

**LAS VIRGENES - TRIUNFO
JOINT POWERS AUTHORITY
AGENDA**

4232 Las Virgenes Road, Calabasas, CA 91302

CLOSING TIME FOR AGENDA IS 8:30 A.M. ON THE TUESDAY PRECEDING THE MEETING.
GOVERNMENT CODE SECTION 54954.2 PROHIBITS TAKING ACTION ON ITEMS NOT ON
POSTED AGENDA UNLESS AN EMERGENCY, AS DEFINED IN GOVERNMENT CODE SECTION
54956.5 EXISTS OR UNLESS OTHER REQUIREMENTS OF GOVERNMENT CODE SECTION
54954.2(B) ARE MET.

5:00 PM

August 3, 2015

PLEDGE OF ALLEGIANCE

1. CALL TO ORDER AND ROLL CALL

A The meeting was called to order at _____ p.m. by _____ in the Las Virgenes Municipal Water District headquarters, and the Clerk of the Board called the roll.

<u>Las Virgenes Municipal Water District</u>	<u>Present</u>	<u>Left</u>	<u>Absent</u>
Glen Peterson, Vice Chair	_____	_____	_____
Charles Caspary	_____	_____	_____
Jay Lewitt	_____	_____	_____
Leonard Polan	_____	_____	_____
Lee Renger	_____	_____	_____
<u>Triunfo Sanitation District</u>			
Steven Iceland	_____	_____	_____
Michael McReynolds	_____	_____	_____
Janna Orkney	_____	_____	_____
Michael Paule	_____	_____	_____
James Wall, Chair	_____	_____	_____

2. APPROVAL OF AGENDA

3. PUBLIC COMMENTS

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

4. CONSENT CALENDAR

A Minutes: Regular JPA Meetings of May 4, 2015 and July 6, 2015 Approve

5. ACTION ITEMS**A September 2015 Joint Powers Authority Board Meeting**

Cancel the regular meeting of the Las Virgenes - Triunfo Joint Powers Authority Board on September 7, 2015, and reschedule the meeting for an alternate date.

B Characterization, Evaluation and Control of Invasive Species in the Malibu Creek Watershed: Authorization of Research Project

Authorize the General Manager/Administering Agent to execute a research project agreement, in a form approved by Legal Counsel, with Pepperdine University in the amount of \$50,841.

6. BOARD COMMENTS**7. ADMINISTERING AGENT/GENERAL MANAGER REPORT****8. FUTURE AGENDA ITEMS****9. INFORMATION ITEMS****A Tapia Water Reclamation Facility: Flood Protection Update****B Recycled Water Reservoir No. 2 Improvements: Final Acceptance****10. PUBLIC COMMENTS**

Members of the public may now address the Board of Directors **ON MATTERS NOT APPEARING ON THE AGENDA**, but within the jurisdiction of the Board. No action shall be taken on any matter not appearing on the agenda unless authorized by Subdivision (b) of Government Code Section 54954.2

11. CLOSED SESSION**A Conference with District Counsel – Existing Litigation (Government Code Section 54956.9(a)):**

Las Virgenes - Triunfo Joint Powers Authority v. United States Environmental Protection Agency and Heal the Bay, Inc. v. Lisa P. Jackson

12. ADJOURNMENT

**LAS VIRGENES - TRIUNFO JOINT POWERS AUTHORITY
4232 Las Virgenes Road, Calabasas CA 91302**

**MINUTES
REGULAR MEETING**

5:00 PM

May 4, 2015

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance to the Flag was led by Chairman Wall.

1. CALL TO ORDER AND ROLL CALL

A Call to order and roll call

The meeting was called to order at **5:02 p.m.** by Chairman Wall in the Las Virgenes Municipal Water District headquarters at 4232 Las Virgenes Road in Calabasas. Joanne Bodenhamer, the Interim Clerk of the Board called the roll.

Present: Director(s): Caspary, Iceland, Lewitt, Polan, McReynolds, Orkney, Paule, Renger, and Wall

Absent: Director(s): Vice Chairman Peterson

2. APPROVAL OF AGENDA

A Approval of Agenda

Director McReynolds moved to approve the agenda as presented. Motion seconded by Director Iceland and carried by the following vote:

AYES: Director(s): McReynolds, Iceland, Orkney, Paule, Wall, Caspary, Lewitt, Polan, and Renger.

NOES: Director(s): None

ABSENT: Director(s): Peterson

ABSTAIN: None

3. PUBLIC COMMENTS

There were no comment cards.

4. CONSENT CALENDAR

A Minutes: Regular JPA Meetings of March 2, 2015 and April 6, 2015.

Director Iceland moved to to approve the minutes of March 2, 2015 and April 6, 2015. Motion seconded by Director Renger, and carried by the following vote:

AYES: Director(s): McReynolds, Iceland, Orkney, Paule, Wall, Caspary, Lewitt, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Peterson
 ABSTAIN: None

5. ILLUSTRATIVE AND/OR VERBAL PRESENTATION AGENDA ITEMS

A Preliminary JPA Budget for Fiscal Year 2015-16

Administering Agent/General Manager, Pedersen gave an overview of the key budget drivers. Operating expenses of \$15.6 Million is just a touch over 2.5% more than last year, capital expenditures of \$7.1 Million due to lower than expected recycled water sales at the wholesale level the new recycled water rate will be \$436.55, compared to the current rate of \$373.72.

Mike Hamilton was introduced and gave detailed specifics on the budget and discussed the following: Revenues and the recycled water rate to the JPA participants; project costs and expenditures.

Discussion took place and questions of the Board were answered.

6. ACTION ITEMS

A Independent Audit Services: Contract Renewal (Pg.33)

Authorize the Administering Agent/General Manager to exercise the first one-year renewal option with Pun & McGeady, LLP, to continue providing independent audit services to the JPA.

Administering Agent/General Manager Pedersen gave an overview of the item stating that Pun & McGeady was selected to complete the JPA's audit; they did the audit last year and the audit committee gave positive feedback using that company; staff recommend five one-year renewal options and this would be the first one-year renewal option.

Director Caspary moved to approve Item 6A. Motion seconded by Director Iceland and carried by the following vote:

AYES: Director(s): McReynolds, Iceland, Orkney, Paule, Wall, Caspary, Lewitt, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Peterson
 ABSTAIN: None

B Financial Review: Third Quarter of Fiscal Year 2014-15

Receive and file the financial review for the third quarter of Fiscal Year 2014-15.

Finance & Administration Director, Donald Patterson gave an overview of the third quarter financial review.

Director Polan questioned the \$250,000 variance in total revenues and Don Patterson explained that is due to lower projected sales between FY 14/15 and FY15/16.

Director Polan moved to approve Item 6B. Motion seconded by Director McReynolds, and carried by the following vote:

AYES: Director(s): McReynolds, Iceland, Orkney, Paule, Wall, Caspary, Lewitt, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Peterson
 ABSTAIN: None

7. BOARD COMMENTS

Director Paule commented about TSD and LVMWD working together as a joint board and spoke about forming a committee with representatives from TSD and LVMWD to figure out how to work better going forward in terms of cooperation between the two boards; this will give the opportunity to sit down and understand that both boards have the same objective; the boards need to participate in a way that benefits all of the agencies so it's not Las Virgenes vs. Triunfo which it turns into at times.

Director Orkney commented on the outreach to Ventura County to increase the use of recycled water; at the AWA Water Symposium, Director Orkney took the opportunity to do some outreach and spoke with Jim Friedl who is now the Manager for Conejo Park and Recreation District; Mr. Friedl would like access to recycled water; Cal Water is adding funds to the budget for recycled water piping for two parks; at Senator Fran Pavley's Advisory Council meeting, Director Orkney spoke with the chair of Conejo Valley School District and they are in favor of recycled water as well; President of the Unified School District, Betsy Connelly mentioned that the utilities are being buried in front of Westlake High School.

Director Caspary commented that he hopes that TSD and Calleguas can come to an agreement on upcoming projects and he is pleased that Director Orkney is committed to increasing reclaimed water distribution;

Director Polan agreed with Director Paule's suggestion for TSD and LVMWD to have a workshop to see what can be done.

8. ADMINISTERING AGENT/GENERAL MANAGER REPORT

Administering Agent/General Manager Pederson reported on several items which included: creek avoidance; sprayfields; Malibu Creek flows are at 2.8 cfs;

progress is being made on the cathodic protection for the Centrate tanks and work is nearly complete; Encino Reservoir investigation; currently working with MWH to complete the plan of action for the Encino Reservoir and the indirect potable use scenario.

9. FUTURE AGENDA ITEMS

Director McReynolds suggested an agenda item specifically for public outreach in regards to the NPDES Permit; this will help the public to be fully aware of what is occurring.

10. INFORMATION ITEMS

A Reservoir No. 2 Improvements: Purchase of Shade Balls

Director McReynolds thanked staff for saving \$60,000 on the contract for the shade balls.

B Bioassessment Monitoring Report: Approval of Purchase Order

Director McReynolds asked about trends for bioassessment monitoring results (i.e. do the results show that conditions are changing and, if so, for the better or worse). Water Reclamation Manager Brett Dingman explained that the bioassessment scores have been consistently below the theoretical values expected for Las Virgenes Creek and Malibu Creek and that the results were even a bit lower than historical due to the drought.

Director Caspary commented that the Resource Conservation District of the Santa Monica Mountains recently completed a study on the Topanga Creek Watershed involving a source identification program to determine the origins of bacterial contamination; they also looked at the biological integrity of Topanga Creek, which showed low bioassessment scores despite very low nutrient levels; the results will likely strengthen the JPA's response to lower nutrient standards expected with Tapia's NPDES Permit renewal.

C Board Meeting Follow-up Items

11. PUBLIC COMMENTS

There were no comment cards.

The Board took a brief recess and reconvened in closed session at **6:13 p.m.**

12. CLOSED SESSION

A Conference with District Counsel – Existing Litigation (Government Code Section 54956.9(a)):

**Las Virgenes - Triunfo Joint Powers Authority v. United States
Environmental Protection Agency and Heal the Bay, Inc. v. Lisa P.
Jackson**

13. ADJOURNMENT

The Board reconvened to open session at **6:30 p.m.**

No reportable action was taken in closed session.

The meeting was adjourned at **6:31 p.m.**

James Wall, Chair

ATTEST:

Glen Peterson, Vice Chair

**LAS VIRGENES – TRIUNFO JOINT POWERS AUTHORITY
4232 Las Virgenes Road, Calabasas CA 91302**

**MINUTES
REGULAR MEETING**

5:00 PM

July 6, 2015

PLEDGE OF ALLEGIANCE

The Pledge of Allegiance to the Flag was led by Chair James Wall.

1. CALL TO ORDER AND ROLL CALL

A Call to order and roll call

The meeting was called to order at 5:00 p.m. by Chair James Wall in the Las Virgenes Municipal Water District headquarters at 4232 Las Virgenes Road in Calabasas. Joanne Bodenhamer, Interim Clerk of the Board, conducted the roll call.

Present: Director(s): Caspary, Lewitt, McReynolds, Renger, Paule, Peterson, Polan and Wall

Absent: Director(s): Iceland (arrived at 5:04 p.m.) and Orkney

2. APPROVAL OF AGENDA

Administering Agent/General Manager Pedersen asked to remove Closed Session, Item 11A from the agenda.

Director Polan moved to approve the agenda with Item 11A removed. Motion seconded by Director Caspary and carried by the following vote:

AYES: Director(s): McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.

NOES: Director(s): None

ABSENT: Director(s): Iceland and Orkney

ABSTAIN: None

3. PUBLIC COMMENTS

None.

4. **CONSENT CALENDAR**

A Minutes: Regular JPA Meetings of May 4, 2015

Director McReynolds asked for a clarification on the first paragraph of the second to last page of the May 4, 2015 minutes, referring to his statement on “trends”.

Director Paule asked for the verbiage to be corrected on item 7 by taking out the duplicate wording “to have a workshop”.

Item 4A was not approved and instead moved to the next meeting for correction and approval.

Director Iceland arrived at **5:04 p.m.**

B Amended Minutes: Regular JPA Meeting of March 2, 2015

Director Caspary moved to approve Item 4B. Motion seconded by Director Peterson, and carried by the following vote:

AYES: Director(s): Iceland, McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Orkney
 ABSTAIN: None

5. **ACTION ITEMS**

A Recycled Water Seasonal Storage Plan of Action

Approve the Recycled Water Seasonal Storage Plan of Action and authorize staff to negotiate a scope of work and fee proposal with MWH Global to prepare a Basis of Design Report/Feasibility Study.

Administering Agent/General Manager Pedersen gave a brief overview of the item, stating that at the April meeting, staff presented to the Board progress on the Plan of Action development for the seasonal storage of recycled water and presented six different scenarios, which had been discussed as the culmination of the stakeholder process that began in January and was completed in March; the Board provided direction to staff on the scenarios to focus on and narrowed it down to Scenario Nos. 4 and 5; staff worked with the consulting team and put together a Plan of Action, which was included in the agenda package; David Lippman, Director of Facilities and Operations, was asked to give a presentation on the item.

Mr. Lippman gave a PowerPoint presentation on the Recycled Water Seasonal

Storage Facility Plan of Action prepared by MWH; key staff members of MWH who were introduced included: Dr. Steven Weber, Jim Borchardt, and Oliver Slosser; the MWH approach centered around a stakeholder process; a series of workshops took place with an orientation that included interviews with the JPA Board Members; Workshop No. 1 focused on the context of the strategy using a technique called P-E-S-T-L-E; Workshop No. 2 focused on Convergence using a technique called BPAT; at the same workshop, MWH briefed the group on four potential categories of solutions for managing Tapia's discharge to Malibu Creek, which included TMDL compliance, recycling and export, seasonal storage and potable reuse; MWH took the four categories and brought back six scenarios to share with the group in Workshop No. 3; the scenarios were reviewed and pros and cons were identified, which were presented to the Board on April 6th; the Board directed staff to move forward with a plan of action for Scenario Nos. 4 and 5, using Las Virgenes Reservoir for indirect potable reuse and repurposing the Encino Reservoir for seasonal storage; Mr. Lippman also discussed the guiding principles, objectives, strategies and timelines for the plan of action.

Director Paule inquired if the timeline had been prepared to consider maximizing the potential to receive funding from Proposition 1. (Lippman: Proposition 1 has different chapters with different funding available) (Weber: one of the action items in the plan is to develop a funding strategy including looking at Proposition 1 and how the funding might apply to different proposed scenarios) (Pedersen: the large sums of money for Proposition 1 will be for construction; the JPA is well positioned to be competitive to receive Proposition 1 monies; however, there is urgency and the JPA will need to move forward expeditiously.)

Director Caspary cautioned staff on Scenario No. 4, using Las Virgenes Reservoir for indirect potable reuse, because it could run into a fatal flaw related to the blend ratio required under proposed reservoir augmentation regulations. (Lippman: it is important to move forward with a basis of design analysis to help identify possible fatal flaws in the scenarios or other avenues the JPA should explore, particularly in talking to the regulators.) Director Caspary commented the stakeholders need to be informed of the possible "rough patches". (Pedersen: the blend ratio is critical for that scenario; the regulatory structure for reservoir augmentation is currently handled on a case-by-case basis; Senate Bill 918 does require that regulations be promulgated by the State for reservoir augmentation by December 31, 2016.) Director McReynolds commented that negotiations should begin as soon as possible to make sure this is a viable option.

Director Peterson commented that Encino Reservoir was a brilliant option; Scenario 4 has a fatal flaw built into it; if you have to analyze what the benefit is going to be, building a huge plant is going to be very expensive; the most important thing is getting out of the creek; Los Angeles may want to take effluent to Tillman; Director Peterson was disappointed that a reservoir was not selected in the community to store water.

Director Polan commented that Scenario No. 4 would reduce dependence on the State and MWD for imported water, the sources of which are expected to yield less water based on all of the available science.

Director McReynolds inquired regarding changes to CEQA for recycled water pipeline projects. (Lemieux: there have been changes, which will be taken advantage of as much as possible; the budget trailer bills contain provisions that waive CEQA under certain circumstances; a legal analysis of the provisions is underway.) Director McReynolds asked about the possibility of streamlining preliminary design for a recycled water pipeline project. (Lemieux: some of the deadlines may be shortened, but they will need to be studied beforehand.)

Director Peterson commented that he is concerned with Scenario No. 4, particularly about the cost to customers and the need for a large advanced water treatment plant that will only be used at capacity for a fraction of the year; he believes that this scenario has a huge flaw; he also expressed concern with the plan for disposal of solids and the salts, which could make the scenario a “non-starter”.

Director Renger stated he was worried about the expense of potable reuse; the idea of using somebody else’s reservoir appealed to him, but the potential loss of control of water by using someone else’s storage is also a concern; he is not in favor of setting up an reverse osmosis system and having to worry about the brine.

Director Lewitt questioned looking further at Scenario 4 if it was potentially a non-starter and wanted to know if staff had a response to Director Peterson’s concerns. (Pedersen: both scenarios have big challenges and unknowns that could impair either from moving forward; Director Peterson’s concerns are good ones; the advantages are that technology is moving very quickly and there is a huge focus in the State right now on potable reuse; there are treatment options available that may not require reverse osmosis, which creates other opportunities and produces less brine; brine is going to be a challenge as we do not have a good means to dispose of it; personally, the two options may not be mutually exclusive, they could work together.)

Mr. Weber informed the Board that back in January they thought they were building a reservoir and, through the process, they determined that there were other options rather than building a reservoir; he encouraged everyone not to be frustrated and stated they are in a very good position.

Director Paule expressed concern about the cost and protecting the ratepayers’ money; he inquired if the cost of work would still be the same if Scenario No. 4 is not viable. (Pedersen: it would likely be less expensive, but not sure how much less; as far as going forward, together with MWH, they need to agree on the same scope of work before assigning costs.)

Mr. Borchardt spoke about the way they looked for fatal flaws and finding the best solution based on a broad range of tasks.

Director Caspary reminded all that Tapia’s NPDES Permit is up for renewal next month and that there will be a six-month window of opportunity to make progress on “real

options”; he explained that this is the right time to investigate those options to get out of the creek.

Director Renger asked if the Board would be limited to the two scenarios considered if it moves forward with the proposal. (Lippman: the process is flexible; however, there were some scenarios that were presented and may not warrant a second look.) (Pedersen: there may be another “Encino Reservoir” option out there that has not been uncovered; if something like that is uncovered, it will be brought forward and considered.)

Director McReynolds moved to approve Item 5A. Motion seconded by Director Caspary and carried by the following vote:

AYES: Director(s): Iceland, McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Orkney
 ABSTAIN: None

B Woodland Hills Country Club Recycled Water System Extension: Preliminary Design and Environmental Review

Accept the proposal from RMC Water and Environment and authorize the General Manager to execute a Professional Services Agreement, in the amount of \$320,041, for the preliminary design and environmental review of the Woodland Hills Country Club Recycled Water System Extension.

Administering Agent/General Manager Pedersen gave an overview of the item, stating that the higher cost proposed by RMC was justified and reasonable; the RMC proposal included optional work to investigate potential customer demands and perform a CEQA “plus” environmental review; the JPA will be fully reimbursed by LADWP for the work in addition to a 7.8% fee for administering the project.

Director Polan asked if LADWP was in agreement with the selection of RMC and if they agreed with estimates for the recycled water demands. (Lippman: yes.)

Brief discussion took place and questions of the Board were answered.

Director Peterson moved to approve Item 5B. Motion seconded by Director Paule and carried by the following vote:

AYES: Director(s): Iceland, McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Orkney
 ABSTAIN: None

C Proposed Joint Powers Authority Budget for Fiscal Year 2015-16

Adopt the proposed Joint Powers Authority budget for Fiscal Year 2015-16.

Director of Finance and Administration Don Patterson gave a PowerPoint presentation, which went into detail on the proposed JPA Budget; he thanked Financial Analyst Mike Hamilton for the work he put into compiling the figures for the budget.

Brief discussion took place and questions of the Board were answered. Director Polan asked about the flow into the treatment plant and if the output of recycled water would remain constant; he suggested it might be wise to look at less flow (Patterson: long-term trends are used for projections; it is hard to predict with a high level of accuracy.)

Director Peterson moved to approve Item 5C. Motion seconded by Director Caspary and carried by the following vote:

AYES: Director(s): Iceland, McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.
 NOES: Director(s): None
 ABSENT: Director(s): Orkney
 ABSTAIN: None

D Tapia Water Reclamation Facility NPDES Effluent Limit Exceedances: Settlement Offer No. R4-2015-0035, Expedited Payment Program

Authorize the Administering Agent/General Manager to execute Settlement Offer No. R4- 2015-0035, including payment of \$75,000 for 25 exceedances of NPDES effluent limitations for the Tapia Water Reclamation Facility.

Administering Agent/General Manager Pedersen gave an overview of the item, stating that the JPA had received a notice of effluent limitation exceedances from the Los Angeles Regional Water Quality Control Board on June 2nd; he explained the exceedances, a total of 25, were subject to mandatory minimum penalties; staff confirmed that the reports were accurate and the exceedances did occur; the list of violations were summarized and reviewed.

Brief discussion took place and questions of the Board were answered.

Director McReynolds moved to approve Item 5D. Motion seconded by Director Caspary and carried by the following vote:

AYES: Director(s): Iceland, McReynolds, Paule, Wall, Caspary, Lewitt, Peterson, Polan, and Renger.
 NOES: Director(s): None

ABSENT: Director(s): Orkney
 ABSTAIN: None

6. **BOARD COMMENTS**

Director Polan asked about the status of work on the centrate treatment tanks. (Pedersen: the project to install the cathodic protection system was completed prior to April 15th; staff and the contractor worked well together and finished before the creek avoidance period; the tanks are currently in operation.)

Director Paule reported on attendance at the Thousand Oaks Water Conservation Expo; he thanked LVMWD for supplying materials and stated that much compost was given out; Samuel Unger, Executive Officer of the Los Angeles Regional Water Quality Control Board, attended and visited the booth.

Director Caspary reported that the Santa Monica Bay annual report would be out in August and that on September 9th, the "State of the Bay" seminar will be held at Loyola Marymount University.

7. **ADMINISTERING AGENT/GENERAL MANAGER REPORT**

Administering Agent/General Manager Pedersen reported the Quarterly Watershed and Wastewater Facilities Tour would take place on August 1st; he also gave a review of legislative items, stating that copies of letters sent, including a support letter for WIFIA, were provided to Board Members.

8. **FUTURE AGENDA ITEMS**

None.

9. **INFORMATION ITEMS**

A Residential Recycled Water Fill Station Program

Director Paule asked about the proposed hours of operation for the residential recycled water fill station, noted to be 9:00 a.m. to 1:00 p.m. on Saturdays; he inquired if that would be a sufficient amount of time for customers and asked how long it would take to get the approvals. (Lippman: not knowing how popular the program will be, the hours are limited to match those for compost pick-up; if the fill station becomes popular; the hours will be extended; a verbal approval has been provided by State Water Resources Control Board, Drinking Water Program staff, but an approval letter is expected shortly; the program may start in early August.)

Director McReynolds commented that the JPA's materials should clarify that containers be secured for transport and that recycled water should not be used in swimming pools.

B Las Virgenes Scenic Corridor Completion Project: Grant of Easement to City of Calabasas

Director Polan asked if the City would be installing landscaping along the proposed retaining wall. (Lippman: will follow up on the question.)

C Tapia Water Reclamation Facility NPDES Permit Renewal: Public Outreach Activity

Director Polan inquired regarding the plan for public outreach associated with the NPDES Permit renewal. (Pedersen: a short staff report was given on that item; it is an important process; the challenge is not knowing what the terms of the permit are going to be; the process was leading up to a September renewal, but the Regional Board has stated that because of their current workload, it will more likely be considered in spring 2016.)

D Board Meeting Follow-up Items

10. PUBLIC COMMENTS

None.

11. CLOSED SESSION

A Conference with District Counsel – Existing Litigation (Government Code Section 54956.9(a)):

Las Virgenes - Triunfo Joint Powers Authority v. United States Environmental Protection

Agency and Heal the Bay, Inc. v. Lisa P. Jackson

Closed session was removed from the agenda.

12. ADJOURNMENT

Seeing no further business to come before the Board, the meeting was duly adjourned at **6:36 p.m.**

James Wall, Chair

ATTEST:

Glen Peterson, Vice Chair

August 3, 2015 JPA Board Meeting

TO: JPA Board of Directors

FROM: General Manager

Subject: September 2015 Joint Powers Authority Board Meeting

SUMMARY:

The Las Virgenes - Triunfo Joint Powers Authority (JPA) Board regularly meets on the first Monday of each month. The first Monday in September of this year falls on September 7, 2015, which is Labor Day. Historically, when a regularly scheduled JPA Board meeting falls on a holiday, the meeting is rescheduled for the following business day. However, this year, the following business day conflicts with the regularly scheduled meeting of the LVMWD Board. As a result, staff recommends that the JPA Board consider an alternate date for the meeting. The September Board meeting will be held at Oak Park Library as approved by the JPA Board on February 2, 2015.

RECOMMENDATION(S):

Cancel the regular meeting of the Las Virgenes - Triunfo Joint Powers Authority Board on September 7, 2015, and reschedule the meeting for an alternate date.

FISCAL IMPACT:

No

ITEM BUDGETED:

No

Prepared By: Josie Guzman, Executive Assistant/Clerk of the Board

August 3, 2015 JPA Board Meeting

TO: JPA Board of Directors

FROM: Resource Conservation & Public Outreach

Subject: Characterization, Evaluation and Control of Invasive Species in the Malibu Creek Watershed: Authorization of Research Project

SUMMARY:

The 2013 Malibu Creek and Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments established by the U.S. EPA significantly downplayed the impact of invasive species on biological communities due to lack of data and a time constraint to meet the court-ordered deadline for establishment of the TMDL. To fill this data gap, EPA indicated that it would support future Causal Analysis/Diagnosis Decision Information System (CADDIS) development with stakeholder participation during the Regional Water Quality Control Board's implementation of the TMDL. CADDIS is a rigorous process established to determine the causes of detrimental changes and undesirable biological conditions observed in aquatic systems.

In collaboration with Pepperdine University, staff has developed a research project that would quantify the impact of invasive species on the ecosystem health of the Malibu Creek Watershed, consistent with the principles of CADDIS development. The effort would serve as the basis for a more thorough watershed stressor identification, while demonstrating a good faith, proactive step by the JPA to implement certain elements of the TMDL as recommended by the EPA. The results would also serve as the foundation for a cooperative, multi-agency effort to better control the spread of invasive species.

Staff recommends that the Board authorize research project to be conducted by Pepperdine University in the amount of \$50,841. The project team would be headed by Dr. Lee Kats, Pepperdine's Vice Provost for Research and Strategic Initiatives and Chair of the Natural Science Department. Dr. Kats is a recognized subject matter expert in amphibians and invasive species whose work in the Malibu Creek Watershed spans over 25 years. Gary Bucciarelli of the UCLA La Kretz Center for California Conservation Science would assist Dr. Kats in managing the work.

RECOMMENDATION(S):

Authorize the General Manager/Administering Agent to execute a research project agreement, in a form approved by Legal Counsel, with Pepperdine University in the amount of \$50,841.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

The total cost of the research project is \$50,841. Sufficient funding for the work is included in the adopted Fiscal Year 2015-16 JPA Budget.

DISCUSSION:

Background:

During the comment period for the TMDL, staff noted that the EPA considered only invasive species that may be niche competitors for benthic macroinvertebrates, omitting reference to the many invasive species that may limit macroinvertebrate abundance through predation, which would have been included had the

ITEM 5B

EPA conducted a CADDIS assessment that included a thorough stressor identification and full stakeholder participation. The city and county governments served by the JPA echoed this comment. A full CADDIS assessment would have taken approximately two years to complete.

Research Project Proposal:

Attached is a proposal for a cooperative research project with Pepperdine University to quantify the impact of invasive species on the ecosystem health of the Malibu Creek Watershed, consistent with the principles of CADDIS development. The Research Team would use both California Stream Condition Index (CSCI) and Southern California Index of Biotic Integrity (SC-IBI) for stream health assessments to provide consistency and accuracy in the interpretation with historical as well as new biological data. The CSCI was adopted by the State as its standard in 2013. The work would be performed over a 36-week period, from April through November 2016. Benthic macroinvertebrate (BMI) and water quality samples would be collected from four infested sites (Medea, Las Virgenes, Trancas, and Lower Cold Creeks) and six sites with no record of crayfish or New Zealand Mud Snails (Tuna, Las Flores, Solstice, Arroyo, Ramirez and Upper Cold Creeks).

Research Objectives:

The research project would be aimed to answer the following questions:

- Do crayfish affect BMI and the overall biological integrity of a stream?
- What is the effect of New Zealand Mud Snails on the overall biological integrity of a stream?
- Does biological integrity of a stream change as a result of crayfish removal?
- Do nutrient levels correlate with the overall biological integrity of a stream?

Research Partners:

A key partner during the development of the invasive species control measures portion of the work would be the Mountains Restoration Trust (MRT), recipient of an \$800,000 grant earlier this year from the Department of Fish and Wildlife to eradicate red swamp crayfish in the Malibu Creek Watershed. Potential future partners may include the cities and county jurisdictions served by the JPA.

Consistency with JPA Strategy to Address Regulatory Standards for Malibu Creek:

The proposed research project is consistent with the JPA's strategy to address regulatory standards for Malibu Creek, specifically the item pertaining to scientific investigation (see excerpt below).

Develop a better scientific understanding of the unique characteristics of the Malibu Creek Watershed and its impact on water quality.

A thorough scientific understanding of the unique characteristics of the Malibu Creek Watershed and its impact on water quality is essential to ensure that proposed regulations are appropriate and effective. Additional study of the influence of the Monterey Formation on water quality and benthic-macroinvertebrate communities is necessary. A more thorough evaluation of the stressors affecting water quality and their linkage to Malibu Creek's water quality impairments is warranted. Partnerships and collaboration with universities and professional organizations will likely yield the greatest opportunities for better scientific understanding of the watershed. Also, it will be important to maintain the in-house expertise to critically evaluate the new regulatory standards and oversee the JPA's participation in relevant research efforts.

Prepared By: Carlos G. Reyes, Director of Resource Conservation and Public Outreach

ATTACHMENTS:

[Research Proposal](#)

**PROJECT TITLE: CHARACTERIZATION, EVALUATION AND
CONTROL OF INVASIVE SPECIES IN THE MALIBU CREEK WATERSHED**

Gary Bucciarelli, UCLA
Debbie Sharpton, Mountains Restoration Trust
Lee Kats, Pepperdine University

STATEMENT OF PROBLEM: Southern California is one of only five unique global regions so rich in species that it is referred to as a “biodiversity hotspot.” For example, the Santa Monica Mountains alone includes over 1,000 plant species, 400 species of birds, 45 species of mammals, 35 species of reptiles and amphibians, and over 50 threatened or endangered species. However, efforts to preserve local biodiversity have become challenging in the wake of global climate change and a severe drought. Furthermore, the spread of non-native species is further complicating management and conservation efforts.

Non-native species become problematic because they can displace native species or in some cases entirely reduce native populations to extinction (Sax and Gaines 2008). Often the consequences of non-native introductions are most evident in aquatic systems, because aquatic species tend to be highly susceptible to abrupt changes in biological community dynamics and composition (Gamradt and Kats 1996, Hammer and Parris 2013). In the Santa Monica Mountains, researchers have documented precipitous declines in native species as a result of predation and competition from introduced crayfish (*Procambarus clarkii*) and in many streams *P. clarkii* has completely reduced native amphibian numbers (Riley et al. 2005).

Over the last 60 years, *P. clarkii* and other aquatic nonnative invertebrates, such as the New Zealand Mud Snail (NZMS) have become established throughout watersheds of the Santa Monica Mountains. Field observations suggest that like amphibians, benthic macroinvertebrate (BMI) communities may be compromised by the spread of non-native species. This may be a result of non-native species outcompeting native BMI community members for resources like substrate. It may also be that the proliferation of non-native species affects the characteristics of a stream so drastically that BMI communities cannot withstand the changes, which is entirely possible given how sensitive BMI communities are to temperature, dissolved oxygen, sedimentation, and changes to water chemistry (Harrington et al. 1999).

The Malibu Creek, Medea, and Las Virgenes Watershed are a subset of watersheds that have been infested with both invasive crayfish and NZMS. Previous management activities have reduced the abundance of crayfish and NZMS in some watersheds to promote the potential recovery of native species (Kats et al. 2013). Currently, the Mountains Restoration Trust (MRT) manages successful programs to remove crayfish in Medea and Las Virgenes Watersheds. To date, MRT has removed well over 60,000 crayfish from one 200 m stretch of the Las Virgenes Watershed. Observations suggest that native species are responding positively to the removal of crayfish. Nevertheless, additional actions are required to better understand if stream biological integrity is affected by the presence of crayfish and NZMS, what densities of both invasives constitute a collapse in stream biological integrity, and whether the removal of crayfish and NZMS improves stream biological integrity.

RESEARCH QUESTIONS:

- i) Do crayfish affect BMI and the overall biological integrity of a stream? Additionally, what is the effect of NZMS on overall biological integrity of a stream?
- ii) Does biological integrity of a stream change as a result of crayfish removal?
- iii) Do nutrient levels correlate with the overall biological integrity of a stream?
- iv) Can densities of invasive species be used to predict breaking points when the biological integrity of a stream will be compromised below currently recognized acceptable levels?
- v) Can eDNA be used to detect the presence of crayfish and NZMS post restoration efforts?

METHODS:

Sampling sites - We propose to characterize a total of 10 streams, which we will visit bi weekly over a 9 month period to collect BMI and water samples. These sites will be visited 18 times from April 2016 to November 2016. This window of sampling is performed during base flow periods to ensure optimum sampling of BMI (flooding events during peak flow wash away BMI). We have chosen to sample BMI and to collect water samples from four sites with invasives (Medea Creek, Las Virgenes Creek, Trancas Creek, and Lower Cold Creek) and six sites with no record of crayfish or NZMS (Tuna Creek, Las Flores, Upper Cold Creek, Solstice, Arroyo, and Ramirez). We have chosen to characterize ten sites to ensure sufficient power for statistical analyses, which will provide buffer should a site show random data fluctuations or be lost from the study.

Benthic macroinvertebrate samples - BMI samples will be collected following the California Stream Bioassessment Protocol detailed in Harrington et. al (199). Briefly, each sampling event at a site will consist of taking 3 sample from 3 randomly chosen riffles. A D-shaped kick-net or appropriate sized handheld net will be placed on the substrate and a 30 x 60 cm portion of substrate upstream disturbed for 90 seconds. Any large rocks will be scrubbed by hand in front of the net. The 3 samples from a riffle will be combined in a jar filled with two-thirds 95% ethanol. The process will be repeated at the two remaining riffles so that each stream has 3 composite samples per visit.

Assessing biological integrity - We propose to use two tools to assess the biological integrity of streams in the Santa Monica Mountains: The California Stream Condition Index (CSCI) by Shilling et al. (2010) and the southern California benthic macroinvertebrate index of biological integrity (B-IBI) developed by Ode et al. (2005). These methods were derived specifically for the assessment of stream biological integrity in southern California. The methods use metrics based on benthic macroinvertebrate data and habitat conditions to derive site scores, which are then used to determine the stream condition. We propose to use both as a means to make empirical

comparisons of biological integrity measurements. Ultimately, this approach will provide an opportunity to identify potential discrepancies within each method.

Measuring chemical characteristics - Water quality and nutrient levels will be made by collecting water samples from the proposed sites following Harrington et al. (1999). Briefly, the riffle environment will be described by measuring total nitrogen (nitrate and nitrite) and phosphorous, dissolved oxygen, temperature, pH, and conductivity. These assays will be performed *in situ* using a field colorimeter (LaMotte, SMART colorimeter) and water quality meter (Horiba U-50). These data will help to interpret BMI temporal patterns within sites, overall trends between sites, and any potential anomalies in data.

Modeling and statistical analyses - Classification models will be used in the R statistical framework to detect break points in chemical characteristics of streams at which there is the most abrupt change in CSCI and B-IBI scores. A more broad model will be created to determine the most important variables affecting scores and the relative influence of each such variable.

eDNA monitoring - Water samples will be collected from the four streams where nonnative species have been observed. Three samples will be taken from each stream, once in April and a second in August. A final sample will be taken once we have estimated that non-native species have been completely removed, and we will use eDNA methods to verify their eradication.

EXPECTED DATA AND RESOURCES: By spring of 2017, LVMWD will be presented with a final report that contains our findings, all of the raw data, and management suggestions and resources. Specifically, the resources will include:

- i) Empirical evaluation of BMI and the effect of nonnative species on stream integrity scores: This task would first quantify the BMI of identified streams throughout the Santa Monica Mountains. This would allow us to make statistical comparisons of measured BMI scores (CSCI and B-IBI) between sites devoid of invasive species and invaded streams. These results would provide strong evidence to determine whether crayfish and NZMS affect stream biological integrity
- ii) Evaluation of biological integrity before and after removal of invasives: These data would provide a very clear picture of how biological integrity is affected as a result of invasions and whether removal leads to improvements in stream biological integrity as measured by CSCI and B-IBI.
- iii) Development of management tools: Statistical models will be created to provide insight into potential break points where streams begin to lose biological integrity as a function of invasive density and/or chemical characteristics. This tool can be used by managers and agencies to make predictions about stream biological integrity and BMI as measured by nutrient levels or densities of non-native stream invertebrates.

BUDGET JUSTIFICATION: We are requesting funding to hire 2 individuals that will each perform 20 hours of work per week to collect BMI samples, water quality measurements, and water samples for subsequent analyses of chemistry and eDNA. An additional 40 hours per week will be needed for two individuals at 20 hours each to sort and identify BMI samples, input data, and calculate stream biological integrity scores (CSCI and B-IBI). We are also requesting funding to hire one individual that will analyze phosphorous and total nitrogen (nitrate and nitrite) and perform statistical analyses. All work will be performed over a 36 week period from April to November 2016.

Personnel:

40 hours per week for sampling	\$17,280
40 hours per week for identification	\$17,280
20 hours per week for chemistry, statistical analyses, and eDNA	\$5,400

Personnel subtotal **\$39,960**

Reagents and supplies:

Horriba water quality meter (model U-50)	\$3,500
Waterproof conductivity and temperature loggers; HOBO UA00264 (10 @ \$64.00 each)	\$640

Field equipment:

Measuring tape (3 @ \$2.95 each)	\$9.00
Kick net with 0.5 mm mesh (5 @ \$29 each)	\$145.00
Standard size sieves; 0.5 mm mesh (5 @ \$2.95 each)	\$9.00
Wide-mouth 500 ml jars (550 @ \$6.00 each)	\$3,300.00
Forceps (12 @ 1.50 each)	\$18.00
95% ethanol (5 gallons @ \$22.00 per gallon)	\$110.00

eDNA reagents:

Primers	\$150.00
Agarose gel and dyes	\$300.00
qPCR runs (1 sample @ \$225.00 each; 4 sites sampled 3 times)	\$2,700.00

Grand total **\$50,841.00**

INFORMATION ONLY**August 3, 2015 JPA Board Meeting**

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject: Tapia Water Reclamation Facility: Flood Protection Update

SUMMARY:

In 1990, Rivertech, Inc. performed a flood plain evaluation to determine the improvements necessary to protect the Tapia Water Reclamation Facility (Tapia) from flooding. Based on the results of the ultimate peak flow condition, flood walls were constructed at Tapia to a height of 477.66 feet at the west end of the plant, stepping down to an elevation of 472.50 feet at the east end. In 2003, staff performed an update of the Rivertech study and validated the effectiveness of the flood walls through observations of high water elevations at Tapia.

Attached is a 2015 Tapia Flood Wall Study Update. The report includes an evaluation of flow station data, channel sediment, channel debris, channel vegetation conditions, and impervious area percentage changes for the drainage basins from 2003 to 2015 to conclude the following:

- The existing flood protection facilities provide adequate protection for Tapia, based on observations of significant flow events since 2003 versus design ultimate peak flow with slightly increased impervious areas in the drainage basins.
- Observations of high water elevations should continue for significant flow events.
- Assumptions made by Rivertech on the increase of impervious areas in the drainage basins remain valid based on the information contained in the *2013 Malibu Creek and Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments*.
- Periodic validation and updates of the flood plain evaluation for Tapia should continue to be performed.
- Flood protection facilities should continue to be inspected and maintained to assure continued performance.
- Cold Creek at Malibu Canyon Bridge experienced higher water elevations with lower flow events in 2005 than previously recorded for higher flow events in 1998. This phenomenon might be the result of overgrown vegetation in the creek and should continue to be monitored.
- Fallen Willow tree removal within the creek area adjacent to Tapia should be encouraged, particularly after major storm events when environmental habitat would not be affected.

Finally, in cooperation with California State Parks, staff proposes to pursue the development of a selective clearance program for the streambed in a manner sensitive to the riparian habitat.

FISCAL IMPACT:

No

ITEM BUDGETED:

No

Prepared By: Lindsay Cao, P.E, Associate Engineer

ATTACHMENTS:[2015 Tapia Flood Wall Study Update](#)

Tapia Water Reclamation Facility
Flood Wall Study Update



Las Virgenes Municipal Water District

Lindsay Cao, P.E.

June 1, 2015

Background Information

The Tapia Water Reclamation Facility (Tapia WRF) is located in Los Angeles County on the south bank of Malibu Creek, just upstream of the Malibu Canyon Road Bridge. A flood plain delineation study was performed by the Los Angeles County Flood Control District in 1965. This study indicated that the Tapia WRF was outside of the flood plain boundary except for some storage buildings on the northwest corner of the plant. In 1990, Rivertech, Inc. performed a flood plain evaluation to determine the level of protection necessary for the Tapia Water Reclamation Facility. Based on the results of ultimate peak flow condition, the flood wall at Tapia was constructed to a height of 477.66 feet at the west end of the plant stepping down to an elevation of 472.50 feet at the east end of the plant. In 2003, District staff performed an update of the Rivertech study and validated the recommended elevations by comparison of high water elevation observed at Tapia for the following events (see Table1).

Table 1

Date	Flood wall at east	Flow Surface (Bridge top 472')	Gauging Station F130-R Peak (cfs)	Ultimate Peak flow (cfs)
February 10-12, 1992	472.5	465	23,300	52,250
February 6-7, 1998	472.5	461	19,100	52,500

This report provides a further update of observation of major storm events since the 2003 update using gauging station data, channel sediment, channel debris, channel vegetation conditions, and percentage changes of impervious area of the drainage basins. The objective of this study is to determine whether existing flood protection measures are sufficient in the future due to climate change and vegetation growth which may reduce the drainage capacity of Cold Creek, and any maintenance program which is needed to assure continued performance with the flood walls.

Two Significant Events Since 2003

Since 2003, there were two high raining events, and both of them were well under the ultimate peak flow of 52,250 cfs¹. The first event was between January 9 and 10, 2005 when a peak flow of 12,700 cfs was measured at the gauging station on January 9th. The second event was between March 20 and 21, 2011 when a peak flow of 6,490 cfs was measured on March 20th. Figure 1 shows the peak flow and daily maximum flow at the gauging station F130-R for the water years 1996-97 to 2012-13². Figure 2 shows the total runoff in acre-feet for this same period, and Figure 3 shows the daily mean flow at the gauging station for the January 2005 and

¹ Ultimate flow of 52,250 cubic feet per second (cfs) at the county gauging station at Cold Creek was used to design the flood wall elevations at Tapia WRF.

² A water year is from October to September

March 2011. Table 2 summarizes two storm events in comparison with 1992 and 1998's events. Both events' peak flows were much lower than the ultimate flow of 52,250 cfs.

Table 2

Date	Flood Wall At east	Flow Surface (Bridge top 472')	Gauging Station F-130-R Peak (cfs)	Ultimate Peak Flow (cfs)	Creek Vegetation
January 9, 2005	472.5	<465 ³ ft	12,700	52,500	<50%
March 30, 2011	472.5	No Data	6,490	52,500	<50%
February 10, 1992	472.5	465 ft	23,200	52,500	<50%
February 6, 1998	472.5	461 ft	19,100	52,500	<50%

There is no water surface data available for 2011 event, but no records were shown that flow surface is higher than the Tapia WRF flood walls at the east.

Channel Sediments, Debris and Vegetation Conditions

The upstream of the main channel may experience sediment deposits from smaller storms, but during the major storms the sediment is moved downstream and the streambed returns to its natural depth.

The Malibu Canyon Road bridge piers may trap debris during a flood resulting in head loss and a higher upstream water surface elevation. Recent field observation and picture of 2005 storm event at the Malibu Canyon Road Bridge show the bridge opening is not blocked by debris. This is important since the willow tree vegetation in the main channel can impact the water surface elevation; therefore, willow removal within the creek area adjacent to Tapia should be encouraged. (These photographs are included in Appendix A).

It is also noticed from the attached photos that water surface flow is higher in January 2005 storm than February 1998 storm, even though 2005 peak flow is 45% smaller. Growing vegetation within the creek, especially adjacent to Tapia WRF may be a cause to the increased flow. Channel maintenance adjacent to the plant might be necessary. Both Rivertech and 2003 Flood Protection indicate that channel maintenance adjacent to the plant can reduce the water surface elevations by 2 to 4 at the upstream end of the plant for willow tree removal percentages of 50% and 100%, respectively. There is only a small effect on the water surface elevation at the downstream end of the plant.

No significant impervious area change in the drainage basin

³ See elevation difference in pictures in Appendix A - by comparing water surface from pictures taken for 1998 and 2005 events).

The other factor that may impact flood flow pattern is the impervious area in the drainage basin, since impervious surfaces encourages direct runoff. In the Rivertech study, the ultimate flow condition was calculated based on an assumption that the total percent impervious area would increase from 6% to 20%. Based on Malibu Creek & Lagoon TMDL study⁴, the imperviousness percentage only changed from 5.26% in 1990 to 6.95% in 2008; therefore, the assumption made by Rivertech on the increase of impervious area in the drainage basin remains valid and conservative.

Conclusion:

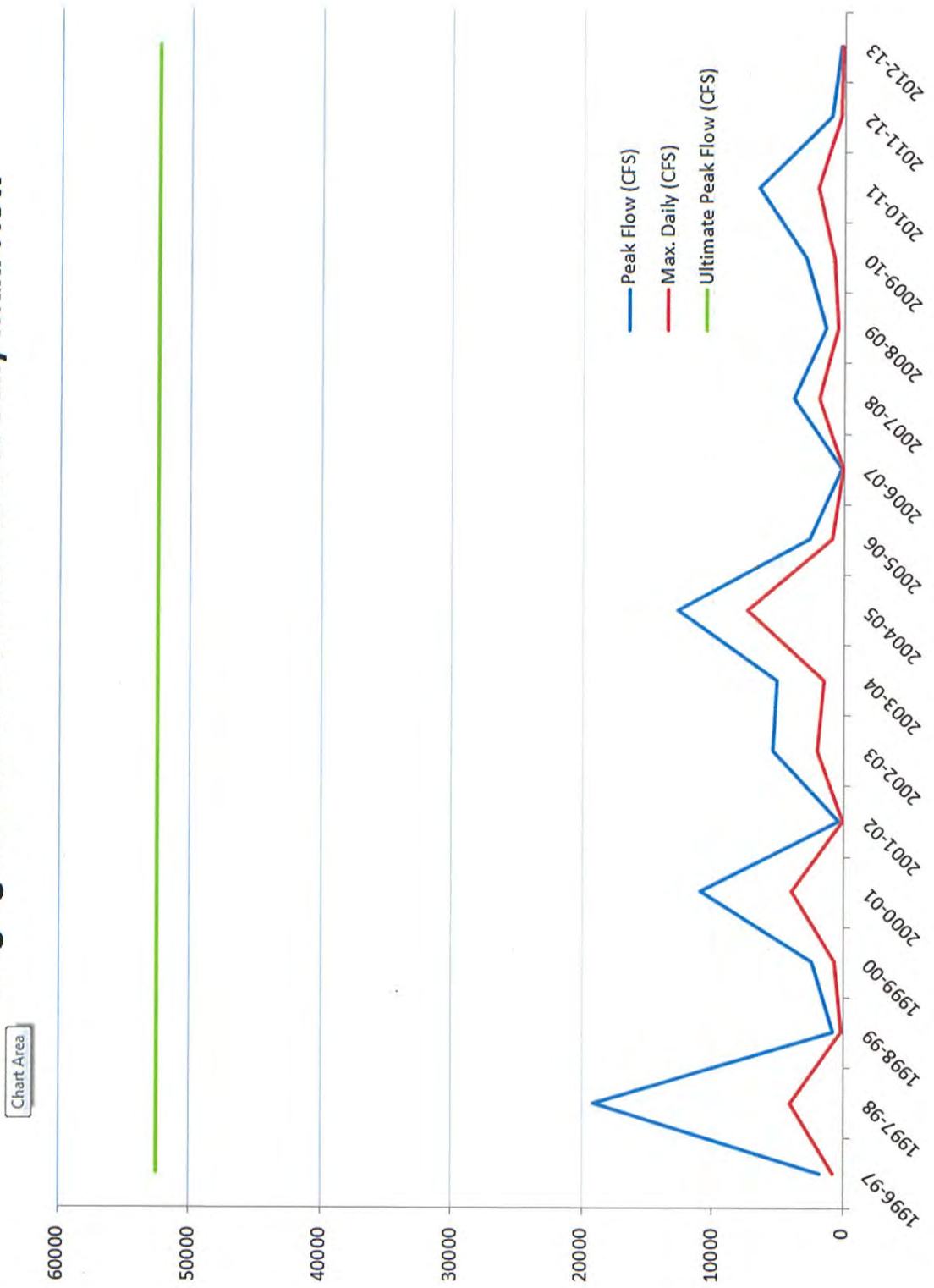
1. The flood protection facilities in place provide adequate protection for Tapia WRF, based on observation of significant flow versus designed ultimate peak flow and the slightly increased impervious area.
2. Based on Malibu Creek & Lagoon TMDL study, the assumption made by Rivertech on the increase of impervious area in the drainage basin remains valid, which is actually conservative.
3. Willow removal within the creek area adjacent to Tapia should be encouraged particularly after major storm events where the environmental habitat would not be affected if fallen trees were removed.

Recommendation:

1. It is recommended that the District staff pursue with California State Parks for development of a selective clearance program in the streambed in a manner sensitive to the riparian habitat, because additional factors of flood protection can be achieved by removing some, or all, of the willow growth.
2. Observations of high water elevations should be continued for significant flow events
3. Flood protection facilities should continue to be inspected and maintained to assure continued performance.

⁴ U.S. Environmental Protection Agency Region IX, Malibu Creek & Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments.

Figure 1
Gauging Station F130-R Peak Flow & Daily Max. Flow



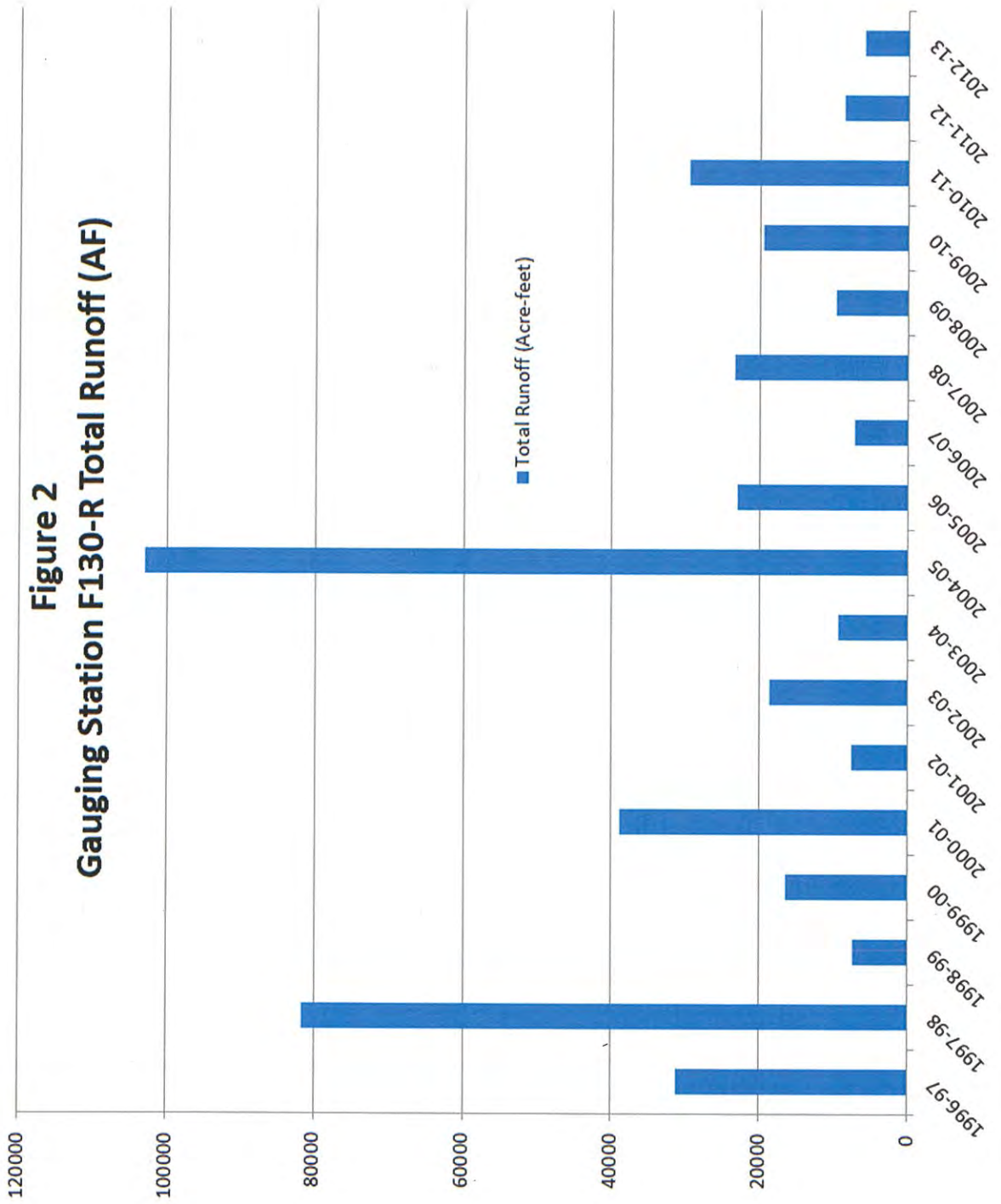
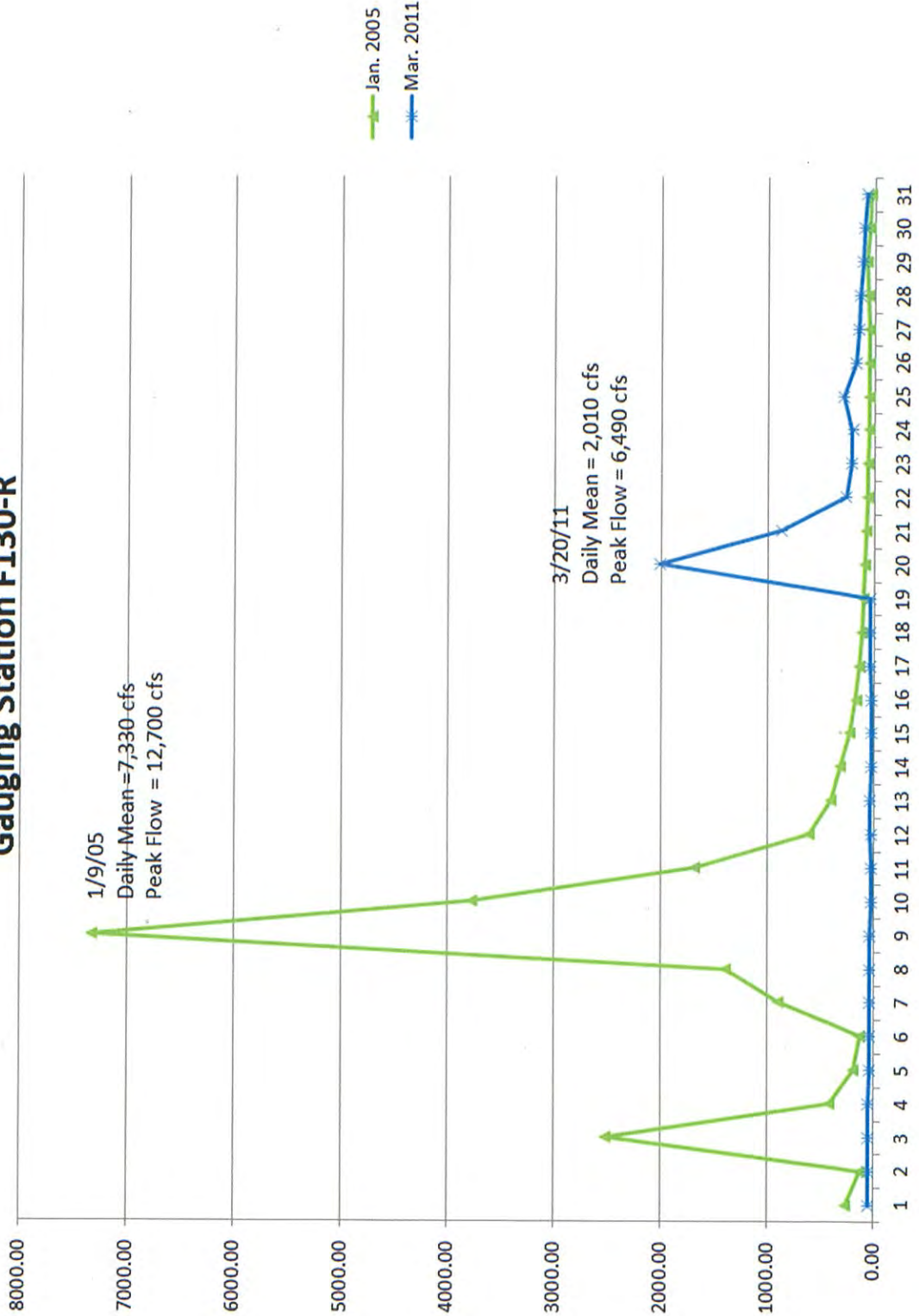


Chart Area

Figure 3
January, February 2005 & February 2010
Gauging Station F130-R



Appendix A



January 10, 2005 Malibu Canyon Bridge top of the pier is at elevation of 465 feet. Peak Flow 12,700 cfs.



Main channel flow in January 10, 2005.



February 11, 1992 Malibu Canyon Bridge top of pier is at elevation 465 feet

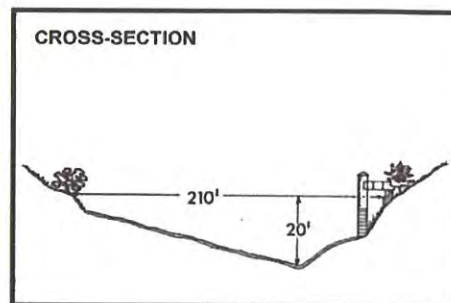
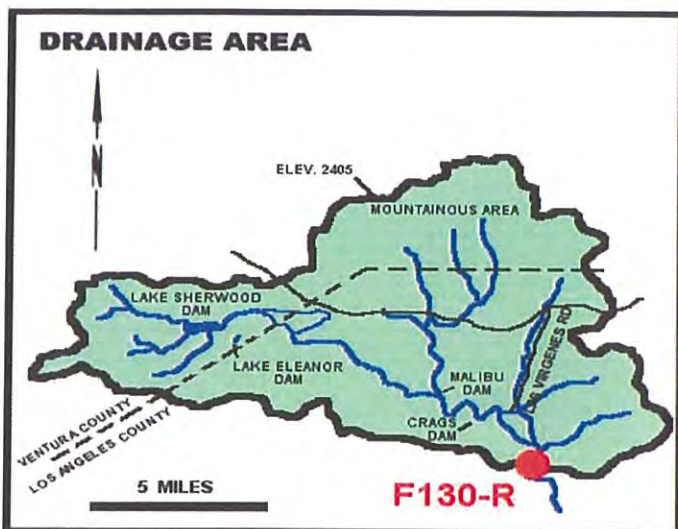
Peak Flow 23,200 cfs.

RUNOFF – STREAM GAGING STATION INFORMATION

MALIBU CREEK

Below Cold Creek.

STATION NO. F130-R



RECORDER - 5 min. interval data logger.

METHOD OF MEASUREMENT - Wading

DRAINAGE AREA - 104.96 square miles.

LOCATION - 0.2 mile downstream of Cold Creek, 6.0 miles southwest of Calabasas.

REGULATION - Lake Sherwood Dam, Lake Eleanor Dam, Malibu Lake Dam and Crags Dam. Other small recreational dams affect low summer flows.

DIVERSION - None.

CHANNEL - Coarse sand and gravel, lined with trees and brush, natural in section.

CONTROL - Concrete stabilizer.

LENGTH OF RECORD - January 17, 1931 to date.

REMARKS - Cableway washed out on January 25, 1969, no high flow measurements since that date.

RUNOFF – STREAM GAGING STATION PEAK FLOW

**MALIBU CREEK below Cold Creek.
STATION NO. F130-R**

Season	Daily CFS			Total Runoff (Acre-feet)	Peak Flow	
	Maximum	Minimum	Mean		Date	CFS
1972-73	3,340	0.8	35.1	25,400	Feb 11	7,480
1973-74	2,240	2.7	22	15,910	Jan 07	5,100
1974-75	519	2.3	15.2	11,020	Dec 04	2,670
1975-76	163	1.1	5.4	3,910	Feb 09	339
1976-77	315	1.1	6.9	4,980	Jan 07	597
1977-78	7,620	1.7	112.4	80,990	Mar 04	19,400
1978-79	1,220	2.3	46.4	33,408	Mar 27	4,420
1979-80	*	*	*	*	Feb 16	*
1980-81	357	1.7	13.5	9,832	Mar 05	910
1981-82	400	2.2	13.9	10,031	Mar 17	676
1982-83	7,720	2.7	121.8	88,148	Mar 01	24,200
1983-84	758	2.5	24.1	17,411	Dec 25	1,840
1984-85	588	0.9	16.6	12,002	Dec 19	880
1985-86	1,480	1.4	39.3	27,881	Feb 15	5,880
1986-87	216	0.5	8.6	6,236	Nov 18	653
1987-88	559	0.6	24	17,337	Feb 28	1,680
1988-89	257	1.6	12.3	8,876	Feb 09	441
1989-90	*	*	*	*		*
1990-91	982	0.8	20.5	14,872	Mar 19	3,150
1991-92	5,850	2	92.7	67,330	Feb 10	23,300
1992-93	*	*	*	*		*
1993-94	880	0.9	16.7	11,090	Feb 20	2,450
1994-95	4,530	3.1	97.8	68,700	Mar 11	15,700
1995-96	637	1.5	12.9	9,395	Feb 21	1,220
1996-97	807	3.2	43.1	31,180	Dec 09	1,800
1997-98	4,020	2.4	113	81,700	Feb 07	19,100
1998-99	134	2.8	10.3	7,430	Apr 11	761
1999-00	701	1.4	22.6	16,440	Feb 23	2,380
2000-01	3,950	0.6	53.8	38,920	Mar 06	10,900
2001-02	93	0.9	10.6	7,670	Nov 24	413
2002-03	1,979	1.9	25.9	18,761	Feb 12	5,410
2003-04	1,470	1.2	13	9,442	Feb 26	5,130
2004-05	7,330	1.3		103,000	Jan 09	12,700
2005-06	845	3.1	31.9	23,120	Jan 02	2,586
2006-07	80	0.7	10.1	7,309	Feb 22	189
2007-08	1,940	0.9	32.4	23,510	Jan 27	3,851
2008-09	521	0.8	13.4	9,710	Feb 16	1,350
2009-10	816	1.97	27	19,530	Jan 20	2,970
2010-11	2,010	1.94	40.8	29,530	Mar 20	6,490
2011-12	320	0.86	11.9	8,660	Apr 13	1,030
2012-13	148	0.95	8.14	5,890	Jan 24	296

M Data missing

* Record incomplete

E Estimate

N.D. Not determined

** Record not computed

+ Less than 0.05 acre feet or less than 0.05 cfs, but greater than 0

INFORMATION ONLY

August 3, 2015 JPA Board Meeting

TO: JPA Board of Directors

FROM: Facilities & Operations

Subject: Recycled Water Reservoir No. 2 Improvements: Final Acceptance

The Las Virgenes - Triunfo Joint Powers Authority (JPA) approved funding for this matter in the JPA Budget. On July 14, 2015, the LVMWD Board of Directors, acting as the Administering Agent of the JPA, approved execution of a Notice of Completion, and release of the retention in the amount of \$37,629.93, thirty calendar days after filing the Notice of Completion, for the Recycled Water Reservoir No. 2 Improvement Project.

SUMMARY:

On October 14, 2014, the LVMWD Board awarded a contract to Zusser Company, Inc., in the amount of \$815,934, for the Recycled Water Reservoir No. 2 Improvement Project. The work was completed, and there were no outstanding issues to prevent acceptance of the project. As a result, staff recommended filing the Notice of Completion and releasing the retention as stipulated in the contract documents.

FISCAL IMPACT:

Yes

ITEM BUDGETED:

Yes

FINANCIAL IMPACT:

The total project cost was \$1,477,858.47, compared to a total appropriation of \$1,607,010 as provided in the adopted Fiscal Year 2014-15 JPA Budget under CIP Job No. 10522. A one-time additional operating cost of \$136,529 was also associated with the project for the purchase of potable supplement.

The final construction cost for the project is summarized as follows:

Construction Costs	
Construction Contract	\$815,934
Change Order No. 1	-\$82,346
Change Order No. 2	\$19,010.56
Subtotal	\$752,598.56
Additional Project Costs	
Design Services (HDR / PACE)	\$101,841.61
Shade Balls	\$312,801.66
Silt and Sediment Removal (Toro)	\$70,736
Dewatering Equipment Rental (Rain for Rent)	\$21,333
Geotechnical Services (Fugro)	\$12,660
Sediment Spreading (Litten)	\$11,780.11
District Labor	\$73,338.28
G&A	\$90,590.73
Miscellaneous Costs	\$30,178.52

ITEM 9B

Total Project Cost	\$1,477,858.47¹
Operating Expense Cost (Non-CIP)	
Potable Supplement	\$136,529 ²

¹Total CIP cost

²Due to the maintenance needs during construction, the cost for potable supplement was not included in the CIP total project cost. The Fiscal Year 2014-15 expenditure was funded as JPA recycled water system maintenance, Business unit 751200.5115, Purchased Water.

DISCUSSION:

Project Scope and Purpose:

The scope of the project included cleaning and removal of debris from the reservoir, installing an HDPE geomembrane liner over the reservoir's earthen sides, improving the piping and drainage facilities, and performing miscellaneous grading work. To provide continuous service to recycled water customers, temporary storage tanks and associated piping were established to maintain service during construction activities. In addition, HDPE shade balls were installed to cover the surface of the reservoir. The shade balls were purchased through a cooperative purchasing clause, utilizing an existing LADWP contract providing an overall cost-savings to the JPA.

The purpose of the project was to ensure consistent compliance with NPDES permit requirements for the 005 discharge point (Los Angeles River) by improving the quality of water pumped from Reservoir No. 2. Recycled water produced at the Tapia Water Reclamation Facility is pumped to Reservoir No. 2, which provides temporary storage before being distributed by the Recycled Water Pump Station to customers or for disposal via the 005 outfall to the Los Angeles River. Since completion of construction, the 005 effluent monitoring station has shown consistent turbidity levels compliant with NPDES permit requirements.

Change Orders:

There were two change orders issued during the course of construction.

Change Order No. 1 was administratively approved by the General Manager on February 18, 2015, in the deductive amount of \$82,346. The change order was for removal of Bid Item No. 1, Sediment Removal and Disposal, from the contract due to failure of the contractor to perform the work.

Change Order No. 2 was administratively approved by the General Manager on June 11, 2015, in the amount of \$19,010.56. The change order was to reconcile the Contractor's extra work items with JPA-incurred costs.

Prepared By: Eric Schlageter, P.E., Associate Engineer

ATTACHMENTS:

[Notice of Completion](#)

[Change Order No. 1](#)

[Change Order No. 2](#)

[Post-Construction Photograph](#)

RECORDING REQUESTED BY

Las Virgenes Municipal Water District

AND WHEN RECORDED MAIL TO

Name Susan Brown
Street Address Las Virgenes Municipal Water District
4232 Las Virgenes Road
City & State Calabasas, CA 91302
Zip

SPACE ABOVE THIS LINE FOR RECORDER'S USE

T 420 LEGAL (9-94)

Notice of Completion

NOTICE IS HEREBY GIVEN THAT:

- 1. The undersigned is the owner of the interest or estate stated below in the property hereinafter described.
2. The full name of the undersigned is Las Virgenes Municipal Water District (NAME).
3. The full address of the undersigned is 4232 Las Virgenes Road, Calabasas CA 91302
4. The nature of the title of the undersigned is
5. The full names and full addresses of all persons, if any, who hold title with the undersigned as joint tenants or as tenants in common are:
6. The names of the predecessors in interest of the undersigned, if the property was transferred subsequent to the commencement of the work of improvement herein referred to are (OR IF NO TRANSFER WAS MADE, INSERT THE WORD "none"):
7. A work of improvement on the property hereinafter described was completed on Jul 14, 2015 (DATE).
8. The name of the original contractor, if any, for the work of improvement was Zusser Company, Inc.
9. The property on which the work of improvement was completed is in the City of Calabasas, County of Los Angeles, State of California, and is described as follows: Reservoir No. 2 Improvement Project
10. The street address of the said property is None

Dated: July 14, 2015 Las Virgenes Municipal Water District
(SIGNATURE)
Charles P. Caspary, Secretary of the Board (TYPED NAME)

VERIFICATION

I, the undersigned, say:
I am the person who signed the foregoing notice. I have read the above notice and know its contents, and the facts stated therein are true of my own knowledge.

I declare under penalty of perjury that the foregoing is true and correct.

Executed at Calabasas, California, this 14th day of July, 2015.
(SIGNATURE)
Charles P. Caspary, Secretary of the Board



CONTRACT CHANGE ORDER

No. 1

4232 Las Virgenes Road
Calabasas, California 91302-1994

Project Reservoir No. 2 Improvement Project

Project No. Acct. No. 10522.5515

Contractor Zusser Company, Inc.

Date 2/18/2015

CONTRACTOR CHANGE ORDER NO. 1 The Contractor is hereby authorized and directed to make the herein described changes from the Plans and Specifications or do the following work not included in the Plans and Specifications for the construction of this project.

This change requested by: LVMWD

DESCRIPTION OF CHANGE:

	Description	Amount	Days
1	The deductive amount is for removal of <u>Bid Item #1 Sediment Removal and Disposal</u> less the actual material hauled and disposed of by the contractor based on the contract. (86 CY of material)	\$82,346.00	0
	TOTAL	\$82,346.00	0

INCREASES
 TOTAL AT AGREED PRICES OR FORCE ACCOUNT \$ 82,346.00
 DECREASES

Contract Change Order No. 1 Project No. 101700 Acct. No. 5515

Date 2/18/2015

(2) Estimate of increases and/or decreases in contract items at contract unit prices:

INCREASES

Item	Description	Quantity	Unit Price	Total
TOTAL INCREASES				\$N/A

DECREASES

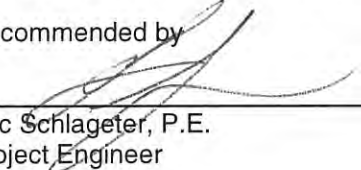
Item	Description	Quantity	Unit Price	Total
TOTAL DECREASES				\$

TOTAL NET _____ IN CONTRACT ITEMS AT CONTRACT UNIT PRICES \$ _____

TOTAL COST OF THIS CHANGE ORDER \$ 82,346.00 **INCREASE**

DECREASE

It is agreed 0 consecutive calendar days extension of time will be allowed by reason of this change.

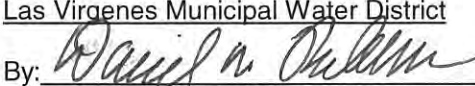
Recommended by

Eric Schlageter, P.E.
Project Engineer

Departmental Approval

David R. Lippman
Director of Facilities and Operations

ACCEPTED:

By: _____
Date: _____

APPROVED:
Las Virgenes Municipal Water District

By: David W. Pedersen, General Manager
Date: 02/18/15

Note: Attention is called to the sections of the Special Provisions and Standard Provisions on EXTRA, ADDITIONAL OR OMITTED WORK.

- THIS CHANGE ORDER IS NOT EFFECTIVE UNTIL APPROVED BY OWNER
- IF ACCEPTABLE TO THE CONTRACTOR, THIS CHANGE ORDER IS EFFECTIVE IMMEDIATELY



CONTRACT CHANGE ORDER

No. 2

4232 Las Virgenes Road
Calabasas, California 91302-1994

Project Reservoir No. 2 Improvement Project

Project No. Acct. No. 10522.5515

Contractor Zusser Company, Inc.

Date 6/11/2015

CONTRACTOR CHANGE ORDER NO. 2 The Contractor is hereby authorized and directed to make the herein described changes from the Plans and Specifications or do the following work not included in the Plans and Specifications for the construction of this project.

This change requested by: LVMWD¹

DESCRIPTION OF CHANGE:

	Description	Amount	Days
1	The additive amount is for the reconciled amount of material hauled under <u>Bid Item #1 Sediment Removal and Disposal</u> . The item was removed from the project through CO#1. The amount reflects the balance owed to the Contractor.	\$6,101.55	0
2	The additive amount is for cost incurred by the Contractor for additional equipment and labor due to residual water infiltrating the reservoir. This included valve blow by & infiltration of saturated soils through subdrains and construction joints.	\$8,979.00	0
3	The additive amount is for cost incurred for full depth removal, preparation and placement of asphalt beyond the grind and overlay scope.	\$1,040.81	0
4	The additive amount is for the cost incurred for repair of the prepared reservoir side slopes due to failure of the District's 8-inch potable supplement pipe during construction.	\$5,299.47	0
5	The additive amount is for the rental cost incurred for the temporary tank system and piping due to operational complexities during shut down and start up procedures as well as rental cost during silt and sediment removal self-performed by the District.	\$10,403.73	0
6	The additive amount is for an overage of asbestos pipe removed beyond the estimated quantity of the bid item for asbestos pipe removal and disposal	\$1,780.00	0
7	The deductive amount is for a credit to the District for additional consulting fees incurred by the District due to a deficient temporary storage tank and system that varied from the contract documents.	(\$5,400.00)	0

8	The deductive amount is for reconciling the estimated quantity of asphalt with the quantity that was used for the project. This credit's the District for the portion that was unused.	(\$9,194.00)	0
TOTAL		\$19,010.56	0

¹ The District waives the liquidated damages assessed for the contract.

INCREASES
 TOTAL AT AGREED PRICES OR FORCE ACCOUNT **\$ 19,010.56**
 DECREASES

Contract Change Order No. 2 Project No. 10522 Acct. No. 5515

Date 6/11/2015

(2) Estimate of increases and/or decreases in contract items at contract unit prices:

INCREASES

Item	Description	Quantity	Unit Price	Total
1	(see page 1)			\$6,101.55
2	(see page 1)			\$8,979.00
3	(see page 1)			\$1,040.81
4	(see page 1)			\$5,299.47
5	(see page 1)			\$10,403.73
6	(see page 1)			\$1,780.00
TOTAL INCREASES				\$33,604.56

DECREASES

Item	Description	Quantity	Unit Price	Total
7	(see page 1)			(\$5,400.00)
8	(see page 2)			(\$9,194.00)
TOTAL DECREASES				\$14,594.00

TOTAL NET INCREASE IN CONTRACT ITEMS AT CONTRACT UNIT PRICES \$19,010.56

TOTAL COST OF THIS CHANGE ORDER \$ 19,010.56 **INCREASE**

DECREASE

It is agreed 0 consecutive calendar days extension of time will be allowed by reason of this change.

Recommended by


Eric Schlageter, P.E.
Project Engineer

Departmental Approval


David R. Lippman
Director of Facilities and Operations

ACCEPTED:

**Misha
Fyodorov**
OV
Digitally signed by: Misha Fyodorov
DN: CN = Misha Fyodorov
C = US O = Zusser
Company OU = ZCI
Date: 2015.06.11 16:07:42 -08'00'

APPROVED:

Las Virgenes Municipal Water District

By: _____

By: 
David W. Pedersen, General Manager

Date: _____

Date: 06/11/15

Note: Attention is called to the sections of the Special Provisions and Standard Provisions on EXTRA, ADDITIONAL OR OMITTED WORK.

- THIS CHANGE ORDER IS NOT EFFECTIVE UNTIL APPROVED BY OWNER
- IF ACCEPTABLE TO THE CONTRACTOR, THIS CHANGE ORDER IS EFFECTIVE IMMEDIATELY

Reservoir No. 2 Improvements Project – Completed Construction

