

AGENDA REGULAR MEETING OF THE BOARD OF DIRECTORS EL DORADO IRRIGATION DISTRICT

District Board Room, 2890 Mosquito Road, Placerville, California February 23, 2015 ~ 9:00 A.M.

Board of Directors

BILL GEORGE BOARD PRESIDENT Division III

GEORGE W. OSBORNE BOARD VICE PRESIDENT Division I

Greg Prada Board Director Division II

Dale Coco, MD Board Director Division IV

Alan Day Board Director Division V General Manager and Executive Staff

JIM ABERCROMBIE GENERAL MANAGER

THOMAS D. CUMPSTON GENERAL COUNSEL

Jennifer Sullivan, Clerk to the Board

Mary Lynn Carlton, Communications/Customer Service

Jose Perez, Human Resources

Tom McKinney, Operations

Brian Mueller, Engineering

Mark Price, Finance

Tim Ranstrom, Information Technology

In accordance with the Americans with Disabilities Act and California law, it is the policy of the El Dorado Irrigation District to offer its public programs, services and meetings in a manner that is readily accessible to everyone, including individuals with disabilities. If you are a person with a disability and require information or materials in an appropriate alternative format; or if you require any other accommodation for this meeting, please contact the EID ADA coordinator at 530-642-4045 or e-mail at adacoordinator@eid.org at least 72 hours prior to the meeting. Advance notification within this guideline will enable the District to make reasonable accommodations to ensure accessibility.

PUBLIC COMMENT: Anyone wishing to comment about items not on the Agenda may do so during the public comment period. Those wishing to comment about items on the Agenda may do so when that item is heard and when the Board calls for public comment. **Public comments are limited to five minutes per person.**

PUBLIC RECORDS DISTRIBUTED LESS THAN 72 HOURS BEFORE A MEETING: Any writing that is a public record and is distributed to all or a majority of the Board of Directors less than 72 hours before a meeting shall be available for immediate public inspection in the office of the Clerk to the Board at the address shown above. Public records distributed during the meeting shall be made available at the meeting.

CALL TO ORDER

Roll Call
Pledge of Allegiance
Moment of Silence

ADOPT AGENDA

COMMUNICATIONS

General Manager's Employee Recognition

APPROVE CONSENT CALENDAR

Action on items pulled from the Consent Calendar

PUBLIC COMMENT

COMMUNICATIONS

Board of Directors

Brief reports on community activities, meetings, conferences, and seminars attended by the Directors of interest to the District and the public.

Clerk to the Board General Manager

CONSENT CALENDAR

1. Finance (Pasquarello)

Ratification of EID General Warrant Registers for the periods ending February 3 and February 10, 2015, and Board and Employee Expense Reimbursements for these periods.

Option 1: Ratify the EID General Warrant Registers as submitted to comply with Section 24600 of the Water Code of the State of California. Receive and file Board and Employee Expense Reimbursements.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

Recommended Action: Option 1.

2. Clerk to the Board (Sullivan)

Approval of the minutes of the February 9, 2015, regular meeting of the Board of Directors.

Option 1: Approve as submitted.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

Recommended Action: Option 1.

3. Office of the General Counsel (Cumpston)

Ratification of Resolution Nos. 2014-011 and 2014-023, to maintain emergency declarations.

- Option 1: Ratify Resolution Nos. 2014–011 and 2014-023 (thus maintaining both emergency declarations for purposes of bidding, contracting, and CEQA compliance).
- Option 2: Decline to ratify Resolution Nos. 2014–011 and/or 2014-023 (thus terminating one or both emergency declarations for purposes of bidding, contracting and CEQA compliance).
- Option 3: Take no action (thus terminating both emergency declarations for purposes of bidding, contracting and CEQA compliance.

Recommended Action: Option 1 (four-fifths vote required for purposes of bidding and contracting).

4. Finance (Pasquarello)

Funding approval for District Capital Improvement Plan (CIP) Projects.

- Option 1: Authorize funding for the CIP projects as requested in the amount of \$44,189.
- Option 2: Take other action as directed by the Board.
- Option 3: Take no action.

Recommended Action: Option 1.

5. Office of the General Counsel (Johnson)

Consideration of a resolution to authorize execution of an easement quitclaim to Taylor Morrison of California, LLC, for a portion of Lot 4 of Serrano Village M [APN: 123-630-04].

- Option 1: Adopt a resolution approving and authorizing execution of the Easement Quitclaim as submitted.
- Option 2: Take other action as directed by the Board.
- Option 3: Take no action.

Recommended Action: Option 1.

END OF CONSENT CALENDAR

INFORMATION ITEMS

6. Engineering (Mueller)

Financial status of the Tank 7 in-conduit hydro project.

Recommended Action: None – Information only.

REVIEW OF ASSIGNMENTS

Board direction to staff

ADJOURNMENT

TENTATIVELY SCHEDULED ITEMS FOR FUTURE MEETINGS

Engineering

- Drought Action Plan Workshop, regular Board meeting, March 9 (Mueller)
- Consideration to approve a reimbursement agreement with Renasci Development for the installation of collection system infrastructure that will allow the abandonment of the Ridgeview 10 lift station, Action Item, regular Board meeting, March (T. Sullivan)
- Consideration to award a single-source purchase of collection system flow monitors, Action Item, regular Board meeting, March (T. Sullivan)
- Consideration to award a construction contract for the rehabilitation of the Moose Hall pump Station, Action Item, regular Board meeting, April (Rice)

Office of the General Counsel / Engineering

Review of the history and purpose of the El Dorado Water & Power Authority (EDWPA), water supply benefits and agency responsibilities under the SMUD-El Dorado Cooperation Agreement, and relationship of the EDWPA water rights project to the District's and County Water Agency's long-range water supply planning, Information Item, regular Board meeting, March 9 (Cumpston/Mueller)

El Dorado Irrigation District February 23, 2015 Board Meeting

Communications - General Manager

1) Awards and Recognitions

None

2) Staff Reports and Updates

- a) Drought Update and Conservation Progress Summary by Brian Mueller
- b) Esmeralda Tunnel Update Summary by Daryl Noel

General Manager's Report February 23, 2015

Drought Update and Conservation Progress

Stage 2 Drought Update

The District continues to track customer conservation both on a weekly basis and cumulative conservation for the year, and compares the usage to 2013.

As of February 11, 2015 cumulative conservation for water customers was 16%. Conservation for the week of February 5–February 11 was 20%.

For recycled water customers, cumulative conservation was -38%. Conservation for the week of February 5–February 11 was -1%.

	2015 vs 2013*	2015 vs 2013*		
	Weekly Conservation %	YTD Conservation %		
Potable Conservation	20%	16%		
Recycled Conservation	-1%	-38%		
*2013 baseline per State Water Board and RWA standard				

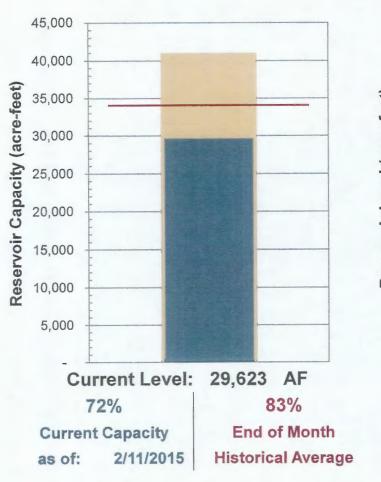
Attachments

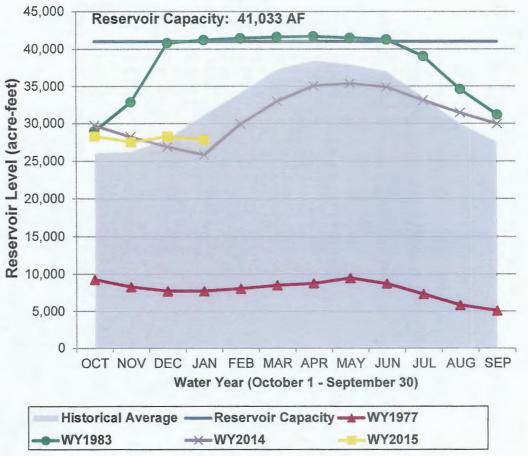
A. Drought and conservation charts

Jenkinson Lake at Sly Park

Reservoir Conditions

(as of February 11, 2015)

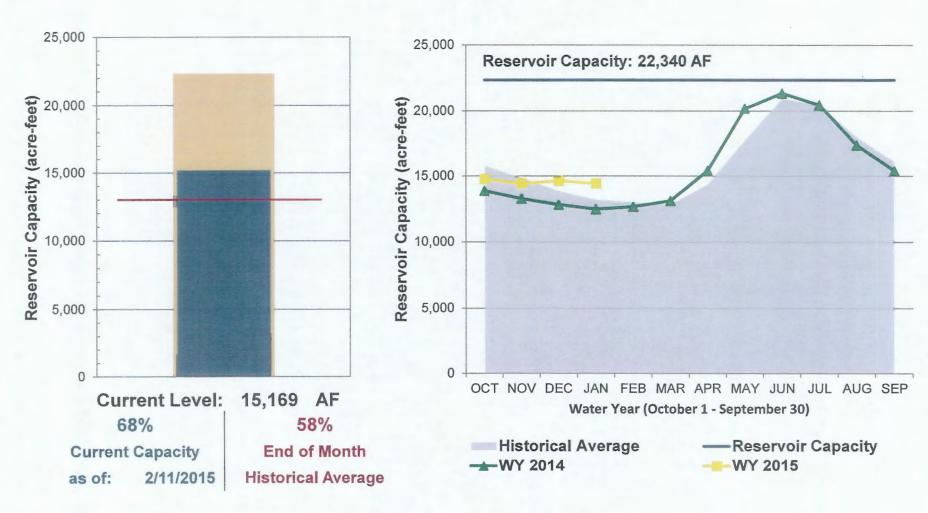




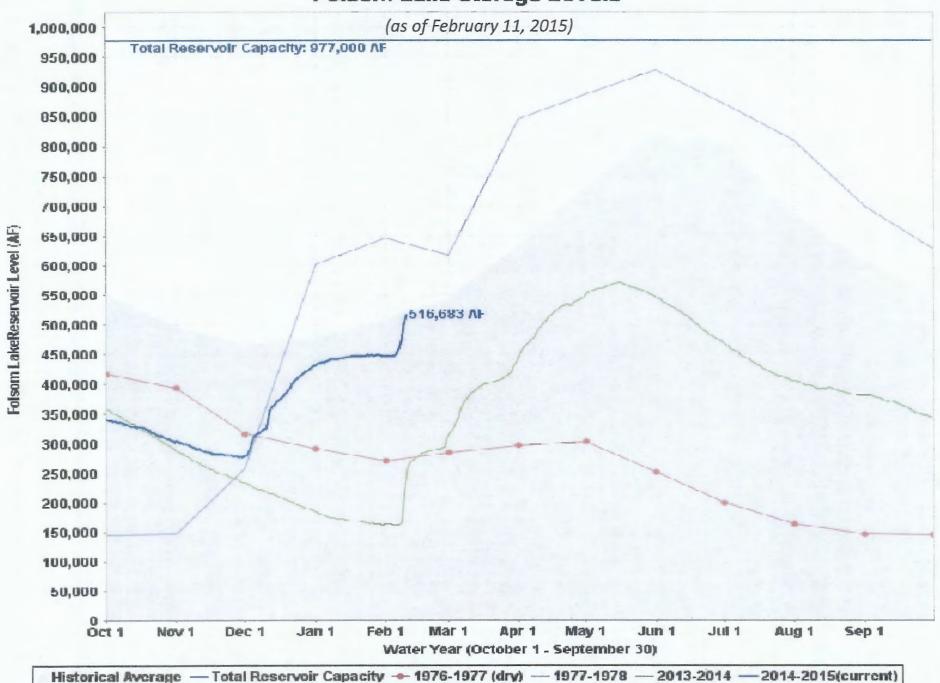
Caples Lake

Reservoir Conditions

(as of February 11, 2015)

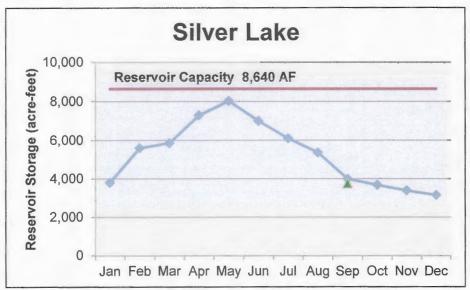


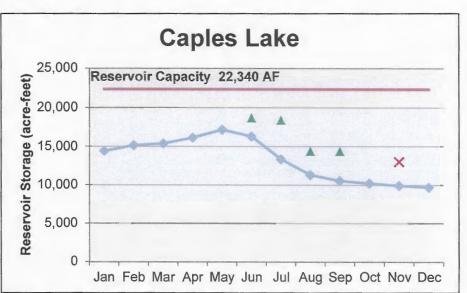
Folsom Lake Storage Levels

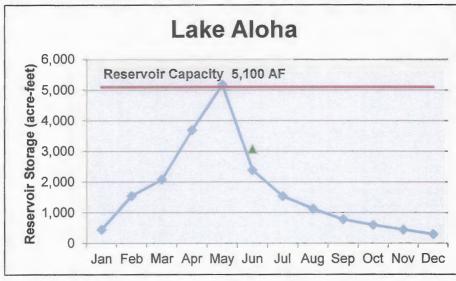


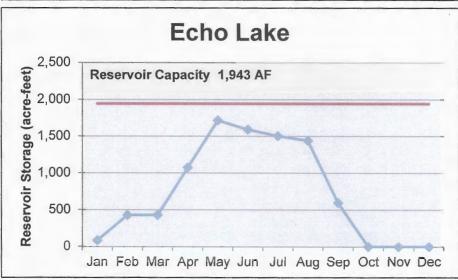
Project 184 - 2015 Forecast Operations

End of Month Storage (AF) – February 10 Forecast Data









Department of Water Resources

California Cooperative Snow Surveys

Snow Course Measurements for February 2015

American River Basin

Course (Location)	Water Content	Avg (Feb)	Avg (Season)	% of Avg (Feb)	% of Avg (Season)
Caples Lake	3.5"	19.8"	30.5"	18%	11%
Lower Carson	6.5"	23.5"	38.2"	28%	17%
Upper Carson	6.0"	22.4"	36.2"	27%	17%

Potable Water Conservation Progress

Weekly Comparison - 2015 vs. 2013 (as of February 11, 2015)



*2013 baseline per State Water Board and RWA standard

Recycled Water Conservation Progress

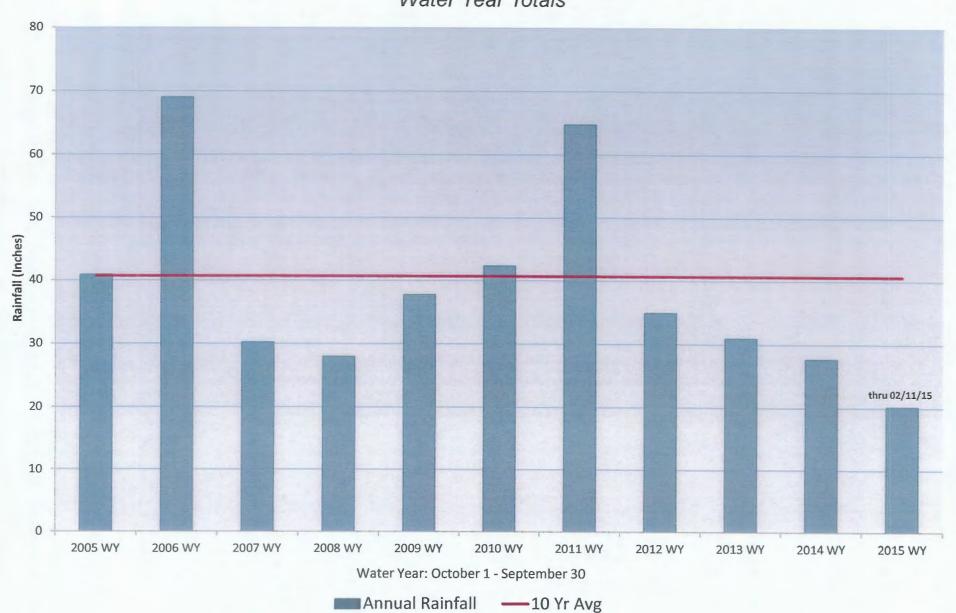
Weekly Comparison - 2015 vs. 2013 (as of February 11, 2015)



*2013 baseline per State Water Board and RWA standard

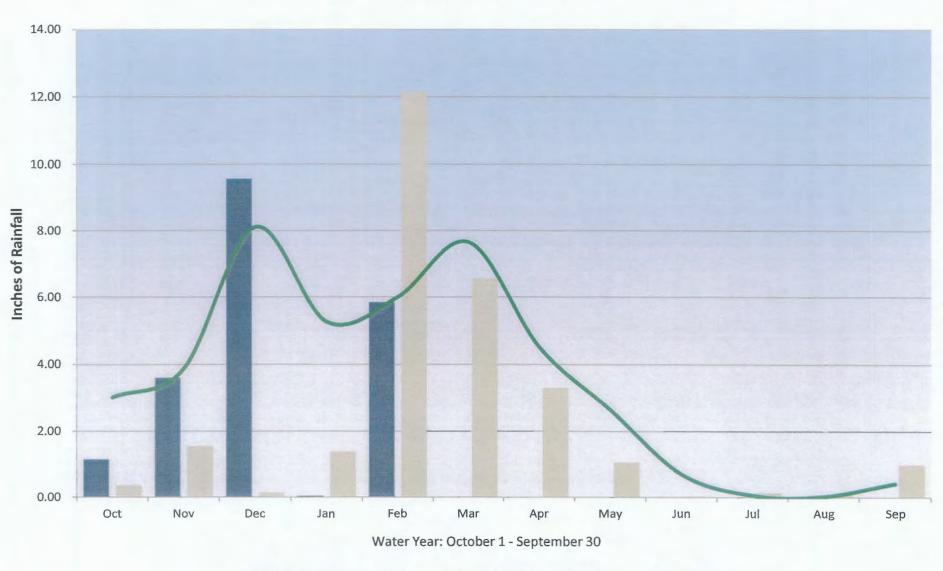
El Dorado Irrigation District

Annual Rainfall (Inches)
Water Year Totals



El Dorado Irrigation District

Monthly Rainfall Comparison (as of February 11, 2015)



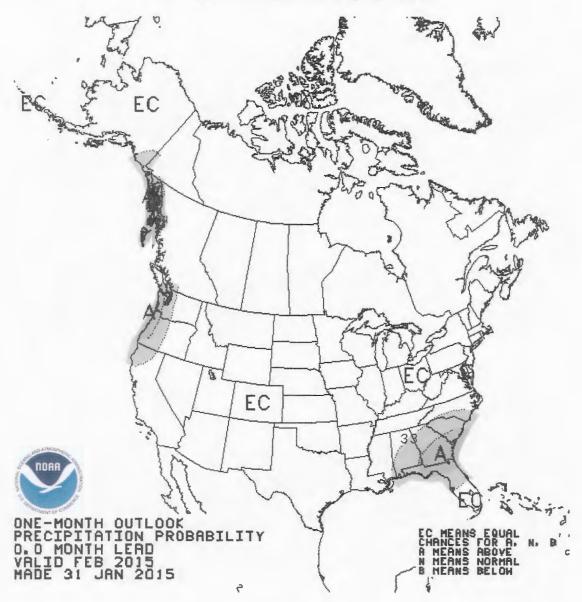
2015 Water Year

2014 Water Year

—10 Yr Avg

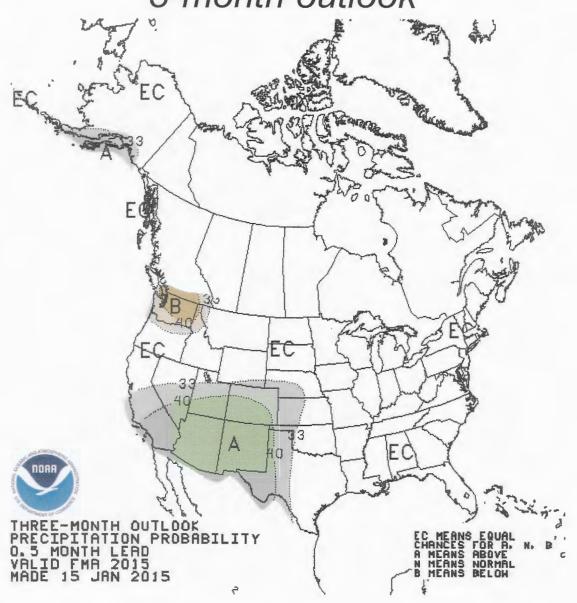
National Weather Service

1-month outlook



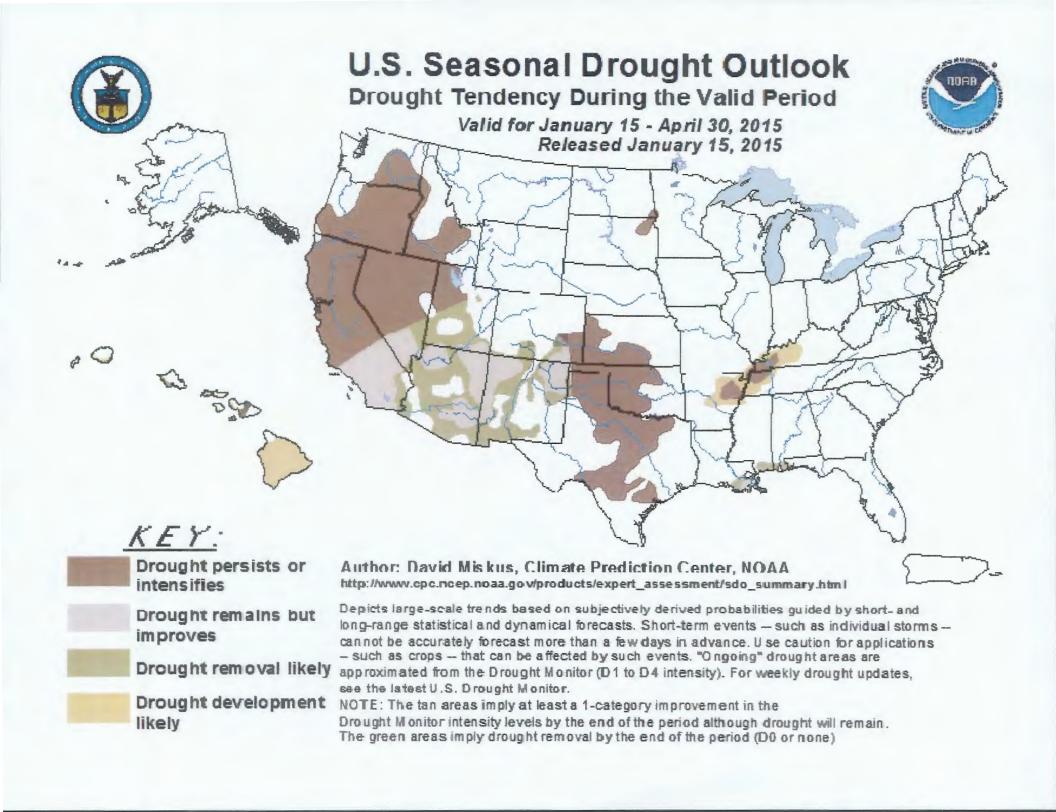
National Weather Service

3-month outlook



U.S. Drought Monitor February 10, 2015 (Released Thursday, Feb. 12, 2015) Valid 7 a.m. EST SL Drought Impact Types: Delineates dominant impacts S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands) L = Long-Term, typically greater than 6 months (e.g. hydrolog y, ecology) Intensity: Author: DO Abnormally Dry David Simeral D1 Moderate Dmught Western Regional Climate Center D2 Severe Drought D3 Extreme Drought D4 Exceptional Drought The Drought Monitor focuses on broadscale conditions. Local conditions may ,0 vary. See accompanying text summary for forecast statements.

http://droughtmonitor.unl.edu/



General Manager's Report February 23, 2015

Esmeralda Tunnel Update

Mining Construction Inc. (MCI) crews continue to make substantial progress on completing phase 1 stabilization work that include both permanent and interim improvements in the Esmeralda Tunnel (tunnel). As the work has progressed, rock quality did not improve at the bottom of the tunnel in the failure area. This requires a heavily reinforced 10-inch thick concrete slab on the tunnel floor and an additional row of rock bolts 12 feet in length, 2 foot on centers to withstand the very large lateral forces at the base of the permanent liner. This additional work will require an additional week to install, extending the tunnel water-up date from Saturday February, 28, to March 7, 2015. MCI crews are now working 6 days per week to meet the revised schedule.

Since the last Board update on January 26, 2015, MCI has completed the permanent liner in the failure area to within 4 feet of the original tunnel floor. MCI crews will have the last 4 feet of failure debris removed from the tunnel and begin installing the remaining rock bolts and reinforcing steel for the permanent liner and concrete slab by Tuesday, February 24, 2015.

The second mining crew has completed the installation of 123 feet of steel I-beams, rebar, and the final shotcrete liner in the unstable section of the tunnel, 331 feet from the downstream portal. This crew is now advancing the mine car track, venting, and utilities to the next heavily timbered section of the tunnel approximately 375 feet from the upstream portal. Since there is inadequate time to remove the remaining timber sets and install the permanent liner during this outage, MCI crews will install temporary wood timber sets next to the existing degraded timber sets so that the tunnel can be safely operated until remaining improvements can be completed during the next scheduled canal outage in October 2015.

EL DORADO IRRIGATION DISTRICT

Subject: Ratification of EID General Warrant Registers for the periods ending February 3, February 10, 2015, and Board and Employee Expense Reimbursements for these periods.

Previous Board Action:

February 4, 2002 – The Board approved to continue weekly warrant runs, and individual Board member review with the option to pull a warrant for discussion and Board ratification at the next regular Board meeting.

August 16, 2004 – Board adopted the Board Expense Payments and Reimbursement Policy.

August 15, 2007 – The Board re-adopted the Board Expense Payments and Reimbursement Policy as Board Policy 12065 and Resolution No. 2007-059.

Board Policies (BP), Administrative Regulations (AR), and Board Authority:

Section 24600 of the Water Code of the State of California provides no claim is to be paid unless allowed by the Board.

Summary of Issue:

The District's practice has also been to notify the Board of proposed payments by email and have the Board ratify the Warrant Registers. Copies of the Warrant Registers are sent to the Board of Directors on the Friday preceding the Warrant Register's date. If no comment or request to withhold payment is received from any Director by the following Tuesday morning, the warrants are mailed out and formal ratification of said warrants is agendized on the next regular Board agenda.

On April 1, 2002, the Board requested staff to expand the descriptions on the Warrant Registers and modify the current format of the Warrant Registers.

On July 30, 2002, the Board requested staff to implement an Executive Summary to accompany each Warrant Register which includes all expenditures greater than \$3,000 per operating and capital improvement plan (CIP) funds.

Staff Analysis/Evaluation:

Warrant registers submitted for February 3, February 10, 2015 totaling \$852,617.00, and Board and Employee Expense Reimbursements for these periods.

Current Warrant Register Information

Warrants are prepared by Accounts Payable; reviewed and approved by the Accounting Manager; the Director of Finance and the General Manager or their designee.

Register Date	Check Numbers	<u>Amount</u>
February 3, 2015	644519 - 644658	\$ 589,666.33
February 10, 2015	644659 - 644771	\$ 262,950.67

Current Board/Employee Expense Payments and Reimbursement Information
The items paid on Attachment A and B are expense and reimbursement items that have been reviewed and approved by the Clerk to the Board, Accounting Manager and the General Manager before the warrants are released. These expenses and reimbursements are for activities performed in the interest of the District in accordance with Board Policy 12065 and Resolution No. 2007-059.

Additional information regarding Board and employee expense reimbursement is available for copying or public inspection at District headquarters in compliance with Government Code Section 53065.5.

Board Decision/Options:

Option 1: Ratify the EID General Warrant Registers as submitted to comply with Section 24600 of the Water Code of the State of California. Receive and file Board and Employee Expense Reimbursements.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

Staff/General Manager's Recommendation:

Option 1.

Support Documents Attached:

Attachment A: Board Expenses/Reimbursements

Attachment B: Employee Expenses/Reimbursements totaling \$100 or more

Tony Pasquarello

Tony Pasquarello Accounting Manager

Mark Price

Director of Finance (CFO)

Jennifer Sullivan Clerk to the Board

Jim Abercrombie General Manager

Attachment A

Board Expenses/Reimbursements Warrant Registers dated 2/3/15 -2/10/15

DESCRIPTION	William George	Alan Day	George Osborne	Dale Coco, MD	Greg Prada	Total
Personal Vehicle Expense	245.00		63.25	8.63		316.88
Hotel						0.00
Meals or Incidentals Allowance						0.00
Airfare, Car Rental, Misc Travel						0.00
Fax, Cell or Internet Service	40.00			40.00		80.00
Meeting or Conference Registration						0.00
Meals with Others						0.00
Membership Fees/Dues						0.00
Office Supplies						0.00
Reimburse prepaid expenses						0.00
Miscellaneous Reimbursements						0.00
	285.00	0.00	63.25	48.63	0.00	396.88

Attachment B

Employee Expenses/Reimbursements Warrant Registers dated 2/3/15 - 2/10/15

EMPLOYEE	DESCRIPTION	AMOUNT
GLEN BINGHAM	TUITION REIMBURSEMENT	\$334.18
VICTORIA CAULFIELD	TRAVEL ADVANCE-AWWA CONFERENCE	\$683.00
JENNIFER SULLIVAN	TRAVEL ADVANCE-CSDA BOARD SECRETARY/CLERK CONFERENCE	\$350.00
		\$1,367.18



MINUTES REGULAR MEETING OF THE BOARD OF DIRECTORS EL DORADO IRRIGATION DISTRICT

District Board Room, 2890 Mosquito Road, Placerville, California February 9, 2015 ~ 9:00 A.M.

Board of Directors

BILL GEORGE BOARD PRESIDENT Division III

GEORGE W. OSBORNE BOARD VICE PRESIDENT Division I

Greg Prada Board Director Division II

Dale Coco, MD Board Director Division IV

Alan Day Board Director Division V General Manager and Executive Staff

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CALL TO ORDER

President George called the meeting to order at 9:00 A.M.

Roll Call

Board

Present: Directors Osborne, Prada, George, Coco, and Day

Staff

Present: General Manager Abercrombie, General Counsel Cumpston, and Clerk to the

Board Sullivan.

Pledge of Allegiance and Moment of Silence

President George led the Pledge of Allegiance followed by a Moment of Silence dedicated to our troops protecting us all over the world.

ADOPT AGENDA

ACTION: Agenda was adopted.

MOTION CARRIED

Ayes: Directors Osborne, Prada, George, Coco, and Day

COMMUNICATIONS

General Manager's Employee Recognition

- a) Congratulations Jeff Johnson. Jeff has been promoted as a replacement to the position of Water Treatment Plant Operator II in the Drinking Water Division.
- b) Congratulations Marty Humbird. Marty has been promoted as a replacement to the position of Senior Construction and Maintenance Worker in the Drinking Water Division.

APPROVE CONSENT CALENDAR

ACTION: Consent Calendar was approved.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

PUBLIC COMMENT

Joe Fuller, Cameron Park

COMMUNICATIONS

Board of Directors

Director Coco commented on several community meetings that he recently attended and gave presentations.

Clerk to the Board

None

General Manager

Staff Reports and Updates

a) Drought Update and Conservation Progress – Summary by Brian Mueller

CONSENT CALENDAR

1. Finance (Pasquarello)

Ratification of EID General Warrant Registers for the periods ending January 20 and January 27, 2015, and Board and Employee Expense Reimbursements for these periods.

ACTION: Option 1: Ratified the EID General Warrant Registers as submitted to comply with Section 24600 of the Water Code of the State of California. Received and filed Board and Employee Expense Reimbursements.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

2. Clerk to the Board (Sullivan)

Approval of the minutes of the January 26, 2015, regular meeting of the Board of Directors.

ACTION: Option 1: Approved as submitted.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

3. Office of the General Counsel (Cumpston)

Ratification of Resolution Nos. 2014-011 and 2014-023, to maintain emergency declarations.

ACTION: Option 1: Ratified Resolution Nos. 2014–011 and 2014-023 (thus maintaining both emergency declarations for purposes of bidding, contracting, and CEQA compliance).

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

4. Finance (Pasquarello)

Funding approval for District Capital Improvement Plan (CIP) Projects.

ACTION: Option 1: Authorized funding for the CIP projects as requested in the amount of \$80,000.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

5. Office of the General Counsel (Cumpston)

Consideration of a resolution declaring the Blakeley Reservoir real property to be surplus to District needs.

ACTION: Option 1: Adopted Resolution No. 2015-006, declaring the Blakeley Reservoir property to be surplus to District needs; authorize staff to issue required offers to government agencies and to negotiate with interested private parties.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

6. Finance (Pasquarello)

Investment Report for quarter ended December 31, 2014.

ACTION: Option 1: Received and filed the Investment Report for the quarter ended December 31, 2014.

MOTION CARRIED

Ayes: Directors Coco, Day, Osborne, Prada, and George

END OF CONSENT CALENDAR

PUBLIC HEARING ~ 9:00 A.M.

7. Engineering (Schaeffer)

Consideration to adopt the Mitigated Negative Declaration for the Mormon Island and Lakeridge Oaks Lift Station Removal Project.

Public Hearing opened at 12:01 P.M.

- **ACTION:** Option 1: Adopted the proposed Mitigated Negative Declaration and Mitigation, Monitoring, and Reporting Program.
 - Made the following CEQA findings:
 - Based on the whole record, there is no substantial evidence that the Project will have a significant effect on the environment.
 - The Mitigated Negative Declaration reflects EID's independent judgment and analysis.
 - Specified that documents or other material, which constitute the record of proceedings upon which this decision is based, shall be in the custody of the Clerk to the Board at El Dorado Irrigation District Headquarters.
 - Approved the Mormon Island and Lakeridge Oaks Lift Station Removal Project.

MOTION CARRIED

Ayes: Directors Day, Coco, Osborne, Prada, and George

INFORMATION ITEMS

8. Engineering (Mueller)

Review of in-conduit hydro projects.

ACTION: None – Information only.

ACTION ITEMS

9. Office of the General Counsel (Cumpston)

Consideration of a resolution proposing to change the District's election cycle.

Public Comment: Ed Willyard, El Dorado Hills

Charlet Burcin, El Dorado Hills

Sue Taylor

Rod Pimental, Camino

Kathleen Mintert

Darwin Throne, El Dorado Hills

Lori Parlin

Laurel Stroud, Placerville

Joe Fuller, Cameron Park

Chris Berry, El Dorado Hills Sam Parlin, Shingle Springs

Charles Nunn, El Dorado Hills Richard Boylan, Diamond Springs

Richard Ross, El Dorado Hills

Bob Luca, El Dorado Hills

MOTION: Substitute motion by Director Day and seconded by Director Prada to approve Option 2 and take other action as directed by the Board to direct the District's legal counsel to investigate the mechanics of and develop language, to be brought back to the Board during the second quarter this year for review and discussion in public workshops, for a measure that the District could place on the ballot of the next available county-wide election asking for voters whether to make this change. The language of the measure should include both possible pros and cons from odd- to even-year general elections, and fully explain that to implement the change all Board members would have their terms extended a fifth year.

MOTION FAILED

Aves: Directors Prada and Day

Noes: Directors Osborne and George

Abstain: Director Coco

MOTION: Subsidiary motion by Director Osborne and seconded by Director Coco to 'call

the question' which ends debate of this item and calls for an immediate vote on

the main motion. This motion requires a fourth-fifths vote.

MOTION FAILED

Ayes: Directors Osborne, George, and Coco

Noes: Directors Prada Abstain: Director Day

MOTION: Substitute motion by Director Coco to approve Option 2 and take other action as

directed by the Board to continue this item to the next regular meeting of the Board of Directors on February 23, 2015, and post meeting notices in all local

news publications. Motion failed due to lack of a second.

Action Item No. 9 continued

MOTION: Substitute motion by Director Prada and seconded by Director Day to approve

Option 2 and take other action as directed by the Board to continue the item, further publicize the issue, and hold public workshops during the second meeting

in the months of March and April 2015.

MOTION FAILED

Ayes: Directors Prada and Day

Noes: Directors Osborne, George, and Coco

MOTION: Substitute motion by Director Day and seconded by Director Prada to approve

Option 3 and take no action.

MOTION FAILED

Ayes: Directors Prada and Day

Noes: Directors Osborne, George, and Coco

ACTION: Option 1: Adopted Resolution No. 2015-007, proposing to change the District's

election cycle as presented by staff.

MOTION CARRIED

Ayes: Directors Osborne, George, and Coco

Noes: Directors Prada and Day

REVIEW OF ASSIGNMENTS

None

ADJOURNMENT

President George adjourned the meeting at 12:15 P.M.

	Bill George, President Board of Directors
	EL DORADO IRRIGATION DISTRICT
ATTEST:	
Jennifer Sullivan	
Clerk to the Board	

EL DORADO IRRIGATION DISTRICT

SUBJECT:

Ratification of Resolutions Nos. 2014-011 and 2014-023, to maintain emergency declarations

Board Action:

- February 4, 2014 Board adopted Resolution No. 2014-006, declaring a drought emergency.
- February 10 and 24, March 10 and 24, April 14 and 28, 2014 Board ratified Resolution No. 2014-006 to maintain the drought emergency.
- May 12, 2014 Board adopted Resolution No. 2014-010, renewing and updating the emergency drought declaration.
- June 9, 2014 Board adopted Resolution No. 2014-011, renewing and updating the emergency drought declaration, ratifying the General Manager's declaration of a Stage 4 Drought Emergency in Outingdale, and ratifying the suspension of Clear Creek flow augmentation.
- June 13, 2014 At a special meeting, Board authorized staff to increase releases to Clear Creek, using water stored in Jenkinson Lake, to provide approximately 2.0 cubic feet per second flows to ditch customers through July 15.
- June 23, July 14, July 28, August 11, August 25, September 8, October 14, 2014 Board ratified Resolution No. 2014-011 to maintain the drought emergency.
- October 14, 2014 Board adopted Resolution 2014-023, declaring an emergency for the repair of the Esmeralda Tunnel.
- October 27, November 10, December 8, 2014 Board ratified Resolutions Nos. 2014-011 and 2014-023 to maintain the emergency declarations.
- January 12, January 26, February 9, 2015 Board ratified Resolutions Nos. 2014-011 and 2014-023 to maintain the emergency declarations.

Board Policies (BP), Administrative Regulations (AR), and Board Authority:

Public Contract Code section 11102: An emergency is a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services.

Public Contract Code section 22050: The Board must ratify the existence of a declared emergency at each subsequent regular Board meeting by four-fifths vote, or the declared

emergency is deemed to be terminated.

California Environmental Quality Act (CEQA) Guidelines section 15359: An emergency is a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services.

Public Resources Code section 21080(b)(4) and CEQA Guidelines section 15269(c): exempt from CEQA actions necessary to prevent or mitigate an emergency.

Summary of Issue:

Since February 4, 2014, the Board has taken the following actions to find and determine that the current drought conditions have continuously constituted an emergency:

- Unanimous adoption of Resolution No. 2014 006 on February 4, 2014;
- Unanimous ratification of that resolution at six subsequent regular Board meetings through April 28, 2014;
- Adoption of Resolution No. 2014 010 on May 12, 2014;
- Adoption of Resolution No. 2014 011 on June 9, 2014; and
- Ratification of Resolution No. 2014 011 on June 23, July 14, July 28, August 11, August 25, September 8, October 14, October 27, November 10, and December 8, 2014, and January 12, January 26, and February 9, 2015.

Additionally, on October 14, 2014, the Board adopted Resolution No. 2014-023, finding and determining that the Esmeralda Tunnel outage and the need for its expeditious repair each constituted emergencies. The Board ratified this resolution on October 27, November 10, and December 8, 2014, and January 12, January 26, and February 9, 2015.

For these emergency declarations to remain in effect, the Board must find (by four-fifths vote for bidding and contracting purposes) at this regular meeting that the needs for emergency action still exist. This may be achieved by ratifying Resolutions Nos. 2014 – 011 and 2014-023 (attached). Furthermore, the Board must ratify any emergency action taken by District staff pursuant to the authority delegated by the resolutions at its next regular meeting after such action is taken.

Staff Analysis/Evaluation:

In Resolutions Nos. 2014 – 006, – 010, and – 011, the Board found and determined that the current drought conditions constituted an emergency within the meaning of and for the purposes of (among other enactments) Public Contract Code sections 11102, 22050(a)(2), and 20567, Public Resources Code section 21080(b)(4), and CEQA Guidelines sections 15269(c) and 15359. The Board's failure to adopt Resolution No. 2014-010 by four-fifths vote on May 12, and to ratify Resolution No. 2014-011 by four-fifths vote on July 28 terminated the declaration of emergency for purposes of the Public Contract Code. The Board's four-fifths votes to ratify on June 9 and August 11 reinstated

the emergency for those purposes.

In Resolution No. 2014-023, the Board found and determined that the outage of the Esmeralda Tunnel and the need for its expeditious repair to full functionality each constituted emergencies within the meaning of and for the purposes of the same enactments. The Board has maintained this emergency declaration in effect by ratifying Resolution No. 2014-023 at each regular meeting since.

It behooves the District to do what it can to advance projects that could protect or expand available water supplies or otherwise address drought throughout the District, and to expedite the repair of the Esmeralda Tunnel, by authorizing staff to dispense with the delays inherent in the competitive bidding and environmental review processes, in order to bring construction projects and contracts to the Board for consideration more quickly.

Staff has taken no emergency actions since the February 9, 2015 meeting that require ratification at this time. The February 23 General Manager's Report will include a status update on the Esmeralda Tunnel repairs and drought conditions, and the March 9 meeting will include a full workshop on the drought. Please refer to the staff report for the September 8, 2014 ratification of the emergency declaration for an explanation of the General Manager's contracting authority in a declared emergency.

Board Decisions/Options:

- **Option 1:** Ratify Resolutions Nos. 2014 011 and 2014-023 (thus maintaining both emergency declarations for purposes of bidding, contracting, and CEQA compliance).
- **Option 2:** Decline to ratify Resolution No. 2014 011 and/or 2014-023 (thus terminating one or both emergency declarations for purposes of bidding, contracting and CEQA compliance).
- **Option 3:** Take no action (thus terminating both emergency declarations for purposes of bidding, contracting and CEQA compliance).

Staff/General Manager's Recommendation:

Option 1 (four-fifths vote required for purposes of bidding and contracting).

Support Documents Attached:

- A. Resolution 2014-011
- B. Resolution 2014-023

Thomas D. Cumpston General Counsel

Jim Abercrombie General Manager

Resolution No. 2014-011

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RESOLUTION OF THE BOARD OF DIRECTORS OF
EL DORADO IRRIGATION DISTRICT
DECLARING A STAGE 2 WATER WARNING DISTRICT-WIDE,
RATIFYING A STAGE 4 WATER EMERGENCY IN OUTINGDALE,
AND DECLARING THE EXISTENCE OF AN EMERGENCY

OPERATIVE FACTS

WHEREAS, El Dorado Irrigation District (District) has experienced dry conditions since 2012, with unimpaired runoff in the American River basin of 74% of normal in 2012 and 41% of normal in 2013; and

WHEREAS, calendar year 2013 was the driest year on record in California, and WHEREAS, January 2014 was the driest January on record in California; and WHEREAS, as of May 27, 2014, the United States Drought Monitor states that all of El Dorado County is in an extreme drought condition, and more than 76% of California is in extreme or

WHEREAS, as of May 1, 2014, snow water content in the American River basin was 9% of normal for that date, according to the state Department of Water Resources (DWR); and

exceptional drought condition, compared to 67% on January 28, 2014; and

WHEREAS, as of May 31, 2014, storage in Folsom Reservoir was at 56% of capacity, which is 68% of average, and total inflow to the reservoir since October 1 has been only 39% of average; and

WHEREAS, the United States Bureau of Reclamation (Reclamation) has stated that it will deliver no more than 50% of adjusted historical average deliveries of Central Valley Project water to Municipal and Industrial contractors such as the District; and

WHEREAS, Jenkinson Lake, the District's largest source of supply at 41,033 acre-feet capacity, will not fill in 2014 despite the importation of more than 6,000 acre-feet of water through the Hazel Tunnel since the beginning of 2013; and

WHEREAS, on January 17, 2014, Governor Edmund G. Brown Jr. proclaimed a state of emergency in California due to drought conditions, and on April 25, 2014, the Governor proclaimed a continued state of emergency for the same reason; and

WHEREAS, the Governor's two proclamations made findings that included the following:

 California's water supplies continue to be severely depleted despite a limited amount of rain and snowfall since January;

- Extremely dry conditions have persisted since 2012 and the duration of this drought is unknown;
- Among the urgent challenges presented by the severe drought conditions is additional water scarcity if the conditions continue into 2015;
- The magnitude of the severe drought conditions continues to present threats beyond the control of the services, personnel, equipment, and facilities of any single local government;
- Conditions of extreme peril to the safety of persons and property exist in California due to
 water shortage and drought conditions with which local authority is unable to cope; and
 WHEREAS, the Governor's emergency proclamations included the following directives:
- · Californians are called on to reduce their water usage by 20 percent;
- Local urban water suppliers are called on to implement their local water shortage contingency plans immediately to avoid or forestall outright restrictions that could become necessary later in the drought season;
- California residents should refrain from wasting water and in particular should:
 - Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes;
 - Turn off fountains and other decorative water features unless they use recycled or grey water;
 - o Limit home vehicle washing by patronizing local carwashes that recycle water;
 - o Limit outdoor watering of lawns and landscaping to not more than two times a week;
- Recreational facilities such as parks and golf courses and large institutional complexes,
 such as school and business parks, should immediately implement water reduction plans to
 reduce the use of potable water for outdoor irrigation;
- Hotels and restaurants should reduce water usage and increase public awareness of the drought by offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets;
- Architectural and landscaping provisions of a common interest development that prohibit compliance with any local or state water conservation measures, such as landscaping installation or maintenance requirements, are void and unenforceable;

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 The State Water Resources Control Board (Water Board) will request a June 15 update from urban water agencies, such as the District, on their actions to reduce water usage, and the effectiveness of those efforts; and

WHEREAS, on May 27, 2014 the Water Board sent notices curtailing all diversions under post-1914 water rights by appropriators in the entire Delta watershed, including the District, subject to exceptions only for public health and safety needs and non-consumptive hydroelectric generation; and

WHEREAS, the District serves the Outingdale community exclusively from a post-1914 water right subject to curtailment except for public health and safety needs; and

WHEREAS, the District provides flow augmentation to Clear Creek from post-1914 water rights subject to curtailment without any applicable exception; and

APPLICABLE LAW, REGULATION, AND POLICY

WHEREAS, Public Resources Code section 21080(b)(4) and CEQA Guidelines section 15269(c) exempt from CEQA any actions that are necessary to prevent or mitigate an emergency; and

WHEREAS, CEQA Guidelines section 15359 defines "emergency" as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services;" and

WHEREAS, Public Contract Code section 20567 authorizes irrigation districts to let contracts without notice for bids in case of an emergency; and

WHEREAS, Public Contract Code section 22050(a)(2) requires that before action is taken to procure equipment, services, and supplies without giving notice for bids, the governing body must first make a finding, based on substantial evidence set forth in the minutes of its meeting, that the emergency will not permit a delay resulting from a competitive solicitation for bids, and that the action is necessary to respond to the emergency; and

WHEREAS, Public Contract Code section 11102 defines "emergency" as "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services;" and

WHEREAS, District Board Policy 2050 authorizes the District's General Manager to act "in emergency situations where no Board Policies or Administrative Regulations exist;" and

WHEREAS, District Administrative Regulation 3061.1, subdivision g, authorizes emergency procurements of supplies, equipment, services, or construction items when there exists a threat to

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public health, welfare, or safety, and requires Board of Directors ratification of emergency procurements exceeding \$50,000; and

WHEREAS, on March 1, 2014, the Governor signed SB 103 and SB 104 into law, making \$687.4 million available for drought relief, including \$549 million of accelerated infrastructure grants for projects included in Integrated Regional Water Management Plans; and

WHEREAS, on February 4, 2014, the Board adopted Resolution 2014-006 declaring an emergency and a Stage 2 Water Warning due to drought conditions, and the Board has ratified Resolution 2014-006 by four-fifths vote at every regular Board meeting thereafter; and

WHEREAS, the Board adopted the staff-prepared Drought Action Plan on February 4, 2014, and approved revisions to the Drought Action Plan on April 14 and May 12, 2014;

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Directors of the El Dorado Irrigation District (Board) as follows:

- 1. The Board concurs with and adopts the findings of the Governor's January 17 and April 25, 2014 emergency proclamations.
- 2. The Board renews and continues a Stage 2 Water Warning for the District as a whole, and ratifies the General Manager's declaration of a Stage 4 Water Emergency for the Outingdale service area, in response to the Water Board's May 27 curtailment order.
- 3. The Board ratifies the District's suspension of flow augmentation in Clear Creek, which began on June 3, in response to the Water Board's May 27 curtailment order.
- The Board finds and declares that the current drought conditions constitute an emergency within the meaning of CEOA Guidelines section 15359, Public Contracts Code section 11102, District Board Policy 2050, and District Administrative Regulation 3061.1, subdivision g.
- 5. The Board finds and declares that the adoption of this Resolution and all of the delegations, authorizations, and directions to the General Manager and District staff specified in paragraph 7, below, satisfy the requirements and criteria of Public Resources Code section 21080(b)(4), CEQA Guidelines section 15269(c), and Public Contract Code sections 22050(a)(2) and 20567.
- 6. The foregoing findings and declarations are based upon all written, oral, and visual evidence, including both facts and professional opinions, presented to the Board at the

meetings of February 4, 10, and 24, March 10 and 24, and April 2, 14, and 28, 2014, and at the hearing of this Resolution.

- 7. The Board hereby delegates, authorizes, and directs the District General Manager and his designees to take all actions reasonably deemed necessary to respond to the emergency conditions declared herein, including but not limited to the following specific actions:
 - a. Continue to pursue the proposal pending before the Water Board for temporary modification of the minimum instream flow requirements prescribed for the Deer Creek Wastewater Treatment Plant by Water Rights Order No. WR 95-9, for as long as drought conditions persist.
 - b. Implement throughout the District all Stage 2 drought actions, other than rate surcharges, detailed in the Drought Action Plan approved by the Board on May 12, 2014.
 - c. Implement in the Outingdale service area all Stage 4 drought actions, other than rate surcharges, detailed in the Drought Action Plan approved by the Board on May 12, 2014.
 - d. Enter into professional services and construction contracts as reasonably deemed necessary to expedite the preservation and enhancement of water supply availability for the District's customers.
 - e. Report to and seek ratification of the Board for any actions taken in excess of normal authority or authority expressly granted by this Resolution, at the first regular Board meeting held after each such action.
 - f. Continue to report to the Board at least monthly, and more often if necessary, on the current status of the drought conditions, responsive actions taken, weekly water usage data, and the need, if any, for further Board actions, including a Stage 3 drought declaration and the declaration of a water supply emergency.
- 8. This Resolution shall take effect immediately upon adoption. Subject to the ratification required by Public Contract Code sections 22050(b)(3), (c)(1), and (c)(2), and by District Administrative Regulation 3061.1, subdivision g, this Resolution shall remain in full force and effect until rescinded by a subsequent Resolution of the Board of Directors.

Resolution No. 2014-011

	1 1 1 mosting of the Board of Directors of the
1	The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the
2	EL DORADO IRRIGATION DISTRICT, held on the 9 th day of June 2014, by Director Day who
3	moved its adoption. The motion was seconded by Director Coco and a poll vote taken which stood
4	as follows:
5	AYES: Directors Day, Coco, Osborne, and George
	NOES: Director Prada
6	ABSENT:
7	ABSTAIN:
8	The motion having a majority of votes "Aye", the resolution was declared to have been
9	adopted, and it was so ordered.
10	
11	Alan Day, President
12	Board of Directors
13	EL DORADO IRRIGATION DISTRICT
	ATTEST:
14 15	
16	Jennifer/Sullivan Clerk to the Board
17	EL DORADO IRRIGATION DISTRICT
18	
19	(SEAL)
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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 9th day of June 2014. Jennifer Sullivan Clerk to the Board EL DORADO IRRIGATION DISTRICT // // // // // // // // // // //

Attachment B

Resolution No. 2014-023

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RESOLUTION OF THE BOARD OF DIRECTORS OF EL DORADO IRRIGATION DISTRICT DECLARING AN EMERGENCY FOR REPAIR OF THE ESMERALDA TUNNEL

WHEREAS, the Esmeralda tunnel is a facility of the El Dorado Irrigation District (District) hydroelectric Project 184; and

WHEREAS, besides generating power, Project 184 supplies up to 15,080 acre-feet of drinking water annually to customers throughout the District, representing more than one-third of the District's supplies, and is also the source of the 17,000 acre-foot per year Permit 21112 water right; and

WHEREAS, the District cannot make normal water deliveries from Project 184 to Forebay Reservoir without a fully functioning Esmeralda tunnel; and

WHEREAS, if the District cannot make normal water deliveries to Forebay Reservoir, it cannot conduct normal electrical generation operations, make normal drinking water deliveries to its customers, or provide needed water deliveries for fire suppression; and

WHEREAS, the District cannot utilize the Hazel Creek tunnel to deliver Project 184 water to Jenkinson Lake as a drought mitigation strategy, without a fully functioning Esmeralda tunnel; and

WHEREAS, electrical generation, the provision of drinking water, the provision of water for fire suppression, and the mitigation of drought conditions during the District's declared Stage 2 drought emergency are all essential public services which, if impaired, put life, health, and property at risk; and

WHEREAS, on September 21, 2014, District sensors suddenly and unexpectedly recorded high water in the Project 184 canal upstream of Esmeralda tunnel, which upon investigation proved to be the result of a complete blockage of the Esmeralda tunnel by dirt and debris; and

WHEREAS, the tunnel blockage was the result of earth movement that could not have been foreseen or predicted; and

WHEREAS, Public Resources Code section 21080(b)(2) and (4) and CEQA Guidelines section 15269(b) and (c) exempt from CEQA any actions that are necessary to repair, prevent, or mitigate an emergency; and

WHEREAS, CEQA Guidelines section 15359 defines "emergency" as "a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to life, health, property, or essential public services;" and

WHEREAS, Public Contract Code section 20567 authorizes irrigation districts to let contracts without notice for bids in case of an emergency; and

WHEREAS, Public Contract Code section 11102 defines "emergency" as "a sudden, unexpected occurrence that poses a clear and imminent danger, requiring immediate action to prevent or mitigate the loss or impairment of life, health, property, or essential public services;" and

WHEREAS, District Board Policy 3060 authorizes emergency procurements of supplies, equipment, services, or construction items when there exists a threat to public health, welfare, or safety, and requires Board of Directors ratification of emergency procurements exceeding \$50,000; and

WHEREAS, District Administrative Regulation 3061.05, subdivision e. authorizes the sole-source procurement of goods and services, including constructions services, when an emergency or extraordinary circumstances require immediate action that cannot be delayed for obtaining bids or proposals; and

WHEREAS, Public Contract Code section 22050(a)(2) requires that before action is taken to procure equipment, services, and supplies without giving notice for bids, the governing body must first make a finding, based on substantial evidence set forth in the minutes of its meeting, that the emergency will not permit a delay resulting from a competitive solicitation for bids, and that the action is necessary to respond to the emergency;

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Directors of the El Dorado Irrigation District (Board) as follows:

- The Board finds and declares that the Esmeralda tunnel outage and the need for expeditious repair of the Esmeralda tunnel to full functionality each constitute emergencies within the meaning of Public Contract Code section 11102, CEQA Guidelines section 15359, and District Board Policy 3060.
- The Board finds and declares that the emergency will not permit a delay resulting from a
 competitive solicitation for bids, and that the expeditious retention of professional services
 and constructions services, including by sole-source negotiation, is necessary to respond to
 the emergency.
- 3. The Board finds and declares that the adoption of this Resolution satisfies the requirements and criteria of Public Resources Code section 21080(b)(2) and (4), CEQA Guidelines section 15269(b) and (c), and Public Contract Code sections 22050(a)(2) and 20567.

- 4. The foregoing findings and declarations are based upon all written, oral, and visual evidence, including both facts and professional opinions, presented to the Board at the meeting of October 14, 2014 and at the hearing of this Resolution.
- 5. This Resolution shall take effect immediately upon adoption. Subject to the ratification required by Public Contract Code sections 22050(b)(3), (c)(1), and (c)(2), and by District Board Policy 3060, this Resolution shall remain in full force and effect until rescinded or replaced by a subsequent Resolution of the Board of Directors.

The foregoing Resolution was introduced at a regular meeting of the Board of Directors of the EL DORADO IRRIGATION DISTRICT, held on the 14th day of October 2014, by Director Osborne who moved its adoption. The motion was seconded by Director George and a poll vote taken which

AYES: Directors Osborne, George, Prada, Coco, and Day

The motion having a majority of votes "Aye", the resolution was declared to have been

Alan Day, President

Board of Directors

EL DORADO IRRIGATION DISTRICT

(SEAL) 25

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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby 1 certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of 2 Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular 3 meeting of the Board of Directors held on the 14th day of October 2014. 4 5 6 Jennifér Sallivan Clerk to the Board 7 EL DORADO IRRIGATION DISTRICT 8 // 9 // 10 11 12 // 13 // 14 15 // 16 // 17 // 18 // 19 // 20 21 // 22 // 23 // 24 // 25 // 26

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EL DORADO IRRIGATION DISTRICT

Subject: Funding approval for District Capital Improvement Plan (CIP) Projects

Recent Board Action:

October 14, 2014 – The Board adopted the 2015-2019 CIP, subject to available funding.

Board Policies (BP) and Administrative Regulations (AR):

Staff advised that each CIP project would be presented to the Board for funding approval.

Summary of Issue:

Board approval is required to authorize CIP funding prior to staff proceeding with work on the projects.

Staff Analysis/Evaluation:

The CIP projects identified in Table 1-1 on page 2 requires immediate funding.

Funding Source:

The primary funding source for the District CIP projects are listed in Table 1-1. Table 1-1 also lists the projects currently in progress and the amount of funding requested.

The CIP project descriptions for these projects are also attached for review. (Exhibit A)

Table 1-1 CIP Funding Request

	Project Name and Number	2015-2019 CIP Plan ¹	Funded to Date	Actual Costs to date ²	Amount Requested	Funding Source
1.	FERC C51.5 & C51.7 RM USFS 07006H	\$521,275	\$304,154	\$289,084	\$20,000	53% Water FCC's 47% Water rates
2.	PLC Replacement 14027	\$330,000	\$47,373	\$34,302	\$24,189	100% Water rates
	TOTAL FUNDING REQUEST	and the second second			\$44,189	10.5 44.

The following section contains a brief breakdown and description of the projects in the table. For complete description of the CIP projects see Exhibit A.

¹ Includes all existing costs plus any expected costs in the 5 year CIP Plan.

² Actual costs include encumbrances.

CIP Funding Request

Project No.	07006H Board Date 2/23/2015				
Project Name	FERC C51.5 & C51.7 RM USFS				
Project Manager Hawkins					

Budget Status	\$		0/0
Funded to date	\$	304,154	
Spent to date	\$	289,084	95%
Current Remaining	\$	15,070	5%

Funding Request Breakdown	\$
USFS payment	\$ 20,000
Total	\$ 20,000

Funding Source	
53% Water FCC's 47% Water rates	

Description

Required by the new FERC License, Settlement Agreement, and the USFS 4(e) Conditions. Conditions 51.5 and C51.7: (5.) Special Use Administration Funding: The licensee shall annually pay, by October 1, the amount of \$4,800 (year 2002 cost basis) to provide for performing monitoring and permit compliance assurance for the campground concessionaire special use permits at Caples Lake Campground and Silver Lake East Campground. The costs shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). (7.) Dispersed Area Patrol Funding on Lands Affected by the Project: The licensee shall annually pay, by October 1, \$25,000 (year 2002 cost basis). The cost shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). These funds are to provide for patrol and operation of non-concessionaire developed and dispersed recreation facilities, as well as trails and other locations utilized by visitors to the Project, within and adjacent to the Project boundary. The licensee shall annually provide a boat and operator at least twice each season (time to be determined by mutual agreement between the licensee and the FS) on Caples Lake and Silver Lake to share with the FS in policing the shoreline along Silver Lake and Caples Lake, and to clean up litter.

This is a mandatory requirement of the October 18, 2006 FERC Order Issuing New License.

2014 U.S. Gross Domestic Product - Implicit Price Deflator (GDP-IDP): 1.08%

 $4,800 + 25,000 = 29,800 \times 1.08\% = 32,184 \text{ total payment}$

Currently PN 07006H has a balance of \$15,069.57

CIP Funding Request

Project No.	14027 Board Date 2/23/2				
Project Name	PLC Replacement				
Project Manager	Strahan				

Budget Status	\$	%
Funded to date	\$ 47,373	
Spent to date	\$ 34,302	72%
Current Remaining	\$ 13,071	28%

Funding Request Breakdown	\$
Materials	\$ 500
Construction services	\$ 21,189
Capitalized labor	\$ 2,500
Total	\$ 24,189

Funding Source			
100% Water rates	<u>.</u>		

Description

The project involves the eventual replacement of 8 antiquated and end of life Tesco PLC control panel/radio units. These units need to be replaced in groups due to specific network connectivity between facilities and remote sites. This funding is to cover internal capitalized labor, outside construction services for the manufacture of replacement control cabinets and related material purchases to replace Reservoir 1 WTP, Pollock Pines Reservoir, Sportsman's pump station, Moose Hall Reservoir and Reservoir 2 Tesco networks.

Board Decisions/Options:

Option 1: Authorize funding for the CIP projects as requested in the amount of \$44,189.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

Staff/General Manager Recommendation:

Option 1

Support Documents Attached:

Exhibit A: Capital Improvement Project Description and Justifications.

Tany Pasquarello,
Accounting Manager
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Dana Strahan,
Drinking Water Operations Manager
Tom McKinney,
Director of Operations
Greg Mawkins, Parks and Recreation Manager
Mark Price,
Director of Finance (CFO)
Director of Finance (CFO)
In Abla
Jim/Abercrombie,

General Manager

2015

CAPITAL IMPROVEMENT PLAN Program:

FERC



Project Number:

07006H

Project Name:

FERC: C51.5 and C51.7 RM USFS Payments

Project Category:

Regulatory Requirements

Priority:

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PM: Hawkins

Board Approval:

10/14/14

Project Description:

Required by the new FERC License, Settlement Agreement, and the USFS 4(e) Conditions. Conditions 51.5 and C51.7: (5.) Special Use Administration Funding: The licensee shall annually pay, by October 1, the amount of \$4,800 (year 2002 cost basis) to provide for performing monitoring and permit compliance assurance for the campground concessionaire special use permits at Caples Lake Campground and Silver Lake East Campground. The costs shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). (7.) Dispersed Area Patrol Funding on Lands Affected by the Project: The licensee shall annually pay, by October 1, \$25,000 (year 2002 cost basis). The cost shall be escalated based on the U.S. Gross Domestic Product – Implicit Price Deflator (GDP-IDP). These funds are to provide for patrol and operation of non-concessionaire developed and dispersed recreation facilities, as well as trails and other locations utilized by visitors to the Project, within and adjacent to the Project boundary. The licensee shall annually provide a boat and operator at least twice each season (time to be determined by mutual

agreement between the licensee and the FS) on Caples Lake and Silver Lake to share with the FS in policing the shoreline along Silver Lake and Caples Lake, and to clean up litter.

This is a mandatory requirement of the October 18, 2006 FERC Order Issuing New License

Basis for Priority:

EID would not be able to comply with the FERC License, Settlement Agreement and USFS 4(e) Condition requirements.

Project Financial Summary:			
Funded to Date:	\$ 304,154	Expenditures through end of year:	\$ 295,977
Spent to Date:	\$ 295,977	2015 - 2019 Planned Expenditures:	\$ 225,298
Cash flow through end of year:	\$ -	Total Project Estimate:	\$ 521,275
Project Balance	\$ 8,177	Additional Funding Required	\$ 217,121

Description of Work		E	stimated Annua	al Expenditures	•		
	2015	2016	2017	2018	2019	Total	
Study/Planning	\$42,436	\$43,709	\$45,020	\$46,371	\$47,762	\$ 225,298	
Design						\$ -	
Construction						\$ -	
						\$ -	
TOTAL	\$ 42,436	\$ 43,709	\$ 45,020	\$ 46,371	\$ 47,762	\$ 225,298	

Funding Sources	Percentage	2015	Amount
Water FCCs	53%		\$18,157
Water Rates	47%		\$16,102
			\$0
Total	100%		\$34,259

Funding Comments:

2015

CAPITAL IMPROVEMENT PLAN Program:

PM:

Water

Project Number:

14027

Project Name:

PLC Replacement

Project Category:

Reliability & Service Level Improvements

Priority:

2

Sullivan

Board Approval:

10/14/14

Project Description:

The project involves replacing 8 antiquated and end of life cycle Tesco PLC control panels / radio units. The current units are controllers and radio units. Replacing these units fixes two issues at once. The new PLCs will have a separate modern radio, greatly stabilizing the network and control system. Additionally this also includes the removal of one Tesco repeater site (Res12) and two master Tesco PLCs (Res1 & Res A). Some of these sites are dependent on each other for proper control and radio communication. This interdependency makes it infeasible to replace these sites one at a time. This must be a coordinated effort requiring labor beyond our current staffing levels.

The following sites need to be replaced: Gold Hill Intertie, Dolomite, Union Mine PS, Pollock Pines, Sportsman's PS, Moose Hall Res, Res 2. (3) of these sites can be replaced with a smaller and less expensive control panel - Pollock Pines, Res A (incorporate into the current CL), Res 2 (remote I/O). The remaining (5) sites will need full control panels. These Tesco units are long past life cycle replacement by about 10 to 15 years.

Basis for Priority:

These units are transmitting on an illegal frequency under the FCC's new regulations, as of 2013, and are not capable of being modified to meet compliance. EID has been notified by the FCC to modify all of our licensed frequency to meet narrow banding requirements. The replacement of these units will bring our radio system into compliance and stabilize a fragile water distribution control system. In addition to the great risk of interrupted service to our customers, EID is needlessly spending a lot of resources (Mechanics, Operators, Electrician, & Control Technicians) in an attempt to keep this system running. New parts have not been available for this technology for years. Technical support is not available and the operating software is not supported.

Project Financial Summary:				
Funded to Date:	\$ -	Expenditures through end of year:	\$	-
Spent to Date:	\$ -	2015 - 2019 Planned Expenditures:	\$	330,000
Cash flow through end of year:	\$ -	Total Project Estimate:		330,000
Project Balance	\$ -	Additional Funding Required	\$	330,000

Description of W	/ork									
		2015	2016		2017	2	018	20	19	Γotal
Design & PM				-						\$ -
Construction	\$	\$ 260,000	\$ 70,000							\$ 330,000
										\$ -
										\$ -
TO	OTAL \$	\$ 260,000	\$ 70,000	\$	-	\$	-	\$	-	\$ 330,000

Funding Sources	Percentage	2015	Amount
Water Rates	100%		\$260,000
			\$0
			\$0
Total	100%		\$260,000

Funding Comments:

EL DORADO IRRIGATION DISTRICT

<u>Subject:</u> Consideration of a resolution to authorize execution of an easement quitclaim to Taylor Morrison of California, LLC, for a portion of Lot 4 of Serrano Village M [APN: 123-630-04].

Previous Board Actions:

July 21, 2014: Grant of Easement by Serrano Associates, LLC to El Dorado Irrigation District for construction of water pipelines in its Serrano Village M2, Phase 1 project.

Board Policies (BP), Administrative Regulations (AR), and Board Authority:

Water Code Section 22500 authorizes conveyance of District property when the Board determines by resolution that property is no longer necessary for District purposes.

Water Code Section 22502 requires all conveyances of District property to be executed by the secretary and president on behalf of the District in accordance with a resolution of the Board.

Summary of Issue(s):

Taylor Morrison of California, LLC now seeks conveyance of District property interests in a portion of Lot 4 of Serrano Village M. The subject property was originally granted by Serrano Associates, LLC to District for construction of water pipelines. Due to a District-approved change in design and pipeline re-alignment, this property interest is not necessary to District. Taylor Morrison of California, LLC, as successor to Serrano Associates, LLC has formally requested District quitclaim the unneeded portion of this property to Taylor Morrison of California, LLC.

District has not used this portion of subject property, and it is no longer required for water pipelines due to changes in design and pipeline re-alignment.

Staff Analysis/Evaluation:

Easement quitclaims proposed by staff are required to be presented to the Board of Directors for review and approval by resolution. After approval by Board, easement quitclaims are then recorded at the El Dorado County Recorder's Office.

District staff has prepared an easement quitclaim to Taylor Morrison of California, LLC, which has been reviewed for accuracy. As District no longer requires this easement right, it is prudent to relieve it of all administrative and legal responsibilities associated with retaining the subject easement on this parcel.

Board Decision/Options:

Option 1: Adopt a Resolution approving and authorizing execution of the

Easement Quitclaim as submitted.

Option 2: Take other action as directed by the Board.

Option 3: Take no action.

Staff/General Manager's Recommendation:

Option 1.

Supporting Documents Attached:

A) Proposed Resolution and Easement Quitclaim

Pat Johnson
Paralegal

Thomas D. Cumpston General Counsel

Jim Abercrombie General Manager

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RESOLUTION OF THE BOARD OF DIRECTORS OF EL DORADO IRRIGATION DISTRICT APPROVING AND AUTHORIZING THE EXECUTION OF EASEMENT QUITCLAIM TO TAYLOR MORRISON OF CALIFORNIA, LLC ASSESSOR PARCEL NUMBER 123-630-04

WHEREAS, El Dorado Irrigation District acquired ownership of a portion of Lot 4 of Serrano Village M [Assessor Parcel Number 123-630-04] ("subject property"); and

WHEREAS, the recorded survey description of subject property depicts an easement to be quitclaimed along a portion of the subject property; and

WHEREAS, El Dorado Irrigation District has not used this portion of the subject property and this portion is no longer required for District purposes; and

WHEREAS, Taylor Morrison of California, LLC, has requested El Dorado Irrigation District Board of Directors to approve an easement quitclaim for the specified portion of the subject property to Taylor Morrison of California, LLC; and

WHEREAS, El Dorado Irrigation District no longer requires the specified portion of subject parcel and desires to relieve itself of all administrative and legal responsibilities associated with it;

NOW, THEREFORE, BE IT AND IT IS HEREBY RESOLVED by the Board of Directors of El Dorado Irrigation District that interest in a portion of the subject parcel is no longer necessary for District purposes, that District shall quitclaim any interest in that portion of the subject parcel to Taylor Morrison of California, LLC, and that such quitclaim is attached hereto as Exhibit A.

Resolution No. 2015 -

1	The foregoing Resolution was introduced at a meeting of the Board of Directors of the
2	EL DORADO IRRIGATION DISTRICT, held on the 23rd day of February, 2015, by Director
3	, who moved its adoption. The motion was seconded by Director
4	, and a poll vote taken which stood as follows:
5	AYES:
6	NOES:
7	ABSENT:
8	ABSTAIN:
9	The motion having a majority of votes "Aye", the resolution was declared to have been
10	adopted, and it was so ordered.
11	
12	Bill George
13	President, Board of Directors of EL DORADO IRRIGATION DISTRICT
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16	ATTEST:
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18	Jennifer Sullivan Clerk to the Board
19	Clerk to the Board
20	{SEAL}
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I, the undersigned, Clerk to the Board of the EL DORADO IRRIGATION DISTRICT hereby certify that the foregoing resolution is a full, true and correct copy of a Resolution of the Board of Directors of the EL DORADO IRRIGATION DISTRICT entered into and adopted at a regular meeting of the Board of Directors held on the 23rd day of February, 2015.

Jennifer Sullivan
Clerk to the Board
EL DORADO IRRIGATION DISTRICT

Recording Requested By, & Mail To: El Dorado Irrigation District c/o Pat Johnson, Paralegal 2890 Mosquito Road Placerville, CA 95667 **EXHIBIT** A

Name: Taylor Morrison of California, LLC

81 Blue Ravine Road

Suite 220

Folsom, CA 95630

Project Name: Serrano Village M, Lot 4

Assessor Parcel No.: 123-630-04

Documentary Transfer Tax \$ 0 RTT 11911

For County Recorder's Use Only

EASEMENT QUITCLAIM

EL DORADO IRRIGATION DISTRICT, does hereby REMISE, RELEASE AND FOREVER QUITCLAIM to **TAYLOR MORRISON OF CALIFORNIA**, **LLC**, a limited liability company, being owner of a portion of that certain parcel designated in Book J, page 129, of the Official Records of El Dorado County, State of California, and more precisely described in the attached Exhibits A and B (**APN 123-630-04**), all right, title, and interest held by the District in that portion of the subject parcel, including all District easement rights or claims of easement rights to that portion of Serrano Village M, Lot 4.

EL DORADO IRRIGATION DISTRICT

By:		Date:	
	Bill George		
	President of the Board of Directors		
By:		Date:	
	Jim Abercrombie		
	General Manager / Secretary		

~ Notary Acknowledgements Attached ~

Form E-31 Rev.4/07

Exhibit "A" Quitclaim Easement

All that real property situated in the County of El Dorado, State of California lying within Section 25, Township 10 North, Range 8 East, M.D.B.&M., being a portion of the waterline easement recorded in Document 2014-0027926 of Official Records in the Recorder's office of said county and also being a portion of at Lot 4 as shown on the "Plat of Serrano Village M Large Lots", County in Book J of Maps at Page 129 also being filed in said Recorder's office and more particularly described as follows:

Beginning at a Point on the southerly line of the future road and P.U.E. as shown on said map from which the north most corner of said waterline easement bears along a curve to the left having a radius of 273.00 feet, a central angle of 6°05'23" and a chord that bears North 41°34'15" East 29.00 feet, thence from said Point of Beginning across said waterline easement the following four courses and distances: (1) South 47°41'36" East 162.44 feet, (2) South 42°57'02" East 28.81 feet, (3) South 38°33'10" East 14.31 feet to a point on the southerly line of said Lot 4 and (4) South 75°40'01" West 4.22 feet along said southerly line of Lot 4 to a point on the westerly line of said waterline easement; thence along said easement the following two courses and distances: (1) North 45°40'30" West 203.12 feet to a point on said future road and (2) along a curve to the left having a radius of 273.00 feet, a central angle of 0°12'59" and a chord that bears North 44°43'26" East 1.03 feet to said Point of Beginning.

See Exhibit "B" attached hereto and made a part thereof.

End of Description

LAND

STEPHEN GUAY

NO. 8277

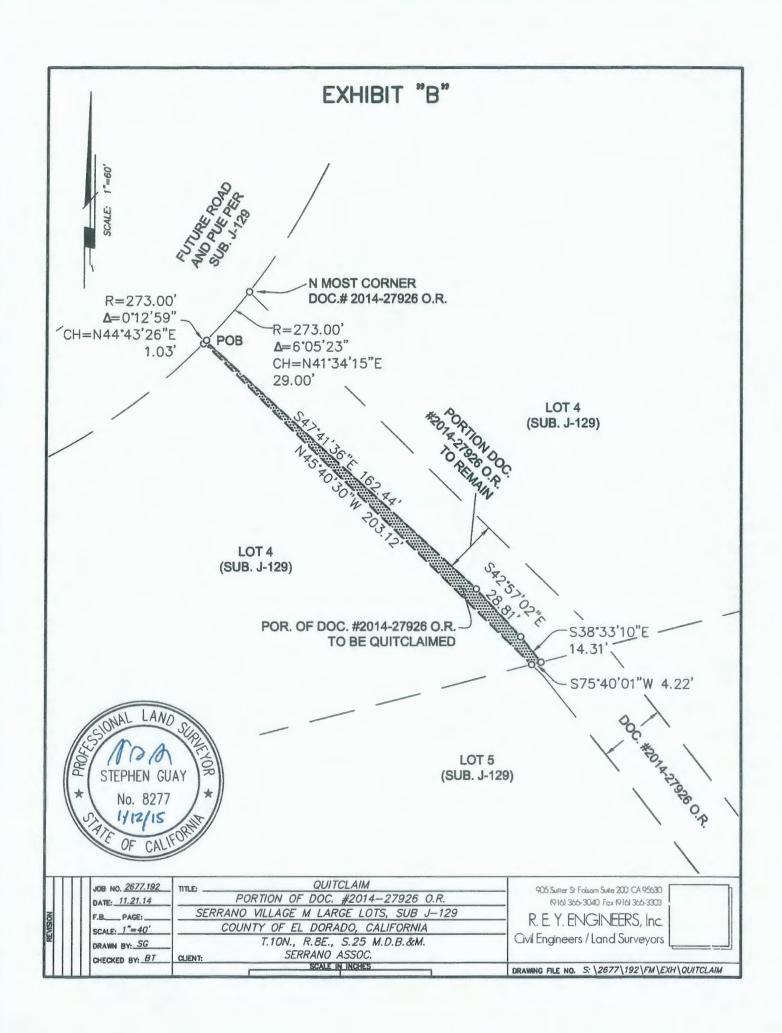
Prepared by:

MM/

R.E.Y. Engineers, Inc.

Stephen Guay P.L.S. 8277

Date



EL DORADO IRRIGATION DISTRICT

SUBJECT:

Financial status of the Tank 7 in-conduit hydro project

Previous Board Actions:

- June 23, 2008 The Board authorized a cost share agreement with the El Dorado County Water Agency for the El Dorado County Hydroelectric Options Plan.
- August 10, 2009 The Board adopted an energy policy statement and directed staff to amend Board Policy 8020 to incorporate it.
- March 11, 2013 Board awarded a professional services contract to NLine Energy for the Tank 7 in-conduit hydroelectric generation system in the not-to-exceed amount of \$400,170; and authorized total funding of \$550,170.
- March 10, 2014 Board authorized an interconnection agreement with PG&E.
- February 9, 2015 Board reviewed status of in-conduit hydro projects and requested a financial review of the Tank 7 project.

Board Policies (BP) and Administrative Regulations (AR):

BP 8020 – The District shall seek to augment its electric energy and capacity revenue stream, and/or reduce its operational energy expenses, by adding new generation facilities whenever they are economically viable.

It is the policy of the El Dorado Irrigation District that resources planning and infrastructure, including water and wastewater systems, emphasize renewable energy and energy efficiency toward a goal of energy independence for El Dorado County and its citizens.

Summary of Issue:

Staff has updated the financial summary and funding options for the Tank 7 project for Board review.

Staff Analysis/Evaluation

Tank 7 in-conduit hydro project

The Tank 7 project design was completed in late 2014. Under the existing FERC exemption, the District needed to begin construction on the project by December, 2014. However, in 2014 several flumes were found to be in extremely degraded condition which required immediate unplanned capital expenditures upwards of \$8 million to replace or upgrade Flumes 42/43, Flume 44 and Flume 45. Additionally, the Esmeralda tunnel collapse in September 2014 led to an emergency declaration and commitment of another \$4.5 million of unplanned capital expenditures to repair the tunnel. In light of these expenditures, the continuing fiscal constraints

to the District's Capital Improvement Plan (CIP) and need for additional prioritization, the Tank 7 project was removed from the 2015-2019 CIP.

The District contacted FERC and requested a two-year extension of the license in the event that the project is reinstated in the future. Staff recently submitted additional documentation requested by FERC and expects the extension to be approved shortly. However, a Prop 84 grant for \$380,000 obtained through CABY was relinquished. Design costs were offset by funding assistance from the El Dorado County Water Agency in the amount of \$182,000.

Various cost-benefit summaries were prepared in 2014 which estimated the payback period between 13 and 19 years, depending on interest rates, incurred costs, and the program option selected. These estimates have been recently updated and are attached, including utilization of an assumed 3% financing through the California Infrastructure and Economic Development Bank. Most scenarios show positive cash flow within one or two years after the project is in service. However, the estimated payback period has increased to between 18.5-20 years when taking into account the total project costs. If incurred costs to date are not considered, the payback is reduced to approximately 15 years.

Tank 3 in-conduit hydro project

As discussed at the last meeting, a facility at the Tank 3 site has been studied, which may prove to be more economical and financially beneficial than the Tank 7 project. The Tank 3 station would have a nameplate capacity of 600 kW with the potential to produce 2,900 MWh annually. For comparison, the Tank 7 station would have a capacity of 420 kW, producing 1,800 MWh annually). The Tank 3 project had not been pursued due to previous FERC licensing requirements with the project occupying lands owned by the Forest Service. However, recent regulations (Hydropower Regulatory Efficiency Act of 2013) have relaxed the license exemption process. Last year, staff submitted a Notice of Intent to construct a facility at the Tank 3 site and received FERC concurrence that it meets the criteria under the Federal Power Act and is not required to be licensed.

Recommendations

In anticipation of receiving a two-year extension to December 2016 to begin construction of the Tank 7 project, staff would propose to 1) evaluate and advance preliminary design of the Tank 3 project; 2) hold off on bidding and construction of the Tank 7 project; and 3) research and apply for any grant possibilities for both projects to improve financial cost-benefit. Once more information is known, the Board could then make a decision on which project to construct, construct both as a package, or to instead focus capital expenditures on asset replacement.

Additionally, some analysis was conducted in 2013 to expand solar at the EDHWWTP and a new solar facility at DCWWTP. Staff can also continue this analysis, if desired, to develop additional options for reducing energy dependence at District facilities.

Board Decisions/Options:

Information only

Staff/General Manager's Recommendation:

N/A

Brian Mueller

Director of Engineering

Mark Price

Director of Finance

Jim Abercrombie General Manager

El Dorado Irrigation District - Tank 7 hydroelectic project 4.3% Debt & CABY Grant 3% Debt & No Grant Includes Sunken Costs Feed-in Tariff (ReMAT) Feed-in Tariff (ReMAT) **RES-BCT** RES-BCT Hydrostation Capacity (kW) 420 420 420 420 Estimated Annual Generation (kWh) 1.765,000 1,765,000 1,765,000 1,765,000 **Estimated Annual Revenue** \$164,000 \$119,000 \$164,000 \$119,000 Capital Costs \$1,522,000 \$1,522,000 \$1,522,000 \$1,522,000 Less Grant (Prop 84) \$380,000 \$380,000 **Net Capital Costs** \$1,142,000 \$1,142,000 \$1,522,000 \$1,522,000 Non Construction Costs (incl. staff time & sunken costs) \$520,000 \$520,000 \$520,000 \$520,000 **Total Project Cost** \$1,662,000 \$1,662,000 \$2,042,000 \$2,042,000 Annual O & M Costs and CEC Costs \$12,000 \$7,000 \$12,000 \$7,000 PG&E Annual Added Facilities Charge \$9.384 \$9,384 \$9,384 \$9,384 30-year Gross Savings \$1,500,000 \$3,429,000 \$1,266,000 \$3,196,000 30-year NPV \$638,000 \$1,317,000 \$478,000 \$1,158,000 Payback (years) 18.2 17.4 20.0 18.5 50-year Gross Savings \$3,811,000 \$14,243,000 \$3,578,000 \$14,009,000 Without Sunen Costs Feed-in Tariff (ReMAT) RES-BCT Feed-in Tariff (ReMAT) RES-BCT 30-year Gross Savings \$2,104,000 \$4,034,000 \$1,963,000 \$3,895,000 30-year NPV \$1,048,000 \$1,727,000 \$954,000 \$1,633,000 Payback (years) 13.7 14.2 14.7 15.0 50-year Gross Savings \$4,416,000 \$14,847,000 \$4,277,000 \$14,708,000

EID - Res 7 - Two PaT Design - ReMAT - No Sunk Costs (3% Debt) No Grant

mated System Size (kWp) = 420	Estin					
tary Turnkey Cost (\$/Wp) = \$3.62	Budgetary Turnkey Cost (\$/Wp) =					

Avoided Cost : TOU AVE BCT = \$0.0000 kWh Convert to Bill Credit = TOU Avg FIT= \$0.0930

kWh Sold Under FIT = 1,765,000 Total Energy Production (kWh) = 1,765,000

					Less: Added							
	Ave	olded	Fee	d In Tariff		PG&E	Le	ss: CEC	Le	ss: 0&M	Ne	t Energy
	Utilit	y Cost	R	tevenue		acilities	Reg	istration		Cost	I	Benefit
						harge						
1	\$	-	\$	164,145	\$	(9,384)	\$	(5,000)	\$	(7,000)	\$	142,761
2	\$	-	\$	163,735	\$	(9,384)	\$	(5,000)	\$	(7,175)	\$	142,176
3	\$	-	\$	163,325	\$	(9,384)	\$	(5,000)	\$	(7,354)	\$	141,587
4	\$	-	\$	162,917	\$	(9,384)	\$	(5,000)	\$	(7,538)	\$	140,995
5	\$	-	\$	162,510	\$	(9,384)	\$	(5,000)	\$	(7,727)	\$	140,399
6	\$	-	\$	162,103	\$	(9,384)	\$	(5,000)	\$	(7,920)	\$	139,800
7	\$	-	\$	161,698	\$	(9,384)	\$	(5,000)	\$	(8,118)	\$	139,196
8	\$	-	\$	161,294	\$	(9,384)	\$	(5,000)	\$	(8,321)	\$	138,589
9	\$	~	\$	160,891	\$	(9,384)	\$	(5,000)	\$	(8,529)	\$	137,978
10	\$	-	\$	160,488	\$	(9,384)	\$	(5,000)	\$	(8,742)	\$	137,362
11	\$	-	\$	160,087	\$	(9,384)	\$	(5,000)	\$	(8,961)	\$	136,743
12	\$	-	\$	159,687	\$	(9,384)	\$	(5,000)	\$	(9,185)	\$	136,118
13	\$	-	\$	159,288	\$	(9,384)	\$	(5,000)	\$	(9,414)	\$	135,490
14	\$	-	\$	158,890	\$	(9,384)	\$	(5,000)	\$	(9,650)	\$	134,856
15	\$	-	s	158,492	\$	(9,384)	\$	(5,000)	s	(9,891)	\$	134,218
16	\$	-	\$	158,096	\$	(9,384)	\$	(5,000)	\$	(10,138)	\$	133,574
17	\$	_	\$	157,701	\$	(9,384)	\$	(5,000)	\$	(10,392)	\$	132,925
18	\$	_	\$	157,307	\$	(9,384)	\$	(5,000)	\$	(10,651)	\$	132,271
19	\$	_	\$	156,913	\$	(9,384)	\$	(5,000)	\$	(10,918)	\$	131,612
20	\$	-	\$	156,521	\$	(9,384)	\$	(5,000)	\$	(11,191)	\$	130,947
21	\$	-	\$	156,130	\$	(9,383)	\$	(5,000)	S	(11,470)	\$	130,276
22	\$		\$	155,739	\$	(9,383)	\$	(5,000)	\$	(11,757)	\$	129,599
23	\$		\$	155,350	\$	(9,383)	\$	(5,000)	\$	(12,051)	\$	128,916
24	S		\$	154,962	\$	(9,383)	\$	(5,000)	\$	(12,352)	\$	128,226
25	\$		\$	154,574	\$	(9,383)	\$	(5,000)	\$	(12,661)	\$	127,530
26	\$	-	s	154,188	\$	(9,382)	\$	(5,000)	\$	(12,978)	\$	126,828
27	\$		\$	153,802	\$	(9,382)	\$	(5,000)	\$	(13,302)	\$	126,118
28	S	-	\$	153,418	\$	(9,382)	\$	(5,000)	\$	(13,635)	\$	125,401
29	\$		\$	153,034	\$	(9,382)	\$	(5,000)	\$	(13,975)	\$	124,677
30	\$		\$	152,652	\$	(9,382)	\$	(5,000)	5	(14,325)	\$	123,945
31	\$		\$		\$	(9,381)	\$	(5,000)	\$	(14,683)	\$	123,206
32	\$		\$	152,270 151,889	\$	(9,381)	\$	(5,000)	\$	(15,050)	\$	122,458
	\$	-	\$		\$	4	\$		\$		\$	
33	\$	-	ŝ	151,510		(9,381)		(5,000)	\$	(15,426)	\$	121,702
34		-	\$	151,131	\$	(9,381)	\$	(5,000)		(15,812)	\$	120,938
35	\$	-	_	150,753	\$	(9,381)	\$	(5,000)	\$	(16,207)	_	120,165
36	\$	-	\$	150,376	\$	(9,380)	\$	(5,000)	\$	(16,612)	\$	119,384
37	\$	-	\$	150,000	\$	(9,380)	\$	(5,000)	\$	(17,028)	\$	118,593
38	\$	-	\$	149,625	\$	(9,380)	\$	(5,000)	\$	(17,453)	\$	117,792
39	\$	-	\$	149,251	\$	(9,380)	\$	(5,000)	\$	(17,890)	\$	116,981
40	\$		\$	148,878	\$	(9,380)	\$	(5,000)	\$	(18,337)	\$	116,161
41	\$	-	\$	148,506	\$	(9,379)	\$	(5,000)	\$	(18,795)	\$	115,331
42	\$	-	\$	148,135	\$	(9,379)	\$	(5,000)	\$	(19,265)	\$	114,490
43	\$	-	\$	147,764	\$	(9,379)	\$	(5,000)	\$	(19,747)	\$	113,638
44	\$		\$	147,395	\$	(9,379)	\$	(5,000)	\$	(20,241)	\$	112,775
45	\$	-	\$	147,026	\$	(9,379)	\$	(5,000)	\$	(20,747)	\$	111,901
46	\$	-	\$	146,659	\$	(9,378)	\$	(5,000)	\$	(21,265)	\$	111,016
47	\$	-	\$	146,292	\$	(9,378)	\$	(5,000)	\$	(21,797)	\$	110,117
48	\$	-	\$	145,926	\$	(9,378)	\$	(5,000)	\$	(22,342)	\$	109,207
49	\$	-	\$	145,562	\$	(9,378)	\$	(5,000)	\$	(22,900)	\$	108,283
50	\$	-	\$	145,198	\$	(9,378)	\$	(5,000)	\$	(23,473)	\$	107,347

Cost of System Purch	nase	Economic Benefit					
Total Project Cost (Less Grants)	\$ 1,522,000	50 Year:					
		Gross Savings =	\$ 4,276,555				
Total Financing =	\$ 1,522,000	NPV Savings =	\$ 1,442,440				
		30 Year:					
		Gross Savings ≈	\$ 1,965,068				
		NPV Savings =	\$ 953,673				

					NPV Savings =	>	953,673
Principal	Int	erest Cost	otal D/S - oject Debt		Annual	Cı	ımulative
\$ (56,642)	\$	(45,660)	\$ (102,302)	\$	40,459	\$	40,459
\$ (58,342)	\$	(43,961)	\$ (102,302)	\$	39,873	\$	80,332
\$ (60,092)	\$	(42,210)	\$ (102,302)	\$	39,285	\$	119,617
\$ (61,895)	\$	(40,408)	\$ (102,302)	\$	38,692	\$	158,309
\$ (63,751)	\$	(38,551)	\$ (102,302)	\$	38,097	\$	196,406
\$ (65,664)	\$	(36,638)	\$ (102,302)	\$	37,497	\$	233,903
\$ (67,634)	\$	(34,668)	\$ (102,302)	\$	36,894	\$	270,797
\$ (69,663)	\$	(32,639)	\$ (102,302)	\$	36,287	\$	307,084
\$ (71,753)	\$	(30,550)	\$ (102,302)	\$	35,676	\$	342,759
\$ (73,905)	\$	(28,397)	\$ (102,302)	\$	35,060	\$	377,820
\$ (76,123)	\$	(26,180)	\$ (102,302)	\$	34,440	\$	412,260
\$ (78,406)	\$	(23,896)	\$ (102,302)	\$	33,816	\$	446,076
\$ (80,758)	\$	(21,544)	\$ (102,302)	\$	33,187	\$	479,263
\$ (83,181)	\$	(19,121)	\$ (102,302)	\$	32,554	\$	511,817
\$ (85,677)	\$	(16,626)	\$ (102,302)	\$	31,915	\$	543,732
\$ (88,247)	\$	(14,055)	\$ (102,302)	\$	31,272	\$	575,004
\$ (90,894)	\$	(11,408)	\$ (102,302)	\$	30,623	\$	605,627
\$ (93,621)	\$	(8,681)	\$ (102,302)	\$	29,969	\$	635,596
\$ (96,430)	\$	(5,873)	\$ (102,302)	\$	29,309	\$	664,905
\$ (99,323)	\$	(2,980)	\$ (102,302)	\$	28,644	\$	693,550
\$ 0	\$	(0)	\$ -	\$	130,276	\$	823,826
\$ 0	\$	(O)	\$ -	\$	129,599	\$	953,425
\$ 0	\$	(0)	\$ -	\$	128,916	\$:	1,082,342
\$ 0	\$	(0)	\$ -	\$	128,226	\$:	1,210,568
\$ 0	\$	(0)	\$ -	\$	127,530	\$:	1,338,098
\$ -	\$	-	\$ -	\$	126,828	\$:	1,464,927
\$ -	\$	-	\$ -	\$	126,118	\$	1,591,045
\$ -	\$	-	\$ -	\$	125,401	\$:	1,716,446
\$ -	\$	-	\$ -	\$	124,677	\$:	1,841,123
\$ -	\$	-	\$ ~	\$	123,945	\$:	1,965,068
\$ -	\$	-	\$ -	\$	123,206	\$:	2,088,274
\$ -	\$	-	\$ -	\$	122,458	\$:	2,210,733
\$ -	\$	-	\$ -	\$	121,702	\$:	2,332,435
\$ -	\$	-	\$ -	\$	120,938	\$:	2,453,373
\$ ~	\$	-	\$ -	\$	120,165	\$:	2,573,538
\$ -	\$	-	\$ -	\$	119,384	\$:	2,692,922
\$ -	\$	~	\$ -	\$	118,593	\$:	2,811,514
\$ -	\$	-	\$ -	\$	117,792	\$:	2,929,306
\$ -	\$	- 1	\$ -	\$	116,981	\$	3,046,288
\$ -	\$	-	\$ -	\$	116,161	\$	3,162,449
\$ -	\$	-	\$ -	\$	115,331	\$:	3,277,780
\$ -	\$	-	\$ -	\$	114,490	\$	3,392,271
\$ - 1	\$	-	\$ -	\$	113,638	\$:	3,505,909
\$ - 1	\$		\$ -	\$	112,775	\$:	3,618,684
\$ -	\$		\$ -	\$	111,901	\$:	3,730,585
\$ -	\$	-	\$ -	\$	111,016		3,841,601
\$ -	\$	-	\$ -	\$	110,117	\$:	3,951,718
\$ -	\$	-	\$ -	\$	109,207	\$	4,060,925
\$ -	\$	-	\$ -	\$	108,283		4,169,208
\$ -	\$	-	\$ -	 \$	107,347	\$	4,276,555

EID - Res 7 - Two PaT Design - ReMAT (3% Debt) No Grant

Conduit Hydroelectric Project - Estimated Savings

NLine Energy Provides TurnKey Design/Build/Maintenace Service

Net	Energy Be	nefit to District	
	E	stimated System 5ize (kWp) =	420
	Bud	getary Turnkey Cost (\$/Wp) =	\$4.86
_			
Avoided Cost =	\$0.0000	Kwh Used On-5ite =	0
TOU AVE BCT =	\$0.0000	kWh Convert to Bill Credit =	0
TOU Avg FIT=	\$0.0930	kWh Sold Under FIT =	1,765,000
_	Tot	al Energy Production (kWh) =	1,765,000

	olded ty Cost	ed In Tariff Revenue	5-	ss: Added PG&E acilities Charge	ess: CEC distration	ss: O&M Cost	t Energy Benefit
1	\$ -	\$ 164,145	\$	(9,384)	\$ (5,000)	\$ (7,000)	\$ 142,761
2	\$ -	\$ 163,735	\$	(9,384)	\$ (5,000)	\$ (7,175)	\$ 142,176
3	\$ -	\$ 163,325	\$	(9,384)	\$ (5,000)	\$ (7,354)	\$ 141,587
4	\$ -	\$ 162,917	\$	(9,384)	\$ (5,000)	\$ (7,538)	\$ 140,995
5	\$ -	\$ 162,510	\$	(9,384)	\$ (5,000)	\$ (7,727)	\$ 140,399
6	\$ -	\$ 162,103	\$	(9,384)	\$ (5,000)	\$ (7,920)	\$ 139,800
7	\$ -	\$ 161,698	\$	(9,384)	\$ (5,000)	\$ (8,118)	\$ 139,196
8	\$ -	\$ 161,294	\$	(9,384)	\$ (5,000)	\$ (8,321)	\$ 138,589
9	\$ -	\$ 160,891	\$	(9,384)	\$ (5,000)	\$ (8,529)	\$ 137,978
10	\$ -	\$ 160,488	\$	(9,384)	\$ (5,000)	\$ (8,742)	\$ 137,362
11	\$ -	\$ 160,087	\$	(9,384)	\$ (5,000)	\$ (8,961)	\$ 136,743
12	\$ -	\$ 159,687	\$	(9,384)	\$ (5,000)	\$ (9,185)	\$ 136,118
13	\$ -	\$ 159,288	\$	(9,384)	\$ (5,000)	\$ (9,414)	\$ 135,490
14	\$ -	\$ 158,890	\$	(9,384)	\$ (5,000)	\$ (9,650)	\$ 134,856
15	\$ -	\$ 158,492	\$	(9,384)	\$ (5,000)	\$ (9,891)	\$ 134,218
16	\$ -	\$ 158,096	\$	(9,384)	\$ (5,000)	\$ (10,138)	\$ 133,574
17	\$ -	\$ 157,701	\$	(9,384)	\$ (5,000)	\$ (10,392)	\$ 132,925
18	\$ -	\$ 157,307	\$	(9,384)	\$ (5,000)	\$ (10,651)	\$ 132,271
19	\$ -	\$ 156,913	\$	(9,384)	\$ (5,000)	\$ (10,918)	\$ 131,612
20	\$ -	\$ 156,521	\$	(9,384)	\$ (5,000)	\$ (11,191)	\$ 130,947
21	\$ -	\$ 156,130	\$	(9,383)	\$ (5,000)	\$ (11,470)	\$ 130,276
22	\$ -	\$ 155,739	\$	(9,383)	\$ (5,000)	\$ (11,757)	\$ 129,599
23	\$ -	\$ 155,350	\$	(9,383)	\$ (5,000)	\$ (12,051)	\$ 128,916
24	\$ -	\$ 154,962	\$	(9,383)	\$ (5,000)	\$ (12,352)	\$ 128,226
25	\$ -	\$ 154,574	\$	(9,383)	\$ (5,000)	\$ (12,661)	\$ 127,530
26	\$ -	\$ 154,188	\$	(9,382)	\$ (5,000)	\$ (12,978)	\$ 126,828
27	\$ -	\$ 153,802	\$	(9,382)	\$ (5,000)	\$ (13,302)	\$ 126,118
28	\$ -	\$ 153,418	\$	(9,382)	\$ (5,000)	\$ (13,635)	\$ 125,401
29	\$ -	\$ 153,034	\$	(9,382)	\$ (5,000)	\$ (13,975)	\$ 124,677
30	\$ -	\$ 152,652	\$	(9,382)	\$ (5,000)	\$ (14,325)	\$ 123,945
31	\$ -	\$ 152,270	\$	(9,381)	\$ (5,000)	\$ (14,683)	\$ 123,206
32	\$ -	\$ 151,889	\$	(9,381)	\$ (5,000)	\$ (15,050)	\$ 122,458
33	\$ -	\$ 151,510	\$	(9,381)	\$ (5,000)	\$ (15,426)	\$ 121,702
34	\$ -	\$ 151,131	\$	(9,381)	\$ (5,000)	\$ (15,812)	\$ 120,938
35	\$ -	\$ 150,753	\$	(9,381)	\$ (5,000)	\$ (16,207)	\$ 120,165
36	\$ -	\$ 150,376	\$	(9,380)	\$ (5,000)	\$ (16,612)	\$ 119,384
37	\$ -	\$ 150,000	\$	(9,380)	\$ (5,000)	\$ (17,028)	\$ 118,593
38	\$ -	\$ 149,625	\$	(9,380)	\$ (5,000)	\$ (17,453)	\$ 117,792
39	\$ -	\$ 149,251	\$	(9,380)	\$ (5,000)	\$ (17,890)	\$ 116,981
40	\$ -	\$ 148,878	\$	(9,380)	\$ (5,000)	\$ (18,337)	\$ 116,161
41	\$ -	\$ 148,506	\$	(9,379)	\$ (5,000)	\$ (18,795)	\$ 115,331
42	\$ -	\$ 148,135	\$	(9,379)	\$ (5,000)	\$ (19,265)	\$ 114,490
43	\$ -	\$ 147,764	\$	(9,379)	\$ (5,000)	\$ (19,747)	\$ 113,638
44	\$ -	\$ 147,395	\$	(9,379)	\$ (5,000)	\$ (20,241)	\$ 112,775
45	\$ -	\$ 147,026	\$	(9,379)	\$ (5,000)	\$ (20,747)	\$ 111,901
46	\$ -	\$ 146,659	\$	(9,378)	\$ (5,000)	\$ (21,265)	\$ 111,016
47	\$ -	\$ 146,292	\$	(9,378)	\$ (5,000)	\$ (21,797)	\$ 110,117
48	\$ -	\$ 145,926	\$	(9,378)	\$ (5,000)	\$ (22,342)	\$ 109,207
49	\$ -	\$ 145,562	\$	(9,378)	\$ (5,000)	\$ (22,900)	\$ 108,283
50	\$ -	\$ 145,198	\$	(9,378)	\$ (5,000)	\$ (23,473)	\$ 107,347

Economic Benefit			
50 Year:			
Gross Savings = \$ 3,577,511			
NPV Savings = \$ 967,428			
30 Year:			
Gross Savings = \$ 1,266,025			
NPV Savings = \$ 478,662			

_									
F	rincipal	Int	erest Cost		otal D/S - oject Debt	,	Annual	Cu	mulative
\$	(75,994)	\$	(61,260)	\$	(137,254)	\$	5,507	\$	5,507
\$	(78, 274)	\$	(58,980)	\$	(137,254)	\$	4,921	\$	10,428
\$	(80,623)	\$	(56,632)	\$	(137,254)	\$	4,332	\$	14,760
\$	(83,041)	\$	(54,213)	\$	(137,254)	\$	3,740	\$	18,500
\$	(85,532)	\$	(51,722)	\$	(137,254)	\$	3,145	\$	21,645
\$	(88,098)	\$	(49,156)	\$	(137,254)	\$	2,545	\$	24,190
\$	(90,741)	\$	(46,513)	\$	(137,254)	\$	1,942	\$	26,132
\$	(93,464)	\$	(43,791)	\$	(137,254)	\$	1,335	\$	27,467
\$	(96,268)	\$	(40,987)	\$	(137,254)	\$	723	\$	28,190
\$	(99,156)	\$	(38,099)	\$	(137,254)	\$	108	\$	28,298
\$	(102,130)	\$	(35,124)	\$	(137,254)	\$	(512)	\$	27,786
\$	(105,194)	\$	(32,060)	\$	(137,254)	\$	(1,136)	\$	26,650
\$	(108,350)	\$	(28,905)	s	(137,254)	\$	(1,765)	\$	24,885
\$	(111,600)	\$	(25,654)	\$	(137,254)	\$	(2,398)	\$	22,487
\$	(114,948)	\$	(22,306)	Ś	(137,254)	\$	(3,037)	\$	19,450
\$	(118,397)	\$	(18,858)	\$	(137,254)	\$	(3,680)	\$	15,769
\$	(121,949)	\$	(15,306)	\$	(137,254)	\$	(4,329)	\$	11,440
5	(125,607)	\$	(11,647)	s	(137,254)	\$	(4,983)	\$	6,45
\$	(129,376)	\$	(7,879)	\$	(137,254)	\$	(5,643)	\$	814
\$	(123,370)	\$	(3,998)	\$	(137,254)	\$	(6,308)	\$	(5,49
\$	0	\$	(0)	\$	(137,234)	\$	130,276	\$	124,78
\$	0	\$	(0)	\$	_	\$	129,599	\$	254,38
\$	0	\$	(0)	\$	-	\$	128,916	\$	383,29
\$	0	\$	(0)	\$	-	\$	128,226	\$	511,525
\$	0	\$	(0)	\$		\$	127,530	\$	639,05
\$	- 0	\$	(0)	\$	-	\$	126,828	\$	765,883
\$	-	\$	-	\$	_	\$	126,118	\$	892,00
\$	_	\$	-	\$	-	\$	125,401		L,017,40
\$	_	\$		\$	_	\$	124,677		L,142,08
\$	_	\$	_	\$	_	\$	123,945		1,266,02
_		_		_		 _		_	
\$	-	\$	-	\$	-	\$	123,206		1,389,23
\$	-	\$	-	\$	-	\$	122,458		1,511,68
\$	-	\$	-	\$	-	\$	121,702		1,633,39
\$	-	\$	-	\$	-	\$	120,938		L,754,33
\$		\$		\$	-	\$	120,165	_	L,874,49
\$	-	\$	-	\$	-	\$	119,384		L,993,87
\$	-	\$	-	\$	-	\$	118,593		2,112,47
\$	-	\$	-	\$	-	\$	117,792		2,230,26
\$	-	\$	-	\$	-	\$	116,981		2,347,24
\$	_	\$		\$	-	\$	116,161	_	2,463,40
\$	-	\$	-	\$	-	\$	115,331		2,578,73
\$	-	\$	-	\$	-	\$	114,490		2,693,22
\$	-	\$	-	\$	-	\$	113,638		2,806,86
\$	-	\$	-	\$	-	\$	112,775		2,919,64
\$	-	\$	-	\$	-	\$	111,901	$\overline{}$	3,031,54
\$	-	\$	-	\$	-	\$	111,016		3,142,55
\$	-	\$	-	\$	-	\$	110,117	\$:	3,252,67
\$	-	\$	-	\$	-	\$	109,207		3,361,88
\$	-	\$	-	\$	-	\$	108,283		3,470,16
\$	-	\$	-	\$	-	\$	107,347	\$ 3	3,577,51

EID - Res 7 - Two PaT Design - RESBCT - No Sunk Costs (3% Debt) No Grant

Conduit Hydroelectric Project - Estimated Savings

Net	Energy Be	nefit to District	
	E	stimated 5ystem 5ize (kWp) =	420
	Bud	getary Turnkey Cost (\$/Wp) =	\$3.62
_		-	
Avoided Cost =	\$0.0000	Kwh Used On-Site =	0
TOU Avg BCT =	\$0.0676	kWh Convert to Bill Credit =	1,765,000
TOU Avg FIT=	\$0.0000	kWh Sold Under FIT =	0
	Tot	al Energy Production (kWh) =	1,765,000

	E.	olded ty Cost	S-BCT Cost Savings	F	s: Added PG&E acilities Charge	ess: CEC Istration	Le	ss: O&M Cost	t Energy Benefit
1	\$	-	\$ 119,314	\$	(9,384)	\$ (5,000)	\$	(7,000)	\$ 97,930
2	\$	-	\$ 124,074	\$	(9,384)	\$ (5,000)	\$	(7,175)	\$ 102,515
3	\$	-	\$ 129,024	\$	(9,384)	\$ (5,000)	\$	(7,354)	\$ 107,285
4	\$	-	\$ 134,171	\$	(9,384)	\$ (5,000)	\$	(7,538)	\$ 112,249
5	\$	-	\$ 139,523	\$	(9,384)	\$ (5,000)	\$	(7,727)	\$ 117,413
6	\$	-	\$ 145,090	\$	(9,384)	\$ (5,000)	\$	(7,920)	\$ 122,786
7	\$	-	\$ 150,878	\$	(9,384)	\$ (5,000)	\$	(8,118)	\$ 128,376
8	\$	-	\$ 156,897	\$	(9,384)	\$ (5,000)	\$	(8,321)	\$ 134,192
9	\$	-	\$ 163,156	\$	(9,384)	\$ (5,000)	\$	(8,529)	\$ 140,243
10	\$	-	\$ 169,665	\$	(9,384)	\$ (5,000)	\$	(8,742)	\$ 146,539
11	\$	-	\$ 176,434	\$	(9,384)	\$ (5,000)	\$	(8,961)	\$ 153,089
12	\$	-	\$ 183,472	\$	(9,384)	\$ (5,000)	\$	(9,185)	\$ 159,904
13	\$	-	\$ 190,791	\$	(9,384)	\$ (5,000)	\$	(9,414)	\$ 166,993
14	\$	-	\$ 198,403	\$	(9,384)	\$ (5,000)	\$	(9,650)	\$ 174,369
15	\$	-	\$ 206,318	\$	(9,384)	\$ (5,000)	\$	(9,891)	\$ 182,043
16	\$	_	\$ 214,549	\$	(9,384)	\$ (5,000)	\$	(10,138)	\$ 190,027
17	\$	-	\$ 223,108	\$	(9,384)	\$ (5,000)	\$	(10,392)	\$ 198,332
18	\$	_	\$ 232,008	\$	(9,384)	\$ (5,000)	\$	(10,651)	\$ 206,973
19	\$	-	\$ 241,264	\$	(9,384)	\$ (5,000)	\$	(10,918)	\$ 215,963
20	\$		\$ 250,889	\$	(9,384)	\$ (5,000)	\$	(11,191)	\$ 225,315
21	\$	-	\$ 260,898	\$	(9,383)	\$ (5,000)	\$	(11,470)	\$ 235,045
22	\$	-	\$ 271,306	\$	(9,383)	\$ (5,000)	\$	(11,757)	\$ 245,166
23	\$	-	\$ 282,130	\$	(9,383)	\$ (5,000)	\$	(12,051)	\$ 255,696
24	\$	-	\$ 293,385	\$	(9,383)	\$ (5,000)	\$	(12,352)	\$ 266,650
25	\$	-	\$ 305,089	\$	(9,383)	\$ (5,000)	\$	(12,661)	\$ 278,045
26	\$	-	\$ 317,260	\$	(9,382)	\$ (5,000)	\$	(12,978)	\$ 289,901
27	\$		\$ 329,917	\$	(9,382)	\$ (5,000)	\$	(13,302)	\$ 302,233
28	\$	-	\$ 343,079	\$	(9,382)	\$ (5,000)	\$	(13,635)	\$ 315,062
29	\$	-	\$ 356,765	\$	(9,382)	\$ (5,000)	\$	(13,975)	\$ 328,408
30	\$	-	\$ 370,998	\$	(9,382)	\$ (5,000)	\$	(14,325)	\$ 342,291
31	\$	-	\$ 385,798	\$	(9,381)	\$ (5,000)	\$	(14,683)	\$ 356,734
32	\$	-	\$ 401,189	\$	(9,381)	\$ (5,000)	\$	(15,050)	\$ 371,758
33	\$	-	\$ 417,194	\$	(9,381)	\$ (5,000)	\$	(15,426)	\$ 387,387
34	\$	-	\$ 433,838	\$	(9,381)	\$ (5,000)	\$	(15,812)	\$ 403,645
35	\$	-	\$ 451,145	\$	(9,381)	\$ (5,000)	\$	(16,207)	\$ 420,557
36	\$	-	\$ 469,143	\$	(9,380)	\$ (5,000)	\$	(16,612)	\$ 438,151
37	\$	-	\$ 487,859	\$	(9,380)	(5,000)	\$	(17,028)	\$ 456,451
38	\$	-	\$ 507,321	\$	(9,380)	\$ (5,000)	\$	(17,453)	\$ 475,488
39	\$	~	\$ 527,560	\$	(9,380)	\$ (5,000)	\$	(17,890)	\$ 495,291
40	\$	-	\$ 548,607	\$	(9,380)	\$ (5,000)	\$	(18,337)	\$ 515,890
41	\$	-	\$ 570,493	\$	(9,379)	\$ (5,000)	\$	(18,795)	\$ 537,318
42	\$	-	\$ 593,252	\$	(9,379)	(5,000)	\$	(19,265)	\$ 559,608
43	\$	-	\$ 616,919	\$	(9,379)	\$ (5,000)	\$	(19,747)	\$ 582,793
44	\$	~	\$ 641,530	\$	(9,379)	\$ (5,000)	\$	(20,241)	\$ 606,910
45	\$	-	\$ 667,123	\$	(9,379)	\$ (5,000)	\$	(20,747)	\$ 631,997
46	\$	-	\$ 693,737	\$	(9,378)	\$ (5,000)	\$	(21,265)	\$ 658,094
47	\$	-	\$ 721,413	\$	(9,378)	(5,000)	\$	(21,797)	\$ 685,238
48	\$	-	\$ 750,193	\$	(9,378)	(5,000)	\$	(22,342)	\$ 713,473
49	\$	-	\$ 780,121	\$	(9,378)	(5,000)	\$	(22,900)	\$ 742,842
50	\$	-	\$ 811,243	\$	(9,378)	\$ (5,000)	\$	(23,473)	\$ 773,392

-	Cost of	f Sy	stem Pu	rct	ase		Econon	nic I	Benefit
l Pr	oject Cost	(Les	ss Grants)	\$:	1,522,000	50	Year:		
						Gros	s Savings =	\$	14,708,001
	Tot	al Fi	Inancing =	5	1,522,000	NP	V Savings =	\$	3,781,651
				4	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		Year:		
									2 224 224
							s Savings =		3,894,984
						NP	V Savings =	\$	1,632,747
P	rincipal	Int	erest Cost		otal D/S - oject Debt	-	Annual	(Cumulative
\$	(56,642)	\$	(45,660)	\$	(102,302)	\$	(4,372)	\$	(4,372
\$	(58,342)	\$	(43,961)	\$	(102,302)	\$	213	\$	(4,160
\$	(60,092)	\$	(42,210)	\$	(102,302)	\$	4,983	\$	823
\$	(61,895)	\$	(40,408)	\$	(102,302)	\$	9,946	\$	10,770
\$	(63,751)	\$	(38,551)	\$	(102,302)	\$	15,110	\$	25,880
\$	(65,664)	\$	(36,638)	\$	(102,302)	\$	20,483	\$	46,363
\$	(67,634)	\$	(34,668)	\$	(102,302)	\$	26,074	\$	72,437
\$	(69,663)	\$	(32,639)	\$	(102,302)	\$	31,890	\$	104,327
\$	(71,753)	\$	(30,550)	\$	(102,302)	\$	37,941	\$	142,268
\$	(73,905)	\$	(28,397)	\$	(102,302)	\$	44,237	\$	186,504
\$	(76,123)	\$	(26,180)	\$	(102,302)	\$	50,787	\$	237,291
\$	(78,406)	\$	(23,896)	\$	(102,302)	\$	57,601	\$	294,892
\$	(80,758)	\$	(21,544)	\$	(102,302)	\$	64,691	\$	359,583
\$	(83,181)	\$	(19,121)	\$	(102,302)	\$	72,067	\$	431,650
\$	(85,677)	\$	(16,626)	\$	(102,302)	\$	79,741	\$	511,391
\$	(88,247)	\$	(14,055)	\$	(102,302)	\$	87,724	\$	599,115
\$	(90,894)	\$	(11,408)	\$	(102,302)	\$	96,030	\$	695,145
\$	(93,621)	\$	(8,681)	\$	(102,302)	\$	104,671	\$	799,816
\$	(96,430)		(5,873)	\$	(102,302)	\$	113,660	\$	913,476
\$	(99,323)	\$	(2,980)	\$	(102,302)	\$	123,012	\$	1,036,489
	0	\$	(0)	\$	-	\$	235,045	\$	1,271,53
\$									

1,516,699

1,772,395

2,039,045

2,317,090

2,606,990

2,909,223 3,224,285

3,552,693

3,894,984 4,251,718

4,623,477 5,010,864

5,414,508 5,835,065

6,273,216 6,729,667

7,205,155

7,700,446 8,216,335

8,753,654

9,313,261

9,896,054

10,502,965 11,134,962

11,793,056

\$ 12,478,294

\$ 13,191,767

\$ 742,842 \$ 13,934,609

\$ 773,392 \$ 14,708,001

\$ 245,166 \$

278,045

\$ 289,901 \$

\$ 302,233 \$

\$ 315,062 \$

\$ 328,408 \$

\$ 356,734 \$

420,557

\$ 438,151 \$

\$ 456,451 \$

\$ 475,488 \$

\$ 495,291 \$

\$ 537,318 \$

\$ 559,608 \$

\$ 631,997 \$

\$ 658,094 \$

\$ 582,793

\$ 606,910

\$ 685,238

\$ 713,473

515,890 \$

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EID - Res 7 - Two PaT Design - RESBCT - Incl Sunk Costs (3% Debt) No Grant

Less: Added

Net	Energy	Benefit	to District
-----	--------	---------	-------------

Estimated System Size (kWp) -Budgetary Turnkey Cost (\$/Wp) = \$4.86

Avoided Cost = \$0,0000 \$0.0676 TOU Avg BCT = TOU Avg FIT= \$0.0000

Kwh Used On-5ite = 1,765,000 kWh Convert to Bill Credit = kWh 5old Under FIT =

1,765,000 Total Energy Production (kWh) =

(5,000) \$ (21,797) \$ 685,238

(5,000) \$ (22,342) \$ 713,473

(5,000) \$ (22,900) \$ 742,842

\$ 773,392

(5,000) \$ (23,473)

	Avoided	RES-BCT Cost	PG&E	Less: CEC	Less: O&M	Net Energy	
	Utility Cost	Savings	Facilities	Registration	Cost	Benefit	
			Charge				
1	\$ -	\$ 119,314	\$ (9,384)	\$ (5,000)	\$ (7,000)	\$ 97,930	
2	\$ -	\$ 124,074	\$ (9,384)	\$ (5,000)	\$ (7,175)	\$ 102,515	
3	\$ -	\$ 129,024	\$ (9,384)	\$ (5,000)	\$ (7,354)	\$ 107,285	
4	\$ -	\$ 134,171	\$ (9,384)	\$ (5,000)	\$ (7,538)	\$ 112,249	
5	\$ -	\$ 139,523	\$ (9,384)	\$ (5,000)	\$ (7,727)	\$ 117,413	
6	\$ -	\$ 145,090	\$ (9,384)	\$ (5,000)	\$ (7,920)	\$ 122,786	
7	\$ -	\$ 150,878	\$ (9,384)	\$ (5,000)	\$ (8,118)	\$ 128,376	
8	\$ -	\$ 156,897	\$ (9,384)	\$ (5,000)	\$ (8,321)	\$ 134,192	
9	\$ -	\$ 163,156	\$ (9,384)	\$ (5,000)	\$ (8,529)	\$ 140,243	
10	\$ -	\$ 169,665	\$ (9,384)	\$ (5,000)	\$ (8,742)	\$ 146,539	
11	\$ -	\$ 176,434	\$ (9,384)	\$ (5,000)	\$ (8,961)	\$ 153,089	
12	\$ -	\$ 183,472	\$ (9,384)	\$ (5,000)	\$ (9,185)	\$ 159,904	
13	\$ -	\$ 190,791	\$ (9,384)	\$ (5,000)	\$ (9,414)	\$ 166,993	
14	\$ -	\$ 198,403	\$ (9,384)	\$ (5,000)	\$ (9,650)	\$ 174,369	
15	\$ -	\$ 206,318	\$ (9,384)	\$ (5,000)	\$ (9,891)	\$ 182,043	
16	\$ -	\$ 214,549	\$ (9,384)	\$ (5,000)	\$ (10,138)	\$ 190,027	
17	\$ -	\$ 223,108	\$ (9,384)	\$ (5,000)	\$ (10,392)	\$ 198,332	
18	\$ -	\$ 232,008	\$ (9,384)	\$ (5,000)	\$ (10,651)	\$ 206,973	
19	\$ -	\$ 241,264	\$ (9,384)	\$ (5,000)	\$ (10,918)	\$ 215,963	
20	\$ -	\$ 250,889	\$ (9,384)	\$ (5,000)	\$ (11,191)	\$ 225,315	
21	\$ -	\$ 260,898	\$ (9,383)	\$ (5,000)	\$ (11,470)	\$ 235,045	
22	\$ -	\$ 271,306	\$ (9,383)		\$ (11,757)	\$ 245,166	
23	\$ -	\$ 282,130	\$ (9,383)	\$ (5,000)	\$ (12,051)	\$ 255,696	
24	\$ -	\$ 293,385	\$ (9,383)		\$ (12,352)	\$ 266,650	
25	\$ -	\$ 305,089	\$ (9,383)		\$ (12,661)	\$ 278,045	
26	\$ -	\$ 317,260	\$ (9,382)	\$ (5,000)	\$ (12,978)	\$ 289,901	
27	\$ -	\$ 329,917	\$ (9,382)				
28	\$ -	\$ 343,079	\$ (9,382)		\$ (13,635)	\$ 315,062	
29	\$ -	\$ 356,765	\$ (9,382)			\$ 328,408	
30	\$ -	\$ 370,998	\$ (9,382)		\$ (14,325)	\$ 342,291	
31	\$ -	\$ 385,798	\$ (9,381)		\$ (14,683)	\$ 356,734	
32	\$ -	\$ 401,189	\$ (9,381)				
33	\$ -	\$ 417,194	\$ (9,381)				
34	\$ -	\$ 433,838	\$ (9,381)				
35	\$ -	\$ 451,145	\$ (9,381)			\$ 420,557	
36	\$ -	\$ 469,143	\$ (9,380)			\$ 438,151	
37	\$ -	\$ 487,859	\$ (9,380)				
38	\$ -	\$ 507,321	\$ (9,380)				
39	\$ -	\$ 527,560	\$ (9,380)				
40	\$ -	\$ 548,607	\$ (9,380)			\$ 515,890	
41	\$ -	\$ 570,493	\$ (9,379)				
42	\$ -	\$ 593,252	\$ (9,379)				
43	\$ -	\$ 616,919	\$ (9,379)				
44	\$ -	\$ 641,530	\$ (9,379)				
45	\$ -	\$ 667,123	\$ (9,379)			\$ 631,997	
46	\$ -	\$ 693,737	\$ (9,378)	\$ (5,000)	\$ (21,265)	\$ 658,094	

721,413 \$

\$ 750,193 \$

\$ 780,121 \$

811,243

(9,378) \$

(9,378) \$

(9,378) \$

(9,378) \$

47

48

49 50 \$

	SEASON NO.	ACCRECATE VALUE					
Cost	of '	SVS	rem	Pur	ch	ASE	

Total Project Cost (Less Grants) \$ 2,042,000

Total Financing = \$ 2,042,000

Economic Benefit

50 Year:

Gross Savings = \$ 14,008,958 NPV Savings = 3,306,640 30 Year:

Gross Savings = \$ 3,195,940

						NP	/ Savings =	\$	1,157,736
F	Principal	Int	erest Cost		otal D/S - oject Debt	,	Annual		Cumulative
\$	(75,994)	\$	(61,260)	\$	(137,254)	\$	(39,324)	\$	(39,324)
\$	(78, 274)	\$	(58,980)	\$	(137,254)	\$	(34,740)	\$	(74,064)
\$	(80,623)	\$	(56,632)	\$	(137,254)	\$	(29,969)	\$	(104,033)
\$	(83,041)	\$	(54,213)	\$	(137,254)	\$	(25,006)	\$	(129,039)
\$	(85,532)	\$	(51,722)	\$	(137,254)	\$	(19,842)	\$	(148,881)
\$	(88,098)	\$	(49,156)	\$	(137,254)	\$	(14,469)	\$	(163,350)
\$	(90,741)	\$	(46,513)	\$	(137,254)	\$	(8,879)	\$	(172,228)
\$	(93,464)	\$	(43,791)	\$	(137,254)	\$	(3,062)	\$	(175,291)
\$	(96,268)	\$	(40,987)	\$	(137,254)	\$	2,989	\$	(172,302)
\$	(99,156)	\$	(38,099)	\$	(137,254)	\$	9,284	\$	(163,017
\$	(102,130)	\$	(35,124)	\$	(137,254)	\$	15,834	\$	(147,183
\$	(105,194)	\$	(32,060)	\$	(137,254)	\$	22,649	\$	(124,534
\$	(108,350)	\$	(28,905)	\$	(137,254)	\$	29,739	\$	(94,795
\$	(111,600)	\$	(25,654)	\$	(137,254)	\$	37,115	\$	(57,680
\$	(114,948)	\$	(22,306)	\$	(137,254)	\$	44,789	\$	(12,892
\$	(118,397)	\$	(18,858)	\$	(137,254)	\$	52,772	\$	39,881
\$	(121,949)	\$	(15,306)	\$	(137,254)	\$	61,078	\$	100,958
\$	(125,607)	\$	(11,647)	\$	(137,254)	\$	69,719	\$	170,677
\$	(129,376)	\$	(7,879)	\$	(137,254)	\$	78,708	\$	249,385
\$	(123,370)	\$	(3,998)	\$	(137,254)	\$	88,060	\$	337,445
\$	0	\$	(0)	\$	(137,234)	\$	235,045	\$	572,490
\$	0	\$	(0)	\$	_	\$	245,166	\$	817,656
\$	0	\$		\$	-	\$	255,696	\$	1,073,352
\$	0	\$	(O) (O)	\$	-	\$	266,650	\$	1,340,001
\$	0	\$	(0)	\$	-	\$	278,045	\$	1,618,046
\$	0	\$	(0)	\$		 \$	289,901	\$	1,907,947
\$	-	\$	_	\$	-	\$	302,233	\$	2,210,180
\$	_	\$		\$		\$	315,062	\$	2,525,242
\$	-	\$		ŝ		\$	328,408	Ś	2,853,649
\$	_	\$	_	\$	_	\$	342,291	\$	3,195,940
\$		\$		\$		 \$	356,734	\$	3,552,675
\$	_	\$	_	\$	-	\$	371,758	\$	3,924,433
		\$		\$	-	\$		\$	
\$	-		-		-	\$	387,387	\$	4,311,820
	-	\$	-	\$	-		403,645		4,715,465
\$	-	\$		\$	-	 \$	420,557	\$	5,136,022
\$	-	\$	-	\$	-	\$	438,151	\$	5,574,173
\$	-	\$	-	\$	-	\$	456,451	\$	6,030,624
\$	-	\$	-	\$	-	\$	475,488	\$	6,506,112
\$	-	\$	-	\$	-	\$	495,291	\$	7,001,402
\$	-	\$		\$	-	 \$	515,890	\$	7,517,292
\$	-	\$	-	\$	-	\$	537,318	\$	8,054,610
\$	-	\$	-	\$	-	\$	559,608	\$	8,614,218
\$	-	\$	-	\$	-	\$	582,793	\$	9,197,011
\$	-	\$	-	\$	-		606,910		9,803,921
\$	-	\$		\$	-	\$	631,997	\$	10,435,919
\$	-	\$	-	\$	-	\$	658,094	\$	11,094,013
\$	-	\$	-	\$	-	\$	685,238	\$	11,779,251
\$	-	\$	-	\$	-	\$	713,473	\$	12,492,724
\$	-	\$	-	\$	-	\$	742,842	\$	13,235,566
\$		\$	-	1 >	-	1 >	773,392	1 >	14,008,958

Review of financial summary for Tank 7
In-conduit hydro project



Previous Board Actions

- June 23, 2008 The Board authorized a cost share agreement with the El Dorado County Water Agency for the El Dorado County Hydroelectric Options Plan
- August 10, 2009 The Board adopted an energy policy statement and directed staff to amend Board Policy 8020 to incorporate it

Previous Board Actions

- March 11, 2013 The Board awarded a single source contract to NLine Energy for the Tank 7 in-conduit hydroelectric generation system in the not-to-exceed amount of \$400,170; and authorized total funding of \$550,170
- March 10, 2014 The Board approved PG&E Interconnection agreement
- February 9, 2015 Reviewed status and Board requested updated financial summary

Summary of Issue

- Tank 7 project removed during development and adoption of 2015-2019 CIP
- Reviewed project status on February 9, 2015
- Board requested financial summary of Tank 7 project

Financial summary

El Dorado Irrigatio	n District - Tank 7	hydroelect	ic project			
	4.3% Debt & CA	ABY Grant	3% Debt & N	3% Debt & No Grant		
Includes Sunken Costs	Feed-in Tariff (ReMAT)	RES-BCT	Feed-in Tariff (ReMAT)	RES-BCT		
Hydrostation Capacity (kW)	420	420	420	420		
Estimated Annual Generation (kWh)	1,765,000	1,765,000	1,765,000	1,765,000		
Estimated Annual Revenue	\$164,000	\$119,000	\$164,000	\$119,000		
Capital Costs	\$1,522,000	\$1,522,000	\$1,522,000	\$1,522,000		
Less Grant (Prop 84)	\$380,000	\$380,000				
Net Capital Costs	\$1,142,000	\$1,142,000	\$1,522,000	\$1,522,000		
Non Construction Costs (incl. staff time & sunken costs)	\$520,000	\$520,000	\$520,000	\$520,000		
Total Project Cost	\$1,662,000	\$1,662,000	\$2,042,000	\$2,042,000		
Annual O & M Costs and CEC Costs	\$12,000	\$7,000	\$12,000	\$7,000		
PG&E Annual Added Facilities Charge	\$9,384	\$9,384	\$9,384	\$9,384		
30-year Gross Savings	\$1,500,000	\$3,429,000	\$1,266,000	\$3,196,000		
30-year NPV	\$638,000	\$1,317,000	\$478,000	\$1,158,000		
Payback (years)	18.2	17.4	20.0	18.5		
50-year Gross Savings	\$3,811,000	\$14,243,000	\$3,578,000	\$14,009,000		
Without Sunen Costs	Feed-in Tariff (ReMAT)	RES-BCT	Feed-in Tariff (ReMAT)	RES-BCT		
30-year Gross Savings	\$2,104,000	\$4,034,000	\$1,963,000	\$3,895,000		
30-year NPV	\$1,048,000	\$1,727,000	\$954,000	\$1,633,000		
Payback (years)	13.7	14.2	14.7	15.0		
50-year Gross Savings	\$4,416,000	\$14,847,000	\$4,277,000	\$14,708,000		

Financial summary

- Positive cash flow except for one alternative
- 18-20 year payback considering total project costs
- 15 year payback not including sunk costs

Tank 3 small hydro project

- Located in Camino
- Occupies FS land
- Previous regulations required FERC licensing
- Hydropower Efficiency Act 2013
 - Easier to exempt projects
- Staff submitted NOI to construct
 - FERC concurred that Tank 3 is exempt from licensing

Tank 3

- Capacity 600 kW
- Estimated generation 2,900 MWh
- Conduct preliminary design
 - Update financial analysis
- Compare against Tank 7

Solar opportunities

- Expansion of solar at EDHWWTP
- New solar at DCWWTP
 - Initial feasibility showed 7-11 year payback

Recommendations

- Continue to look for funding assistance for small hydro projects
- Advance design and determine financials for Tank 3
- Include solar analysis
- Board consideration of renewable energy projects