;

3. Records relating to any pending claim or litigation or any settlement or other disposition of litigation within the past two years;

4. Records that are the subject of any pending request for records under the California Public Records Act, whether or not the record is exempt from disclosure, until the request has been fulfilled or denied. Records shall be retained for the current year plus two (2) years after closure;

5. Records relating to any pending construction that the District has not accepted or for which a stop notice claim may be legally presented;

6. Records relating to any non-discharged debt of the District;

7. Records relating to the title to real property in which the District has an

interest;

8. Records relating to any non-discharged contract to which the District is a party;

9. Records that have not fulfilled the administrative, fiscal, or legal purpose for which they were created or received;

10. Unaccepted bids or proposals, which are less than two (2) years old, for the construction or installation of any building, structure or other public work; and

11. Records less than the current year plus seven (7) years that specify the amount of compensation or expense reimbursement paid to District employees, officers, or independent contractors.

(*Gov. Code §§ 34090 & 60201*)

D. The District shall not destroy or otherwise disposed of any Record, unless it is determined that the Record has no further administrative, legal, or fiscal value and the Secretary of State has determined that the record is inappropriate for preservation in the State Archives. (*Gov. Code § 14755, subd. (a).)*

E. The District shall not destroy or otherwise disposed of any Record that is the subject of an audit shall be destroyed until it has been determined that the audit has been performed. (*Gov. Code § 14755, subd. (b).)*

F. The District shall not destroy or otherwise disposed of any Record that is part of an agency rulemaking file subject to Gov. Code § 11347.3. (*Gov. Code § 14755, subd. (c).)*

G. The District shall retain General Ledgers for a minimum of four (4) years after completion of any annual audit. (Code of Civ. Pro. § 337.) Published articles show retention periods of four (4) to seven (7) years as typical. The Secretary of State recommends that general ledgers be permanently retained. (Sec. of State Local Gov't. Records Mgmt. Guidelines; Gov. Code § 3409(1).)

H. The District shall retain original source documents that are detailed in a register, journal, ledger or statement until audited plus five (5) years. Certain source documents may be retained for a shorter period of time. Refer to the Records Retention Schedule for specific accounting documents.

I. Each Department shall be responsible for preparing any of its Records designated for destruction in the following manner:

1. Prepare a "List of Obsolete Records for Destruction" according to the

example attached to this Policy as "Attachment B."

2. Prepare a "Records Destruction Form" using the form attached to this policy as "Attachment C."

3. The "List of Obsolete Records for Destruction" and "Records Destruction Form" shall be reviewed and approved by the Department Head and then submitted to the Officer.

J. The Officer shall review the "List of Obsolete Records for Destruction" and "Records Destruction Form" and verify that the listed Records: (1) are not required to be permanently retained; (2) have been retained for the legally required period of time; and (3) have been reproduced pursuant to any applicable requirements (i.e., imaging, etc.).

K. The Officer shall return any Records that do not satisfy the criteria for destruction set out in this Policy to their respective Department for further evaluation and processing.

L. The Officer shall approve the destruction of any Record that meets the criteria for destruction set out in this Policy.

M. The Officer shall determine the means by which Records shall be destroyed. When determining the means of destruction, the Officer shall choose the most cost-effective means of destruction unless this Policy, the Schedule, or State law prescribes a specific means of destruction for a particular type of Record.

N. The Officer or a Designee of the Officer shall oversee the destruction of all Records and then sign the Records Destruction Form to verify witnessing the destruction of the Records. The original Records Destruction Form shall be retained by the Officer and a copy shall be retained by the Department to which the Records belonged.

VI. OTHER GUIDELINES

A. <u>Accounting Records (May include, but not be limited to the following:)</u>

1. <u>Source Documents, including</u>:
Invoices
Warrants
Vouchers
Requisitions/Purchase Orders (attached to invoices)
Cash Receipts
Claims
Bank Statements
Bank Deposits

Checks
Bills
Various accounting authorizations taken from District minutes, resolutions or contracts

2. Journals, including:
   Cash Receipts
   Accounts Receivable or Payable Register
   Check or Warrant Register
   General Journal
   Payroll Journal

3. Ledgers, including:
   Expenditure
   Revenue
   Accounts Payable or Receivable Ledger
   Assets/Depreciation
   Warrants Payable
   Construction
   General Ledger

4. Trial Balance

5. Adjusting Entries

6. Statements (Interim or Certified - Individual or All Fund), including:
   Balance Sheet
   Analysis of Changes in Available Fund Balance
   Cash Receipts and Disbursements
   Inventory of Fixed Assets (Purchasing)

7. Journal Entries

8. Reversing Entries

9. Payroll and Personnel Records, including:
   Accident reports, injury claims and settlements
   Applications, changes or terminations of employees
   Earnings records and summaries
   Fidelity bonds
   Garnishments
   Insurance records of employees
   Job descriptions
   Medical histories
   Retirements
   Time cards

10. Other
Inventory Records (Purchasing)
Capital Asset Records (Purchasing)
Depreciation Schedule
Cost Accounting Records

B. Payroll Records, including:

1. Accident reports, injury claims and settlements

2. Medical histories

3. Injury frequency charts

4. Applications, changes and terminations of employees Insurance records of employees

5. Time cards

6. Job descriptions

7. Performance or rating documents

8. Earning records and summaries

9. Records specifying amounts of compensation or expense reimbursement paid to District employees, officers, or independent contractors must be retained for seven (7) years after date of payment. (Gov. Code § 60201).

CASITAS MUNICIPAL WATER DISTRICT - RECORDS RETENTION SCHEDULE

Legend: **AA - After Audit Settled, ACT - While Active, AE - After Expiration, AFP - After Final Payment, AP - After Approval, C - Confidential, CL - Closed/Completed (After final resolution. When no further action pending or required), CR - Creation (of the record) Date, CU - Current, CY - Current Year, EY - Event Year, GC - Government Code, H - Historical , IND - Indefinite, L - Life of Entity/Equipment, P - Permanent, R - Review, S - Superseded, T - Termination (Employment or Contract), V - Vital, +[Number] - Plus Years**

Series Code	Series Name	Description of Documents, As Needed	Office of Record	Official Record Retention	Citation/Legal Basis/Rationale
ACCOUNTING (ACC)					
ACC100.1	Accounts Payable	Records documenting payment required to be made for goods and services. May include claims, credit card transactions, invoices, petty cash records, refunds, vouchers and warrants.	Accounting Manager	**CY+7**	GC 34090 & 60201; 2 year minimum, CCP 337; Statute of limitations, State of California Guidelines; 4 years after audit for account postings and supporting documents; 2 years after audit for journal entries, **CMWD - Best Practice - Maintain records for Current Year plus 7 based on IRS guidelines and recordkeeping consistency.**
ACC100.2	Bank Check Lists	Check lists for audit and those included in Board Packets	Accounting Manager, Executive Administrator (Board)	**CY+10 P for Board Packet**	GC 34090 & 60201; 2 year minimum CCP 337; Statute of limitations State of California Guidelines; 5 years after audit for checks, Administrative Decision. **CMWD - Best Practice - Maintain for the Current Year plus 10 years for recordkeeping consistency. - Lists included with Board Packet - Permanent.**
ACC100.3	1099	Non Incorporated Outside Consultants	Accounting Manager	**CY+7**	GC 34090 & 60201; 2 year minimum, 29 USC 436; 5 years 26 CFR 31.6001; 4 years after tax return is filed R&T 19530; 3 years after tax return is filed, 29 CFR 516.2-6; Maintain at least 3 years, State of California Guidelines; 4 years after audit. **CMWD - Best Practice - Maintain records for Current Year plus 7 based on IRS guidelines and recordkeeping consistency.**
ACC100.4	Banking - Cash Disbursements Audit Trail and Updates	Records documenting transactions with an outside financing institution. May include statements, reconciliations, deposit slips, canceled checks for minor transactions, negotiated checks, returned checks and check registers. Includes journal entries and subsidiary ledgers.	Accounting Manager	**CY+7**	GC 34090 & 60201; 2 year minimum CCP 337; Statute of limitations State of California Guidelines; 4 years after audit for account postings and supporting documents; 2 years after audit for journal entries. **CMWD - Best Practice - Maintain records for Current Year plus 7 based on IRS guidelines and recordkeeping consistency**.
ACC100.5	Claims By/Against the District	Claims paid or denied	Accounting Manager, Executive Administrator (Management)	**CL+7**	GC 34090 & 60201; 2 year minimum 42 USC 1983; Definitions, GC 25105.5; 5 years after closure/completion, 29 USC 1113; 6 years after date of last action, or 3 years after plaintiff had knowledge of breach or violation, whichever comes first, GC 910 - 913; 6 months to 1 year after event occurs. State of California Guideline; 5 years after settlement or closure. **CMWD - Best Practice - CL+7 years.**
ACC100.6	Dues and Subscriptions, Professional Associations and Organizations	Dues and Subscriptions	Accounting Manager and Departments	**CU+2**	**GC 34090 & 60201; 2 year minimum**
ACC100.7	Temporary Employment Agencies	Temporary Employment Agency Records	Accounting Manager and HMR	**ACT + 3**	**No retention citation. Keep while active.** **CMWD Best Practice -: Maintain 3 years after completion of use of services.**
ACC200.1	Accounts Receivable	Records documenting payment received for goods and services provided by the District. May include collection notices & records, credit advices, credit card charges, receipts and uncollected account records. May also include daily deposit, daily balance and balance sheets.	Accounting Manager and Recreation	**FY+7**	GC 34090 & 60201; 2 year minimum CCP 337; Statute of limitations State of California Guidelines; 4 years after audit for account postings and supporting documents; 2 years after audit for journal entries. **CMWD - Best Practice - Maintain records for Fiscal Year+7 based on IRS guidelines and recordkeeping consistency.**
ACC200.2	Utility Billing	Records documenting customer water usage and charges therefor.	Accounting Manager	**CY+7**	GC 34090 & 60201; 2 year minimum CCP 337; Statute of limitations State of California Guidelines; 4 years after audit for account postings and supporting documents; 2 years after audit for journal entries. **CMWD - CY+7 years for recordkeeping consistency.**
ACC200.3	Bills	Payables	Accounting Manager	**CY+7**	GC 34090 & 60201; 2 year minimum, State of California Guidelines; 2 years After Audit for billing records. **CMWD - CY+7 years for recordkeeping consistency.**

CASITAS MUNICIPAL WATER DISTRICT - RECORD OF DOCUMENTS DESTRUCTION

EXAMPLE

Legend: **AA - After Audit Settled, ACT - While Active, AE - After Expiration, AFP - After Final Payment, AP - After Approval, C - Confidential, CL - Closed/Completed (After final resolution. When no further action pending or required), CR - Creation (of the record) Date, CU - Current, CY - Current Year, EY - Event Year, GC - Government Code, H - Historical , IND - Indefinite, L - Life of Entity/Equipment, P - Permanent, R - Review, S - Superseded, T - Termination (Employment or Contract), V - Vital, +[Number] - Plus Years**

Series Code	Series Name	Description of Documents, As Needed	Office of Record	Official Record	Citation/Legal Basis/Rationale	
CONSERVATION (CON)						
CON100.1	**Backflow**	Records for Testing and Maintenance of Backlow Preventers	Conservation	**CY+3**	**CCR Title 17 Section 7605(f)**	

Type	Dates Covered	Description of Documents, As Needed	Office of Record	Destroy Date	Method of Destruction	Year Destroyed
Docs	1974-1979	Testing records and correspondence	Conservation	**1983**	Onsite Outside Confidential Shredding	**2016**
Docs	1988-2002	Testing records and correspondence	Conservation	**2006**	Onsite Outside Confidential Shredding	**2016**
	2002-2008	Testing records and correspondence	Conservation	**2012**	Onsite Outside Confidential Shredding	**2016**
Docs	1974-1977	Work Order Requests Completed - County Billing	Conservation	**1981**	Onsite Outside Confidential Shredding	**2016**
Docs	1981-1984	Work Order Requests Completed - County Billing	Conservation	**1988**	Onsite Outside Confidential Shredding	**2016**
List	1978-1985	List of Devices Required to be Tested	Conservation	**1989**	Onsite Outside Confidential Shredding	**2016**

*** Permanent for engineering records, drawings, and other supporting data for proposed or as-constructed utility facilities: Maps, diagrams, profiles, photographs, field survey notes, plot plan, detail drawings, records of engineering studies, and similar records showing the location of proposed or as-constructed facilities: 18 CFR 125.3; Life of facility plus 5 years**
GC 34090(a) & 60201(d)(8); Permanent for documents relating to title to real property
State of California Guidelines; Termination of the facility plus 2 years, Permanent for capital improvement construction documentation.

*** Maintenance and operation documents, including work orders authorizing expenditures:**
18 CFR 125.3; 5 years
GC 34090 & 60201; 2 year minimum State of California Guidelines; Current year plus 2 years for maintenance & operations records.

CASITAS MUNICIPAL WATER DISTRICT
RECORDS DESTRUCTION FORM

CONTACT			
Department	**Contact Person**	**Telephone/E-mail**	**Date**
APPROVALS			
Department Approval (Name)	**Position Title**	**Signature**	**Date**
Final Approval	**Records Retention Officer (Name)**	**Signature**	**Date**
Records Retention Officer			
LIST OF RECORDS TO BE DESTROYED			
See attached	Number of Sheets -		
DESTRUCTION COMPLETED BY			
Company Name		**Method**	**Date**
DESTRUCTION VERIFIED BY			
Name	**Position Title**	**Signature**	**Date**
INSTRUCTIONS FOR COMPLETING FORM			

1. **Contact -** Person coordinating lists of documents for destruction.
2. **Department Approval -** Head of the Department.
3. **List of Records to be Destroyed -** Must be prepared in approved format. Coordinate with Records Retention Officer.
4. **Method of Destruction -** Paper records by onsite confidential shredding. Digital and other media to be determined and approved.
5. **Destruction Completed By -** Name and details of person who performed task or name of third party company with documentation.
6. **Destruction Verified By** - Name and details of person who observed destruction of documents.
7. **Retain copy of form for department records.**

CASITAS MUNICIPAL WATER DISTRICT
LAKE CASITAS RECREATION AREA

DATE: October 30, 2017

TO: Recreation Committee

FROM: Carol Belser, Park Services Manager

SUBJECT: Recreation Area Monthly Report for September 2017

Visitation Numbers

The following is a comparison of visitations* for September 2017:

	Sept. 2017	Sept. 2016	August 2017
Visitor Days	50,172	56,768	75,292
Camps	5,787	5,331	9,834
Cars	12,543	14,192	18,823
Boats	94	154	168
Kayaks & Canoes	6	20	5

Fiscal Year to Date Visitation	
2016/2017	276,166
2017/2018	260,064
% Change	-5.831

*The formulas for calculating the above attendance figures derived from the daily cash reports are as follows:
Visitor Days = Daily vehicles + 30 minute passes X 3 + café passes + attendance at special events + annual vehicle decals + replacement decals + campsites occupied +extra vehicles X 4
Camps = Campsites occupied + extra vehicles
Cars = Daily vehicles + 30 minute passes X 3 + café passes + attendance at special events + annual vehicle decals + replacement decals + campsites occupied + extra vehicles
Boats = Daily boats + overnight boats + annual decals + replacement decals
Kayaks & Canoes = Daily kayaks and canoes + overnight kayaks and canoes + annual kayaks and canoes

Boating and Operations

There were six cables sold for new inspections, three vessels were re-inspected, and a total of 446 vessels were retagged in September. Seven vessels failed the first inspection in September 2017. Santa Ana Launch Ramp ceased operation after the water level decreased and Old Coyote was reactivated and is now in use.

The Casitas Water Adventure hosted a splash-in movie with great success. The movie Goonies was screened and 409 participants cane to enjoy the free movie in the water play structre. We will schedule more next season, as this was a welcomed popular event. The Ojai Cross Country Invational was held on September 16, staff participated in lifeguard training waterfront in the lake on September 21, a fund-raiser Duck Race was held in the Lazy River and the annual disc golf trournament Coyote Classic was held September 29, 30 and October 1st.

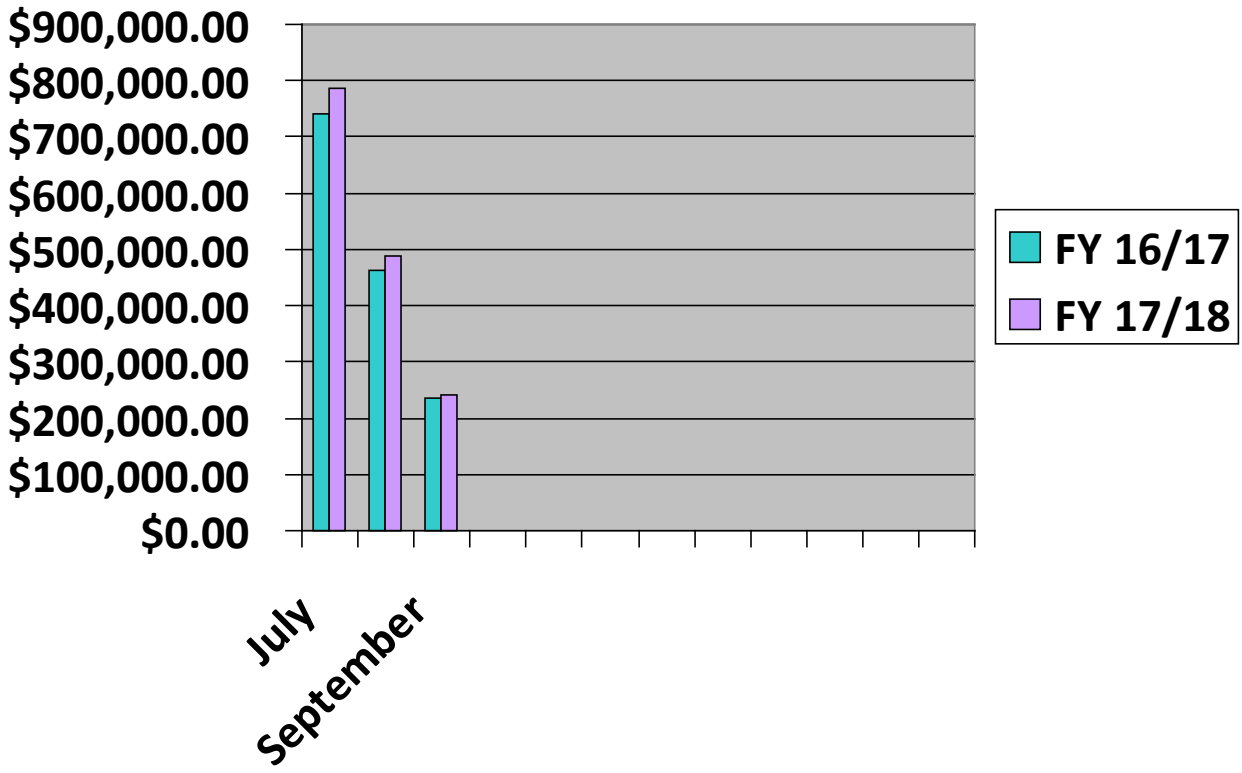
Incidents

There were 24 calls for service from the public and 166 staff observations of violations where the park

staff made customer contact. Four medical responses, four incidents required response from Ventura County Sheriff Office; an assault with a deadly weapon, shots heard, property damage and a distrubance resulting in remaoval from the park by VCSO. There were 182 disturbances, 15 unattended fires, 1 boating violations, 12 leash law violations, 42 traffic violations, 10 parking violations, and zero body contacts in Lake Casitas.

Revenue Reporting

The 2017/2018 unaudited monthly figures below available to date illustrate all Lake Casitas Recreation Area's revenue collected in the respective months (operations, concessions, Water Adventure, etc.) per the District's Financial Summary generated by the Finance Manager.



LCRA TOTAL REVENUE

CASITAS MUNICIPAL WATER DISTRICT

MINUTES
Recreation Committee

DATE: November 17, 2017
TO: Board of Directors
FROM: General Manager, Steven E. Wickstrum
Re: Committee Meeting of November 6, 2017

RECOMMENDATION:

It is recommended that the Board of Directors receive and file this report.

BACKGROUND AND OVERVIEW:

1. **Roll Call**.
   Director Bill Hicks
   Director Pete Kaiser
   Steve Wickstrum, General Manager
   Carol Belser, Park Services Manager
   Joe Evans, Division Officer

   Public: Dee Bennett

2. **Public Comments**.
   Dee Bennett provided an update on the recent successes by the Lake Casitas Rowing Club and grants being issued to the Club from the 1984 Olympics.

3. **Board/Management Comments**.
   Director Hicks commented that the residents in the Seacliff community are actively conserving water. Director Kaiser commented that staff appears to be keeping up with park maintenance. Joe Evans commented that Park Ranger staff are being assigned areas of the park to solve logistical problems that were recognized during the past summer.

4. **Ojai Wine Festival Five Year Contract Agreement.**
   The General Manager asked the Committee if there were further questions regarding the contract. Staff had responded to the question of insurance coverage. No further questions from the Committee.

5. **September 2017 Recreation Area Report.**
   Carol Belser and Committee reviewed the report. Move the report to Board information.

6. **Discussion regarding the LCRA Sewer Study.**
   The General Manager presented an overview of the consultant's study to consider the extension of a sewer lateral to the Lake Casitas Recreation Area. The study provided a preliminary look at alignments, benefits, options, and project costs. The sewer lateral extension may be considered in future budget preparations. The Committee suggested moving this item to the Board as an informational presentation.

7. **Review of Incidents and Comments.**
   Joe Evans updated the Committee on the customer interactions.

CASITAS MUNICIPAL WATER DISTRICT

MINUTES
Quagga Mussel Committee

DATE: November 17, 2017
TO: Board of Directors
FROM: General Manager, Steven E. Wickstrum
Re: Committee Meeting of November 13, 2017

RECOMMENDATION:

It is recommended that the Board of Directors receive and file this report.

BACKGROUND AND OVERVIEW:

1. **Roll Call**.
   Director Russ Baggerly
   Director Pete Kaiser
   Steve Wickstrum, General Manager
   Michael Flood, Assistant General Manager
   Carol Belser, Park Services Manager
   Joe Evans, Division Officer
   Susan McMahon, Laboratory Supervisor

2. **Public Comments**. None.

3. **Board/Management Comments**.
   Director Kaiser commented that fisheries staff should look upstream of Robles Diversion for presence/absence of mussels.

   Director Baggerly asked for an update on the Matilija HoBo project and the status of ordering the cross-polarization microscope for the lab.

4. **General Manager Comments,**
   The General Manager informed the Committee that Fisheries staff do note any mussel or other unusual aquatics discovered during their field work – such as their discovery of New Zealand mud snails at the North Fork Matilija gaging station. The HoBo permit is in Forest Service process and calls have been made to progress the permit. Jordan Kear is continuing to perform quarterly measurements at the spring sites. Michael Flood commented that the microscope is being ordered.

5. **Update on Public records Act request sent to United Water Conservation District.**
   Director Baggerly reported that United is working on the request.

6. **Discussion regarding interagency coordination concerning quagga mussel monitoring and containment.**
   The Committee discussed the need for interagency cooperation regarding the protection of the Ventura River system. Specific note of importance is the discovery of New Zealand mud snails in North Fork Matilija Creek and the undetermined method of transport to this watershed. The Committee discussed need for cooperation with the Ventura County Public Works and Watershed Protection District to decontaminate equipment and boots that could transport mussels from the Santa Clara River to the Ventura River Watershed. The General Manager will make contacts with

Ventura County to ask for this cooperation.

7. **Discussion regarding the Report of Adult Quagga Mussels discovered in Lower Piru Creek.**
The Committee discussed concerns of adult quagga mussels beginning to inhabit the Santa Clara River and possibly beyond.

8. **Update on the Casitas Rapid Response Plan.**
Staff presented their progress to prepare the Rapid Response Plan. The General Manager explained that the Plan will be incorporated into and implemented in accordance with the District's Emergency Response Plan. The Committee was made aware of the two directions that staff are considering for the permitting of the aquatic pesticide. This work is in progress and being conducted by Susan McMahon. The Committee suggested that Susan McMahon get in contact with the environmental staff of United Water Conservation District to learn what they have developed and the direction they are moving toward.

Carol Belser is desiring to share the draft plan with the California Department of Fish and Wildlife during a December 13th conference in Bakersfield.

The Committee was informed that staff will work towards a draft to present to the Board at their November 22nd meeting.

9. **Discussion concerning actions by Western Governor's request for Federal Assistance to fight quagga and zebra mussels.**
The Committee suggested contacting the California Governor's office to determine if they are actively coordinating with other western states. The General Manager will call the Natural Resources office.

CASITAS MUNICIPAL WATER DISTRICT

Minutes
Executive Committee

DATE: November 14, 2017
TO: Board of Directors
FROM: General Manager, Steven E. Wickstrum

Re: Committee Meeting of November 14, 2017

RECOMMENDATION:
It is recommended that the Board of Directors receive and file this report.

MEETING:

1. **Roll Call.**
   Director Russ Baggerly
   Director Jim Word
   Steve Wickstrum, General Manager
   Michael Flood, Assistant General Manager
   Rebekah Vieira, Executive Administrator

2. **Public Comments.** None.

3. **Board Manager comments.**
   Director Baggerly commented on the Ventura Star's water article posted November 13, 2017, regarding the horizontal bore water supply.

4. **General Manager comments.**
   The General Manager reported that he will consider the review and comments for the County General Plan, Water Resources section.

5. **Review of the draft Records Retention Policy.**
   Rebekah Vieira presented the draft Policy to the Committee. The current policy was drafted in 1990 and the proposed Policy will bring the District to appropriate compliance.

   The Policy has been under development and review by legal counsel during the past year. Each department of the District has had input to the type of records that are developed and retained. The Policy provides the legal citing or the proposed best practice guidelines for retention and destruction of documents. Director Word pointed out that there will need to be an assignment of responsibility to staff for complying with the policy and setting time certain for accomplishing the review of documents.

   The Committee discussed the protections and concerns over electronic server and cloud based handling of documents. Director Baggerly asked for more information regarding electronic document securities.

   There is not a legislative draft for the policy changes, as the new Policy will replace the 1990 policy in its entirety, recognized by Director Baggerly. This item will be moved to the Board for further consideration.

CASITAS MUNICIPAL WATER DISTRICT

Minutes
Personnel Committee

DATE: November 17, 2017
TO: Board of Directors
FROM: Executive Administrator, Rebekah Vieira
RE: Committee Meeting of November 14, 2017

RECOMMENDATION:
It is recommended that the Board of Directors receive and file this report.

MEETING:

1. **Roll Call.**
   Director Mary Bergen
   Director Bill Hicks
   Steve Wickstrum, General Manager
   Michael Flood, Assistant General Manager
   Rebekah Vieira, Assistant to GM/Clerk of the Board
   Chelbi Kelley, Accounting Technician

2. **Public Comments.**
   None

3. **Board/Manager comments.**
   Director Hicks mentioned there was a nice article in the paper and then commented about a temporary meter being used at the fire station.

4. **Discussion regarding recruitments.**
   The O & M Manager position is being filled by Michael Shields. A Distribution Worker and Utility Worker will begin in December. Watershed Coordinator Interviews are being conducted on Thursday. Candidates are being reviewed for the HR Manager position. Recruitment is underway for the E & M position. We are in discussions for the Treatment Plant Operator position. We are receiving applications for the Rangers. The Principle Civil Engineer position will be opened as Neil Cole has provided us with his retirement date in January. The Water Quality position has not been opened yet as the job description is still being revised.

5. **Discussion regarding the hiring of a relative of a current full time employee**.
   The committee was apprised of the desire of staff to hire a relative of a current full time employee and per policy and practice is bringing this forward to the board for authorization. The Committee was not supportive of this request and offered strong concerns on the hiring of relatives and requested that a more stringent anti-nepotism policy be drafted for the board's consideration. Based on the lack of support by the committee this item is not moving forward to the Board and the candidate was notified.

The meeting was adjourned at 4:47 p.m.

CASITAS MUNICIPAL WATER DISTRICT

MINUTES
Finance Committee

DATE: November 17, 2017
TO: Board of Directors
FROM: General Manager, Steve Wickstrum
Re: Finance Committee Meeting of November 17, 2017, at 1000 hours.

RECOMMENDATION:

It is recommended that the Board of Directors receive and file this report.

BACKGROUND AND OVERVIEW:

1. **Roll Call**.
   Director Peter Kaiser and Director Jim Word
   General Manager, Steve Wickstrum
   Assistant General Manager, Michael Flood
   Accounting Manager/Treasurer, Denise Collin

2. **Public Comments**. None.

3. **Board/Management comments**.
   Denise Collin informed the Committee of the progress to bill Ojai customers. Staff have received and answered many questions. The first meter reading and data download from the AMR system went very well. Payments are being received and the AutoPay system is available to all customers. In general, customers have expressed being appreciative of the transition to Casitas.

4. **Discussion regarding the final Golden State Water bill in the amount of $442.91 for Dr. Robert Feiss.**
   Dr. Feiss was informed of the meeting date and time, but did not attend. The Committee was unsure of Dr. Feiss' request of Casitas and discussed the point that outstanding water bills issued by Golden State Water Company were transferred to Casitas for collection. It was noted that Dr. Feiss did pay the bill to Casitas. No further discussion by the Committee.

5. **Review of the Financial Statements for September 2017**.
   The Committee reviewed the financial statement with no critical changes or issues. Denise Collin explained the breakout of revenue received from the Ojai water system and discussed the variables of meter readings during the initial stage of the transition. Denise Collin stated that there is an additional $62,000 from Morgan Stanley Investments that came to the District just after posting of the financial statement. Director Word asked about Outside Contracts that were elevated in the Water Conservation and Engineering section. Each increase was explained. Denise Collin will look at Animal Permits revenue that seems higher than in past years.

6. **Review of the September 2017 Consumption Report.**
   The Committee commented on the breakout of the Ojai system water demand numbers.

CASITAS MUNICIPAL WATER DISTRICT
TREASURER'S MONTHLY REPORT OF INVESTMENTS
11/15/17

Type of Invest	Institution	CUSIP	Date of Maturity	Adjusted Cost	Current Mkt Value	Rate of Interest	Date of Deposit	% of Portfolio	Days to Maturity
*TB	Federal Farm CR Bank	3133EGZW8	10/25/2024	$833,918	$808,462	2.014%	10/25/2016	3.89%	2500
*TB	Federal Farm CR Bank	31331VWN2	4/13/2026	$908,546	$867,238	1.901%	5/9/2016	4.17%	3028
*TB	Federal Farm CR Bank	3133EFK71	3/9/2026	$852,696	$823,864	2.790%	3/28/2016	3.96%	2994
*TB	Federal Farm CR Bank	3133EFYH4	2/8/2027	$1,013,979	$992,640	3.000%	3/24/2016	4.78%	3323
*TB	Federal Farm CR Bank	3133EGWD	9/29/2027	$694,629	$671,717	2.354%	11/17/2016	3.23%	3554
*TB	Federal Home Loan Bank	3130A3DL	9/8/2023	$1,573,999	$1,509,945	1.486%	10/13/2016	7.27%	2093
*TB	Federal Home Loan Bank	313379EE5	6/14/2019	$1,360,527	$1,348,488	1.625%	10/3/2012	6.49%	569
*TB	Federal Home Loan Bank	3130A0EN	12/10/2021	$535,055	$516,010	1.107%	5/9/2016	2.48%	1465
*TB	Federal Home Loan Bank	3130A5R35	6/13/2025	$763,596	$733,504	2.875%	2/19/2016	3.53%	2728
*TB	Federal Home Loan Bank	313383YJ4	9/8/2023	$465,443	$440,004	1.203%	7/14/2016	2.12%	2093
*TB	Federal Home Loan Bank	3130A5VW6	7/10/2025	$1,023,664	$1,014,150	2.360%	5/10/2017	4.88%	2755
*TB	Federal Home Loan Bank	3130AIXJ2	6/14/2024	$926,099	$872,091	2.875%	8/2/2016	4.20%	2369
*TB	Federal Home Loan Bank	3133XFKF	6/11/2021	$640,521	$631,187	5.625%	1/16/2013	3.04%	1286
*TB	Federal Home Loan MTG Corp	3137EABA	11/17/2017	$1,000,104	$1,000,220	5.125%	1/3/2012	4.81%	2
*TB	Federal Home Loan MTG Corp	3137EADB	1/13/2022	$674,533	$672,964	2.375%	9/8/2014	3.24%	1498
*TB	Federal National Assn	31315P2J7	5/1/2024	$794,689	$766,905	1.721%	5/1/2016	3.69%	2326
*TB	Federal National Assn	3135G0ZR	9/6/2024	$1,472,460	$1,419,678	2.625%	5/25/2016	6.83%	2451
*TB	Federal National Assn	3135G0K3	4/24/2026	$2,528,443	$2,429,050	2.125%	5/25/2016	11.69%	3039
*TB	US Treasury Inflation Index NTS	912828JE1	7/15/2018	$1,145,313	$1,156,176	1.375%	7/6/2010	5.56%	240
*TB	US Treasury Inflation Index NTS	912828MF	1/15/2020	$1,146,083	$1,172,701	1.375%	11/18/2015	5.64%	780
*TB	US Treasury Note	912828WE	11/15/2023	$768,209	$789,832	2.750%	12/13/2013	3.80%	2160
	Accrued Interest				$146,271				
	Total in Gov't Sec. (11-00-1055-00&1065)			**$21,122,506**	**$20,783,096**			**99.98%**	
	Total Certificates of Deposit: (11.13506)			**$0**	**$0**			**0.00%**	
**	**LAIF as of: (11-00-1050-00)**		N/A	**$452**	**$452**	1.07%	Estimated	**0.00%**	
***	**COVI as of: (11-00-1060-00)**		N/A	**$2,879**	**$2,879**	0.93%	Estimated	**0.01%**	
	TOTAL FUNDS INVESTED			**$21,125,837**	**$20,786,427**			**100.00%**	
	Total Funds Invested last report			$21,126,687	$20,797,263				
	Total Funds Invested 1 Yr. Ago			$19,392,286	$19,073,403				
****	**CASH IN BANK (11-00-1000-00) EST.**			**$443,569**	**$443,569**				
	CASH IN Western Asset Money Market			**$22,486**	**$22,486**	0.19%			
	TOTAL CASH & INVESTMENTS			**$21,591,891**	**$21,252,482**				
	TOTAL CASH & INVESTMENTS 1 YR AGO			$24,661,218	$24,308,357				

*CD CD - Certificate of Deposit
*TB TB - Federal Treasury Bonds or Bills
** Local Agency Investment Fund
*** County of Ventura Investment Fund
Estimated interest rate, actual not due at present time.
**** Cash in bank

No investments were made pursuant to subdivision (i) of Section 53601, Section 53601.1 and subdivision (i) Section 53635 of the Government Code.
All investments were made in accordance with the Treasurer's annual statement of investment policy.