

# Baseline Discussion (Cont.) Agenda



**Date:** April 3, 2020

**Location:**

Call In:XXXX; Access code:  
WebEx Link added to Outlook Invitation

**Time:** 10:00 AM to 12:00 PM

**Leader:** Ali Forsythe

**Recorder:** HDR – Sites Integration

**Purpose:** Initial Discussion of Alternatives

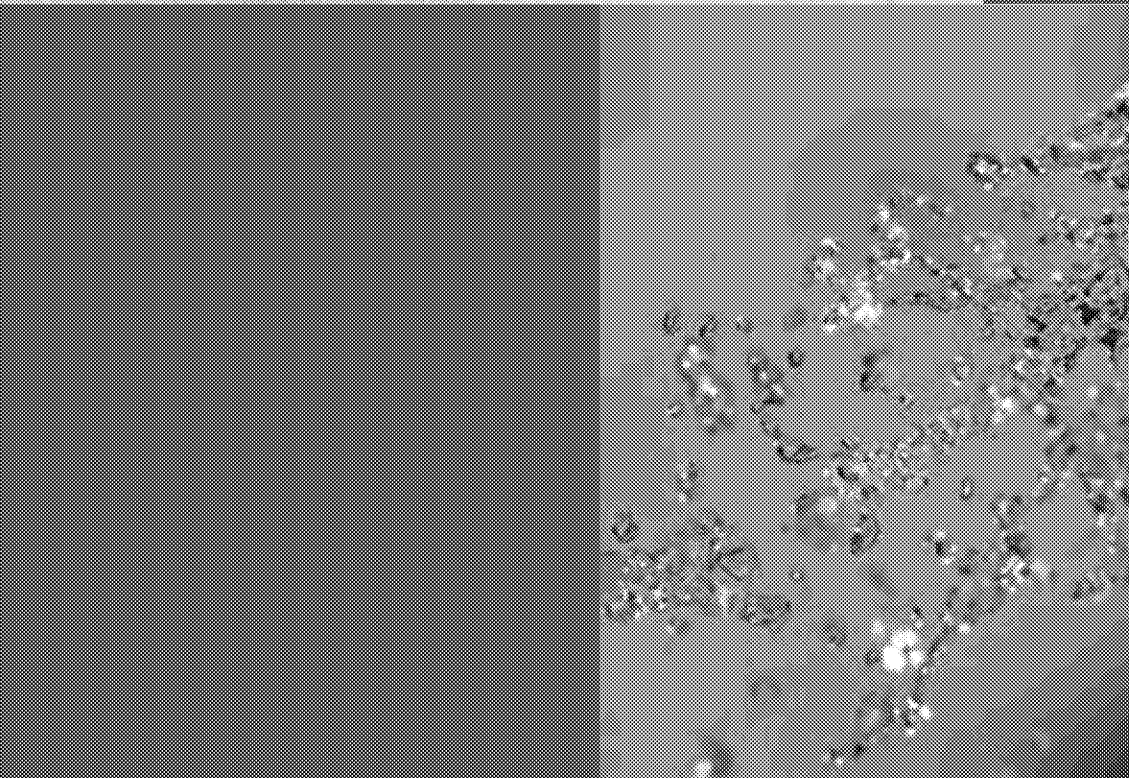
**Attendees:**

Jelica Arsenijevic, Sites Integration	Ali Forsythe, Sites Authority	Rob Tull, Jacobs
Ellen Berryman, ICF	Erin Heydinger, Sites Integration	Laurie Warner Herson, Sites Integration
Monique Briard, ICF	Jim Lecky, ICF	Nicole Williams, ICF
Linda Fisher, Sites Integration	John Spranza, Sites Integration	

**Agenda:**

Discussion Topic	Topic Leader	Time Allotted
1. Introduction	Ali/Laurie	10 min
2. Current Status of the Preferred Project <ul style="list-style-type: none"> <li>a. Overview of VP7 design and operations</li> <li>b. Is the preferred project still VP7 with release to the CBD?</li> <li>c. Ongoing VP process/Authority selection of preferred project</li> </ul>	John	20 min
3. Are variations in project components 'alternatives' or design 'options' <ul style="list-style-type: none"> <li>a. pipeline to Sac River vs. to CBD could be an option under VP7 and other alternatives</li> <li>b. road instead of bridge - based on Colusa County's input during value planning and their original comment letter, we should address to some level building a road to the west side of the reservoir instead of bridge</li> </ul>	Laurie	
4. Identify Potential Alternatives for Analysis <ul style="list-style-type: none"> <li>a. is there a 'Reclamation' alternative and how do we address federal investment vs. no investment</li> <li>b. should we include VP5 as a 1.3 maf alternative</li> <li>c. any need to carry forward any of the alternatives from the DEIR/S</li> </ul>	Group Discussion	30 min
5. What, if any, operational alternatives should be considered	Rob	20 min
6. Action Items/Next Steps	Ali/Laurie	10 min

**File Provided Natively**



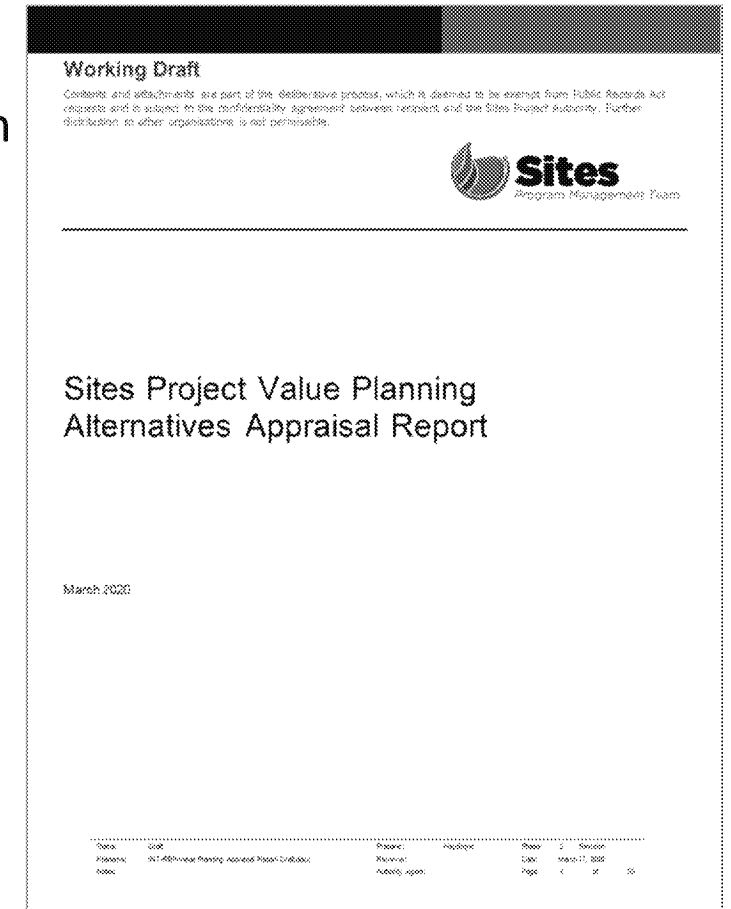
## March Authority Board 6.4: Extending to Current Participation Agreement

March 2020



# Proposed Home Board Package

- Amended Phase 2 participation agreements with updated work plan
- Value Planning Report
- Draft Storage Policy
- 2019 Annual Report
- 4-Page Prospectus
- Power Point template for presentations to home boards



Are there additional things you need for your home board?

2

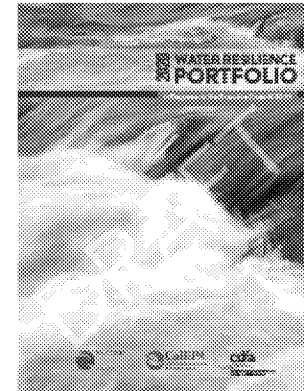
# Sites Reservoir Project Executive Prospectus



March 2020

## HIGHLIGHTS OF WHAT HAS BEEN ACCOMPLISHED TO DATE

- Named in the Governor's Water Resiliency Plan
- Reduced the construction cost by over \$2B through the value planning process
- Leveraged your investment dollars against other federal and state dollars. For every dollar you invested we stretched it into \$1.50
- Honed in on permitting criteria
- Adopted storage policy that you can use to meet individual investor needs



### Additional Investments

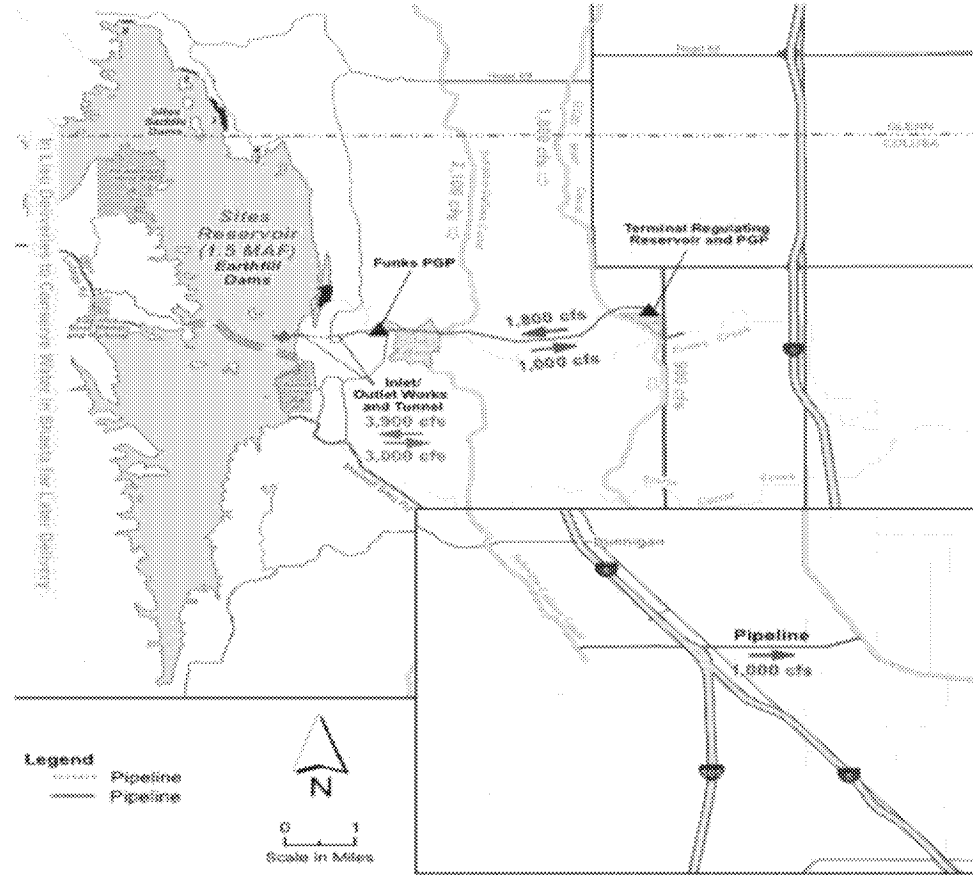
BOR WIIN Act	\$6M
USDA Low Interest Rate Loan	\$439M
Prop 1	\$816M

## CURRENT PARTICIPATION

Member	Reservoir Participation (AFY)
<b>Public Water Agencies</b>	
North of Delta	52,142
South of Delta	140,750
Subtotal Public Water Agencies	192,892
State of CA (WSIP)	-40,000
<b>Total Requirement</b>	<b>-230,000</b>



## VALUE PLANNING



Leveraged federal dollars to do geotech explorations in 2019

ENVIRONMENTAL PLANNING & PERMITTING

- Plan to Recirculate EIS

DIVERSION CRITERIA CONSIDERED				
Criteria	Scenario A		Scenario B	
Reservoir Size	1.5 MAF		1.5 MAF	
GCC Maintenance Window	2 weeks (Jan/Feb)		2 weeks (Jan/Feb)	
Wilkins Slough Bypass Flow	8,000 cfs		8,000 cfs April/May, all other times, 5,000 cfs	
Fremont Weir Notch	Prioritize the Fremont Weir Notch, Yolo Bypass preferred alternative, flow over weir within 1%		Prioritize the Fremont Weir Notch, Yolo Bypass preferred alternative, flow over weir within 5%	
Flows into the Sutter Bypass System	No restriction due to flow over Moulton, Colusa, and Tisdale Weirs		No restriction due to flow over Moulton, Colusa, and Tisdale Weirs	
Freeport Bypass Flow	Modeled WaterFix Criteria (applied on a daily basis) Pulse & Post-Pulse Protection (applied on a moving 7-day average) Pulse = Oct-Mar (35,000 cfs offramp) Post-Pulse (3 levels) = Oct-Jun Level 1 starts Oct 1st		Modeled WaterFix Criteria (applied on a daily basis) Post-Pulse Protection (applied on a moving 7-day average) Post-Pulse (3 levels) = Jan-Mar Level 2 starts Jan 1st Level 1 is initiated by the pulse trigger	
Net Delta Outflow Index (NDOI) Prior to Project Diversions	44,500 cfs between March 1st and May 31st		44,500 cfs between March 1st and May 31st	
Potential Range of Diversions to Fill Sites (Average)	Lower (Estimate) 189 TAF	Upper (Modeled) 209 TAF	Lower (Estimate) 242 TAF	Upper (Modeled) 272 TAF

OPERATIONS

Year Type	1,000 cfs Release Capacity (TAF)
Wet	116
Above Normal	286
Below Normal	273
Dry	382
Critically Dry	237
Long Term Average	243



## AFFORDABILITY

- Continue to advance beneficiary pays concept

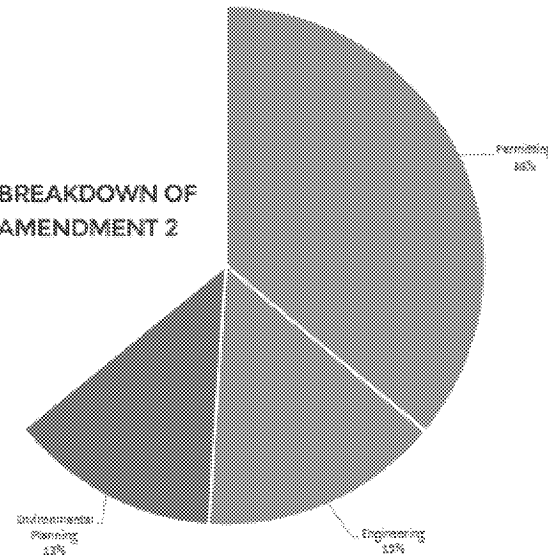
### Annual Repayment Costs per Acre Foot of Release

Reservoir Size (MAF)	1.5
Project Cost (2019\$, billions)	\$3.0
Annualized AF/year Release (TAF)	2.43
PWA Annual Costs During Repayment Without WIFIA Loan (2020\$, \$/AF)	\$648
PWA Annual Costs During Repayment With WIFIA Loan (2020\$, \$/AF)	\$598

## NEXT STEPS

- Workplan Highlights include
  - Operations/SWP/CVP Exchange Refinements
  - Advancing Permitting Certainty
  - Recirculation of Draft EIS
  - Feasibility Study
  - State and Federal Grant Administration
  - Continue to strengthen community and landowner relationships
  - Develop plan to advance the project past 2021

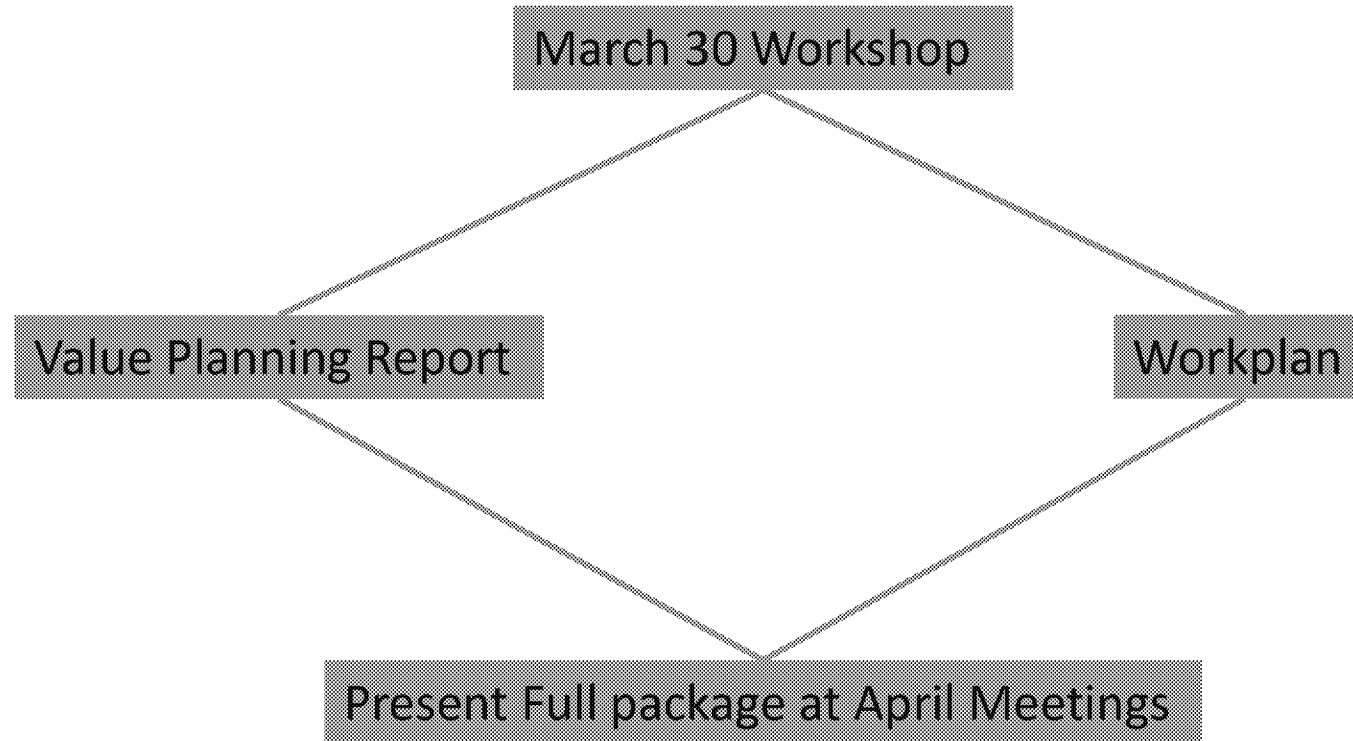
BREAKDOWN OF AMENDMENT 2



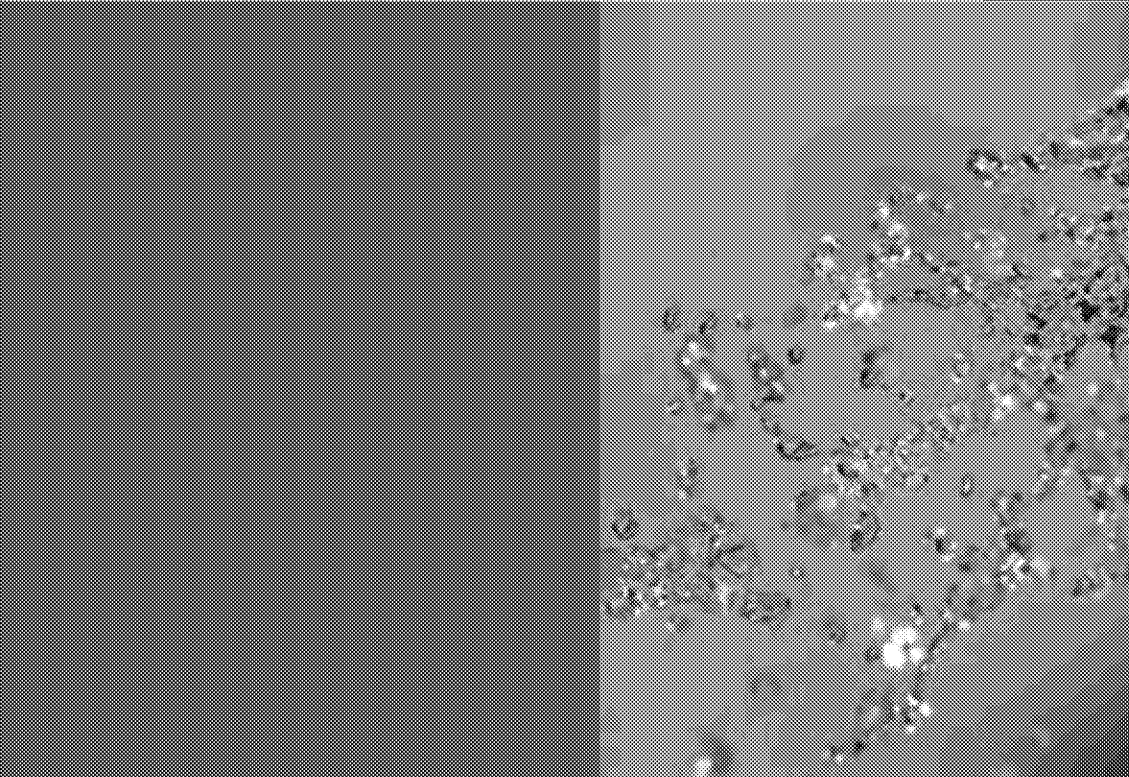
- Workplan translates into \$100/acre-ft cash call from Sept. 1, 2020 through December 31, 2021



# Next Steps



**Proposed Ad Hoc Work Group to Finalize Prospectus & Power Point**



## Break for Closed Session

March 2020



## SITES JOINT POWERS

### AUTHORITY

JIM WATSON, GENERAL MANAGER  
530.410.8250  
ANN NORDYKE, CLERK  
530.458.0509  
boardclerk@countyofcolusa.org  
WWW.SITESJPA.NET

## Board of Directors

LEIGH MCDANIEL, GLENN COUNTY SUPERVISOR, CHAIR  
FRITZ DURST, RECLAMATION DISTRICT 108, VICE-CHAIR  
KIM DOLBOW VANN, COLUSA COUNTY SUPERVISOR,  
SECRETARY/TREASURER  
DON BRANSFORD, GLENN-COLUSA IRRIGATION DISTRICT  
KEN LAGRANDE, TEHAMA-COLUSA CANAL AUTHORITY  
MARY WELLS, MAXWELL IRRIGATION DISTRICT  
JOE MARSH, COLUSA COUNTY WATER DISTRICT  
JIM JONES, ORLAND ARTOIS WATER DISTRICT  
JAMIE TRAYNHAM, WESTSIDE WATER DISTRICT  
DAN JONES, TC 5 DISTRICTS

WESTSIDE WATER DISTRICT  
5005 HIGHWAY 20  
WILLIAMS, CA 95987 GCID?

Commented [JW1]: Please confirm location.

## February 8, 2016 Agenda

Welcome to a meeting of the Sites Joint Powers Authority. If you are scheduled to address the Board, please state your full name for the record. Regularly numbered items may be considered at any time during the meeting. All items are listed in accordance with the Ralph M. Brown Act. We invite all members of the public to attend.

### 1:30 p.m. CALL TO ORDER

- Pledge of Allegiance.
- Approval of Agenda.
- Approval of the December 21, 2015 and January 11, 2016 Regular Meeting Minutes and the January 27, 2016 Directors/Alternate-Managers Workshop.
- Period of Public Comment.

### 1. BOARD MEMBER REPORTS: (No action will be taken)

This time is set aside to give the Directors an opportunity for members to disclose/discuss any meetings with external stakeholders to advance the Project.

### 2. ACCOUNTING

- a. Consider approving Treasurer's Report (**Attachment 1a**).
- b. Consider approving payment of Claims (**Attachment 1b**).
- c. Discussion of cash flow chart (**Attachment 1c**)

### 3. CA. FAIR POLITICAL PRACTICES COMMISSION-PROPOSED CONFLICT OF INTEREST CODE

Consider authorizing/directing the General Manager or his designee to move forward with Notice of Intent to adopt a Conflict of Interest Code for the Sites Joint Powers Authority pursuant to Government Code Section 6500 et seq., proposes to adopt a Conflict of Interest Code ("Conflict Code") pursuant to the authority vested in it by Government Code Sections 87300-87302 and 87306. (**Attachment 2**)

4. GOVERNANCE

a. Status of respective Member Board's approval of Amendment #3

b. Discussion/direction and possible action regarding proposed Project Agreement that defines indirect water benefits (i.e. reliability) as "Class 4" water type combined with a weighted voting structure. (Attachments 3a & 3b)

5. PROP 1, CHAPTER 8 APPLICATION:

a. Discussion/direction and possible action regarding appointing 2 (two) Members to assist in the preparation of a Draft Comment Letter. Further, authorize the General Manager to sign and forward same to the appropriate Agency/Authority. (informational Attachments 4a, 4b) NOTE: Public comment period closes March 14, 2016 and a Public Hearing to be held March 16, 2016

b. Discussion/direction and possible action regarding Water Commission's request for applicants to submit a "Concept Paper" by March 31 (Attachment 5a & 5b)

6. PRESENTATION: (No action will be taken)

Presentation by SAGE Engineers, Inc. regarding Dam Safety Design.

7. WORK PLAN

Consider approving the Facility Table (Attachment 6a)

Consider approving AECOM task order and cost estimate (Attachment 6b).

8. Discussion and possible action regarding Colusa Drain scope change (Attachment 6c & 6d).9. Discussion and possible action regarding USBR Feasibility study.10. Discussion/direction regarding needed consultant services for finance, CEQA legal, public outreach, and project controls.11. Manager's Report12. Election of Officers11. CLOSED SESSION (Government Code Section §54957(b)(1))  
Title: General Manager's 6 (six) month performance.12. Report Out from CLOSED SESSION

NEXT MEETING: March 14, 2016 at 1:30 p.m.  
Tehama Colusa Canal Authority  
5513 Highway 162  
Willows, CA 95988

**ADJOURN**

PERIOD OF PUBLIC COMMENT: Any person may speak about any subject of concern, provided it is within the jurisdiction of the Directors and is not already on today's agenda. The total amount of time allotted for receiving such public communication shall be limited to a total of 15 minutes

per issue and each individual or group will be limited to no more than 5 minutes each within the 15 minutes allocated per issue. **Note:** *No action shall be taken on comments made under this comment period.*

ADA COMPLIANCE: Upon request, Agendas will be made available in alternative formats to accommodate persons with disabilities. In addition, any person with a disability who requires a modification or accommodation to participate or attend this meeting may request necessary accommodation. Please make your request to the County Board Clerk, specifying your disability, the format in which you would like to receive this Agenda, and any other accommodation required no later than 24 hours prior to the start of the meeting.

All supporting documentation is available for public inspection and review in the Office of the Clerk of the Board located at 547 Market Street, Suite 102, Colusa, CA 95932 during regular business hours 8:30 a.m. to 5:00 p.m., Monday through Friday.

## Proposed Project Features by Action Alternatives

Project Feature	Component of				
	Alternative A 1.3 MAF New Intake	Alternative B 1.8 MAF Outfall Only	Alternative C 1.8 MAF New Intake	Alternative C <sub>1</sub> 1.8 MAF New Intake Funks Reservoir	Alternative D <sub>1</sub> JPA Alt. Roads, Recreation, Transmission
1.27-MAF Sites Reservoir (requires 9 dams total)	Yes	No	No	No	No
1.81- MAF Sites Reservoir (requires 11 dams total)	No	Yes	Yes	Yes	Yes
Golden Gate and Sites Dams	Yes	Yes	Yes	Yes	Yes
9 Saddle Dams	No	Yes	Yes	Yes	Yes
7 Saddle Dams	Yes	No	No	No	No
Stone Corral, Antelope Island, and Lurline Headwaters Recreation Areas	Yes	Yes	Yes	Yes	No
Stone Corral and Peninsula Hills Recreation Area with Boat Ramp	No	No	No	No	Yes
Road Relocations, Sulphur Gap Road, and South Bridge	Yes	Yes	Yes	Yes	Yes
Modified Road Relocations and South Bridge	No	No	No	No	Yes
Sites Pumping/Generating Plant	Yes; 5,900-cfs pumping capacity; 5,100 cfs generating capacity	Yes; 3,900-cfs pumping capacity; 5,100 cfs generating capacity	Yes; 5,900-cfs pumping capacity; 5,100 cfs generating capacity	5,900-cfs pumping capacity; <u>no generation</u>	Yes; 5,900-cfs pumping capacity; 5,100 cfs generating capacity
Electrical Switchyards	Yes	Yes	Yes	Yes	Yes
Tunnel from Sites Pumping/Generating Plant to Sites Reservoir Inlet/Outlet Structure	Yes	Yes	Yes	Yes	Yes
Sites Reservoir Inlet/Outlet Structure	Yes	Yes	Yes	Yes	Yes
Field Office Maintenance Yard	Yes	Yes	Yes	Yes	Yes

## Proposed Project Features by Action Alternatives

Project Feature	Component of				
	Alternative A 1.3 MAF New Intake	Alternative B 1.8 MAF Outfall Only	Alternative C 1.8 MAF New Intake	Alternative C <sub>1</sub> 1.8 MAF New Intake Funks Reservoir	Alternative D <sub>1</sub> JPA Alt. Roads, Recreation, Transmission
Holthouse Reservoir Complex (includes Holthouse Reservoir and Dam, breached Funks Dam, existing Funks Reservoir Dredging, Holthouse Spillway and Stilling Basin, Holthouse Pumping Plant, T-C Canal Discharge Dissipater, T-C Canal Bypass Pipeline, and Holthouse to T-C Canal Pipeline)	Yes	Yes	Yes	No	Yes
Modified Funks Reservoir	No	No	No	Yes	No
Pump Installation at the Red Bluff Pumping Plant	Yes	Yes	Yes	Yes	Yes
GCID Canal Facilities Modifications	Yes	Yes	Yes	Yes	Yes
GCID Canal Connection to the Terminal Regulating Reservoir (TRR)	Yes	Yes	Yes	Yes	Yes
TRR (includes the TRR to Funks Creek Pipeline and Outlet) – 2,000 AF at northern location	Yes	Yes	Yes	Yes	No
TRR (includes the TRR to Funks Creek Pipeline and Outlet) – 1,000 AF at northern location	No	No	No	No	Yes
TRR Pumping/Generating Plant	Yes	Yes	Yes	<u>No generation</u>	Yes
TRR Pipeline (3.5-mile-long pipeline to convey water from the TRR to Holthouse Reservoir) and TRR Pipeline Road	Yes	Yes	Yes	Yes	Yes

## Proposed Project Features by Action Alternatives

Project Feature	Component of				
	Alternative A 1.3 MAF New Intake	Alternative B 1.8 MAF Outfall Only	Alternative C 1.8 MAF New Intake	Alternative C <sub>1</sub> 1.8 MAF New Intake Funks Reservoir	Alternative D <sub>1</sub> JPA Alt. Roads, Recreation, Transmission
Delevan Power Transmission Line with East-West alignment	Yes; Sites Pumping/Generating Plant to WAPA/PG&E <sup>1</sup> Line plus WAPA/PG&E Line to Sacramento River	Yes; Sites Pumping/Generating Plant to WAPA/PG&E Line	Yes; Sites Pumping/Generating Plant to WAPA/PG&E Line plus WAPA/PG&E Line to Sacramento River	Yes; Sites Pumping/Generating Plant to WAPA/PG&E Line plus WAPA/PG&E Line to Sacramento River	No
Delevan Power Transmission Line with North-South alignment	No	No	No	No	Yes; Sites Pumping/Generating Plant to WAPA/PG&E Line plus North-South WAPA/PG&E Line to Sacramento River Intake
Delevan Pipeline (2,000 cfs with 2 pipelines) – northern alignment	Yes	Yes	Yes	Yes	No
Delevan Pipeline (2,000 cfs with 2 pipelines) – southern alignment using existing easements	No	No	No	No	Yes
Delevan Pipeline Intake Facilities (includes fish screen and pumping/generating facilities)	Yes; 2,000 cfs diversion capacity; 1,500 cfs release capacity	No	Yes; 2,000 cfs diversion capacity; 1,500 cfs release capacity	Yes; 2,000 cfs diversion capacity; 1,500 cfs release capacity; <u>No generation</u>	Yes; 2,000 cfs diversion capacity; 1,500 cfs release capacity
Delevan Pipeline Discharge Facility	No	Yes; 1,500 cfs release capacity	No	Yes	No

<sup>1</sup> The proposed Project would connect with either the existing PG&E Transmission Line or the existing WAPA Transmission Line.



## Proposed Project Features by Action Alternatives

Project Feature	Component of				
	Alternative A 1.3 MAF New Intake	Alternative B 1.8 MAF Outfall Only	Alternative C 1.8 MAF New Intake	Alternative C <sub>1</sub> 1.8 MAF New Intake Funks Reservoir	Alternative D <sub>1</sub> JPA Alt. Roads, Recreation, Transmission
Supplemental Colusa Drain Intake	No	No	No	No	TBD
Project Buffer	Yes	Yes	Yes	Yes	Yes
Potential Acreage of Temporary Land Use Impacts	17,680	19,637	19,636	19,636	TBD
Potential Acreage of Permanent Land Use Impacts	26,425	26,424	26,425	26,425	TBD

Note:

MAF = million acre-feet

## SITES JOINT POWERS

### AUTHORITY

JIM WATSON, GENERAL MANAGER

530.410.8250

ANN NORDYKE, CLERK

530.458.0509

[boardclerk@countyofcolusa.org](mailto:boardclerk@countyofcolusa.org)

[www.SITESJPA.NET](http://www.SITESJPA.NET)

## Board of Directors

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KIM DOLBOW VANN, COLUSA COUNTY SUPERVISOR,

SECRETARY/TREASURER

DON BRANSFORD, GLENN-COLUSA IRRIGATION DISTRICT

KEN LAGRANDE, TEHAMA-COLUSA CANAL AUTHORITY

MARY WELLS, MAXWELL IRRIGATION DISTRICT

JOE MARSH, COLUSA COUNTY WATER DISTRICT

JIM JONES, ORLAND ARTOIS WATER DISTRICT

JAMIE TRAYNHAM, WESTSIDE WATER DISTRICT

DAN JONES, TC 5 DISTRICTS

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GLENN-COLUSA IRRIGATION DISTRICT

344 EAST LAUREL STREET

WILLOWS, CA 95988

## February 8, 2016 Agenda

The Sites Joint Powers Authority Board meets in Regular Session this 8<sup>th</sup> day of February 2016 at the hour of 1:30 p.m. **Directors Present:** Leigh McDaniel, Chair, Glenn County, Fritz Durst, RD 108, Kim Vann, Colusa County, Joe Marsh, Colusa County Water District, Fritz Durst, RD 108, Don Bransford, Glenn-Colusa Irrigation District, Ken LaGrande, Tehama-Colusa Canal Authority, Mary Wells, Maxwell Irrigation District, Jamie Traynham, Westside Water District, Jim Jones, Orland Artois Water District, and Dan Jones, TC5 District-Proberta. **Directors Absent:** None.

(Alternate Directors that may be listed as Present below, did not participate in the decision making process)

Chairman McDaniel calls to order the February 8, 2016, Regular Session at 1:33 p.m., with all Directors present.

Staff Present: Jim Watson, General Manager.  
John Kenny, Counsel.  
Ann Nordyke, Clerk.  
Jim Bond, Bond Tax.

Alternates Present: Gary Evans, Colusa County.  
Joe Richter, Maxwell Irrigation District.  
Jeff Sutton, Tehama Colusa Canal Authority.  
Joe Richter, Maxwell Irrigation District.  
Sean Doherty, RD 108.  
Logan Dennis, GCID.

Others Present: Bill Vanderwaal, USBR.  
Kevin Spesert, Loren Murray, Jeff Herrin, AECOM.  
Nadine Bailey, Family Water Alliance.  
Oscar Serrano, CICC.  
Sarah Reynolds, T & P Farms.  
Mark Connelly, Kleinfelder.  
Scott Brown, LWA.

Walter Michael, Mark Marshall, GSRMA.  
 Emil Cavagnolo, Orland Artois Water District.  
 Lewis Bair, RD 108.  
 Tony St. Amant, citizen.  
 Faiz Makdisi, Marc Ryan, SAGE Engineers, Inc.  
 Mike Azevedo, Colusa County.  
 Dan Ruiz. MID/Westside WD.

Pledge of Allegiance.

It is moved by Director D. Jones, seconded by Director Bransford to approve the February 8, 2016 Agenda as presented. Motion carried: All yes. Absent: None.

It is moved by Director Durst, seconded by Director Wells to approve the following meeting Minutes and Workshop Minutes:

- December 21, 2015 Regular Meeting Minutes,
- January 11, 2016 Regular Meeting Minutes and
- January 27, 2016 Directors/Alternate-Managers Workshop,

as corrected. Motion carried: All yes. Absent: None.

Period of Public Comment

None.

1. BOARD MEMBER REPORTS: (No action will be taken)

Director Durst speaks to meetings he has attended regarding Power lines and SMUD, noting, no position has been taken.

Brief discussion is held, with no action taken.

2. ACCOUNTING

a. It is moved by Director Durst, seconded by Director Bransford to approve the Treasurer's Report. Motion carried: All yes. Absent: None.

b. It is moved by Director Durst, seconded by Director Bransford to approve payment of Claims. Motion carried: All yes. Absent: None.

c. Brief discussion is held regarding the cash flow chart, with no action taken.

3. CA. FAIR POLITICAL PRACTICES COMMISSION-PROPOSED CONFLICT OF INTEREST CODE

It is moved by D. Jones, seconded by J. Jones to authorize/direct the General Manager or his designee to move forward with Notice of Intent to adopt a Conflict of Interest Code for the Sites Joint Powers Authority pursuant to Government Code Section 6500 et seq., proposes to adopt a Conflict of Interest Code ("Conflict Code") pursuant to the authority vested in it by Government Code Sections 87300-87302 and 87306. Motion carried: All yes. Absent: None.

4. GOVERNANCE

a. Brief discussion is held regarding status of respective Member Board's approval of the Modified Third Amended and Restated Sites Project Authority Joint Exercise of Powers Agreement, with no action taken.

b. Chair McDaniel makes time for discussion/direction and possible action regarding proposed Project Agreement that defines indirect water benefits (i.e. reliability) as "Class 4" water type combined with a weighted voting structure. Lengthy discussion is held.

Following discussion it is the consensus of the Directors, Mr. Watson will work with the Managers Group and bring back the proposed Project Agreement with revisions.

5. PROP 1, CHAPTER 8 APPLICATION:

a. Chair McDaniel makes time for discussion/direction and possible action regarding appointing 2 (two) Members to assist in the preparation of a Draft Comment Letter. **Further**, authorize the General Manager to sign and forward same to the appropriate Agency/Authority. Discussion is held.

Following discussion it is the consensus of the Directors, Mr. Watson, General Manager is to draft a letter for Chair McDaniel to sign.

b. Chair McDaniel makes time for discussion/direction and possible action regarding Water Commission's request for applicants to submit a "Concept Paper" by March 31, 2016. Brief discussion is held.

Following discussion it is the consensus of the Directors Mr. Watson is to move forward with the Concept Paper.

6. PRESENTATION: (No action will be taken)

Chair McDaniel makes time for a Presentation by SAGE Engineers, Inc. regarding Dam Safety Design.

Mr. Ryan and Mr. Makdisi speaks to the following:

Dam Safety in the U.S.,  
Regulatory Agencies Jurisdiction,  
Dam Safety Failures and Incidents,  
Overview of Dam Safety Programs,  
Hazard Classification,  
Dam Ownership in the United States,  
Dam Failures in the United States,  
Failure During Construction,  
Flood Overtopping Failure,  
Internal Erosion Failure,  
Leakage and Foundation Failure,  
Failure During Earthquake,  
Operational Dam Failure,  
Operation Error and Overtopping,  
Dam Safety Programs,  
Dam Safety Jurisdiction Overview,  
Dam Safety Organizations,

U.S. Army Corps of Engineers,  
U.S. Bureau of Reclamation,  
Federally-Owned Dams,  
State-Owned Dams (CA DWR),  
Regulators and Risk,  
Jurisdictional Considerations for Sites Reservoir,  
Dam Safety Programs,  
FERC Dam Safety Inspections,  
Dual Jurisdictions in CA,  
Permitting a New Dam,  
DSOD Permitting,  
Future of Dam Safety Regulation,  
Overview of Regulatory Agency Jurisdiction,  
Overview of Regulatory Agency Jurisdiction, and  
Sites Reservoir and Dam Safety,

Following the presentation, discussion is held, with no action taken.

7. WORK PLAN

It is moved by Director Wells, seconded by Director Durst to approve the Facility Table. Motion carried: All yes. Absent: None.

It is moved by Director Bransford, seconded by Director J. Jones to approve AECOM task order and cost estimate. Motion carried: All yes. Absent: None.

8. It is moved by Director Wells, seconded by Director Vann to approve Colusa Drain scope change, further the cost will be funded with Contingencies. Motion carried: All yes. Absent: None.

9. It is moved by Director Bransford, seconded by Director Durst to approve action regarding USBR Feasibility study. Motion carried: All yes. Absent: None.

10. Chair McDaniel makes time for discussion/direction regarding consultant services for finance, CEQA legal, public outreach, and project controls. Discussion is held.

Following discussion it is the consensus of the Directors, Mr. Watson, General Manager is to move forward.

11. Manager's Report  
USBR,  
DWR,  
Investor Outreach, and  
California Water Commission.

12. Chair McDaniel makes time for Nominations/Election of Officers for Fiscal Year 2016.

It is moved by Director Traynham, seconded by Director Well to nominate Director Vann as Chair for FY 2016. Motion carried: All yes. Absent: None.

It is moved by Director LaGrande, seconded by Director J. Jones to close nominations and elect Director Vann and Chair for FY 216. Motion carried: All yes. Absent: None.

It is moved by Director J. Jones, seconded by Director Bransford to nominate Director Durst as Vice-Chair for FY 2016. Motion carried: All yes. Absent: None.

It is moved by Director Traynham, seconded by Director Wells to close nominations and elect Director Durst as Vice-Chair for FY 2016. Motion carried: All yes. Absent: None.

It is moved by Director Vann, seconded by Director Bransford to nominate Director Traynham as Secretary/Treasurer for FY 2016. Motion carried: All yes. Absent: None.

It is moved by Director Durst, seconded by Director J. Jones to close the nominations and elect Director Traynham as Secretary/Treasurer for FY 216. Motion carried: All yes. Absent: None.

13. CLOSED SESSION (Government Code Section §54957(b)(1))  
Title: General Manager's 6 (six) month performance.
14. Report Out from CLOSED SESSION  
No reportable action.

NEXT MEETING:      March 14, 2016 at 1:30 p.m.  
                            Tehama Colusa Canal Authority  
                            5513 Highway 162  
                            Willows, CA 95988

Chair McDaniel adjourns the meeting at 5:33 p.m. to reconvene in Regular Session on March 14, 2016 at the hour of 1:30 p.m.

Respectfully submitted,

.....  
Liegh McDaniel, Chair

.....  
Kim Dolbow Vann, Secretary to the Board

Location: Teleconference Call  
Chair: Rob Kunde, Wheeler Ridge-Maricopa Water Service District  
Chair: Mike Azevedo, Colusa County

### MEETING AGENDA

**Roster/Attendance:**   *Hide Roster before creating PDF agenda to distribute*

- American Canyon (Alt): Rick Kaufman \_\_\_\_\_
- Colusa County: Mike Azevedo \_\_\_\_\_
- CVWD: Robert Cheng \_\_\_\_\_
- Dunnigan WD: Bill Vanderwaal \_\_\_\_\_
- GCID: Thad Bettner \_\_\_\_\_
- MWDSC: Randall Neudeck \_\_\_\_\_
- SCVWA (Alt): Dirk Marks \_\_\_\_\_
- SCVWD: Eric Leitnerman \_\_\_\_\_
- SBVMWD: Bob Tincher \_\_\_\_\_
- TC-4 Districts (Alt): Jeff Sutton \_\_\_\_\_
- Westside WD: Dan Ruiz \_\_\_\_\_
- WRMWSD: Rob Kunde \_\_\_\_\_
- Zone 7: Amparo Flores \_\_\_\_\_

**Total Members in Attendance** (Must be publicly noticed if > 10 ≈ 50% of 21)

By Invite:

- DWR: Rob Cooke \_\_\_\_\_
- USBR: \_\_\_\_\_

Staff:

- |                   |                |         |
|-------------------|----------------|---------|
| • Jim Watson      | • Mike Forrest | • _____ |
| • Ali Forsythe    | • _____        | • _____ |
| • Lee Frederiksen | • _____        | • _____ |
| • Erin Heydinger  | • _____        | • _____ |
| • Rob Tull        | • _____        | • _____ |
| • Jeff Herrin     | • _____        | • _____ |

Action items serve as meeting minutes

Status: **Issued for Use**  
 Purpose: **Informational**  
 Caveat 1: **Subject to change**  
 Caveat 2:

Version: **A**  
 Date: **2020 Apr 07**  
 Ref/File #: **12.228-210.500**  
 Page: **1** of **2**

Agenda Topics:

Ask Jerry for any opening remarks

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5. Recap & schedule next call



## **Requested Actions:**

1. Identify VP7 as the Authority's Preferred Project for the purposes of the EIR analysis, consistent with the California Environmental Quality Act (CEQA)
2. Direct staff to prepare a revised Draft EIR to analyze the environmental effects of VP7.

## **Detailed Description/Background:**

The CEQA Guidelines, Section 15126.6(a), require that an EIR describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social and technological factors."

The courts have also found that a draft EIR that studies different project alternatives without identifying a preferred alternative violates CEQA by "failing to provide the public with a stable project to review" (Washoe Meadows Community v. Department of Parks and Recreation (1st Dist. 2017) 17 CA5th 277).

In 2017, the Authority prepared and released for public review a Draft EIR that addressed the environmental effects of a range of alternatives. At that time, Alternative D was considered the locally preferred alternative. However, the Ad Hoc Value Planning Workgroup has identified additional project alternatives through a screening process that considered total project cost, impacts on landowners, impacts on traffic and public safety, ability to meet participant demands, ability to provide public benefits to the State, relative magnitude of environmental impacts, and the estimated cost per acre-foot of water delivered. The Sites Project Value Planning Alternatives Appraisal Report (Report) provides the following recommendation:

**The Value Planning Workgroup has recommended the Project proceed as Alternative VP7.** Although Alternative VP5 had the lowest overall cost and lower cost per acre-foot, the Value Planning Workgroup recommends VP7 based on higher deliveries at a comparable cost and improved operational flexibility with a 1.5 MAF reservoir.

As noted in the Report, VP7 results in the following significant changes to the Draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) Alternative D 1.8 MAF Project:

- Reduced project size and footprint
- Reduced Sacramento River diversions
- Elimination of Delevan Sacramento River diversion and release facility
- Elimination of Delevan Pipeline and associated impacts to landowners and wildlife refuges along that alignment
- Reduced costs and improved affordability to the Project's funding participants

With the identification of VP7 as the Authority's Preferred Project, these changes will require additional analysis and revisions to the Draft EIR.

**Prior Reservoir Committee Action:**

[Need to reference prior presentation/action regarding recirculation]

Location: Teleconference Call  
Chair: Rob Kunde, Wheeler Ridge-Maricopa Water Service District  
Chair: Mike Azevedo, Colusa County

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Location: Teleconference Call

Chair: Rob Kunde, Wheeler Ridge-Maricopa Water Service District

Vice Chair: Mike Azevedo, Colusa County

***PROPOSED MEETING AGENDA***

Agenda Topics:

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# SITES RESERVOIR



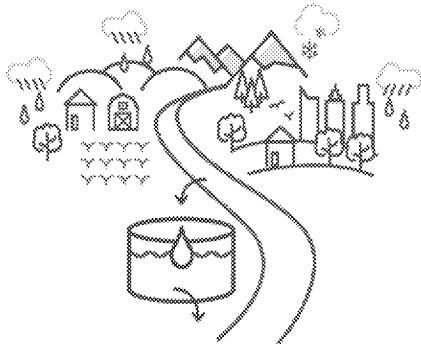
## 21<sup>ST</sup> CENTURY SOLUTION TO CALIFORNIA'S WATER RELIABILITY CHALLENGES

Sites Reservoir is a generational opportunity to construct a multi-benefit water storage project that helps restore flexibility, reliability, and resiliency to our statewide water supply.

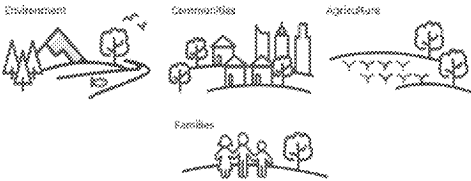




# 21<sup>ST</sup> CENTURY SOLUTION TO CALIFORNIA'S WATER RELIABILITY CHALLENGES



Water from Sites directly benefits:



© 2008 United Water of California

## SITES RESERVOIR IS NEW PERSPECTIVE FOR WATER STORAGE

- CAPTURES AND STORES STORMWATER FLOWS FROM THE SACRAMENTO RIVER—AFTER ALL OTHER WATER RIGHTS AND REGULATORY REQUIREMENTS ARE MET—FOR RELEASE IN DRY AND CRITICAL YEARS FOR ENVIRONMENTAL USE AND FOR CALIFORNIA COMMUNITIES, FARMS, AND BUSINESSES WHEN IT IS SO DESPERATELY NEEDED.
- SITES IS NOT A “TRADITIONAL” RESERVOIR PROJECT. IT IS AN OFF-STREAM FACILITY THAT DOES NOT DAM A MAJOR RIVER SYSTEM AND WOULD NOT BLOCK FISH MIGRATION OR SPAWNING.
- SITES RESERVOIR IS ONE OF ONLY TWO STATEWIDE PROJECTS SPECIALLY DESIGNATED AS A PRIORITY PROJECT IN GOVERNOR



## **21<sup>ST</sup> CENTURY SOLUTION TO CALIFORNIA'S WATER RELIABILITY CHALLENGES**

### **SITES RESERVOIR WOULD BE A VITAL COMPONENT OF CALIFORNIA'S INTEGRATED STATEWIDE WATER INFRASTRUCTURE**

- **SITES RESERVOIR WILL SIGNIFICANTLY IMPROVE THE STATE'S WATER MANAGEMENT SYSTEM IN DRIER PERIODS AND RESTORE MUCH-NEEDED FLEXIBILITY AND RELIABILITY THAT HAS BEEN LOST IN THE STATEWIDE SYSTEM.**
- **WILL BE ONE OF THE STATE'S LARGEST RESERVOIRS, AND WILL PROVIDE FLEXIBILITY TO CALIFORNIA'S EXISTING WATER INFRASTRUCTURE BY PROVIDING UP TO 1.5 MILLION ACRE-FEET OF ADDITIONAL STORAGE CAPACITY**
- **SITES WILL BE COOPERATIVELY MANAGED IN CONJUNCTION WITH BOTH THE STATE WATER PROJECT AND CENTRAL VALLEY PROJECT AND WILL GREATLY INCREASE THE FLEXIBILITY, RELIABILITY AND RESILIENCY OF STATEWIDE WATER SUPPLIES IN DRIER YEARS FOR ENVIRONMENTAL, AGRICULTURAL, AND URBAN USES.**



## **21<sup>ST</sup> CENTURY SOLUTION TO CALIFORNIA'S WATER RELIABILITY CHALLENGES**

### **SITES RESERVOIR IS DESIGNED TO BE ADAPTABLE TO A CHANGING CLIMATE**

- As snowpack declines due to climate change and more of our water comes in the form of atmospheric rivers -- Sites Reservoir will become even more vital to the future resiliency of our statewide water supply.
- Sites Reservoir captures and stores this water for release in dry and critical years adding resiliency to future California water supplies
- Sites operates even better under the most challenging climate change scenarios

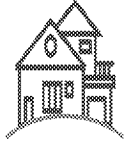
Insert Graphic



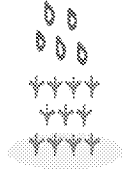
## OUR STRENGTH IS IN OUR DIVERSE STATEWIDE PARTICIPATION

### PARTICIPANTS ARE DIVERSE, REPRESENTING MAJOR URBAN CENTERS AND RURAL AGRICULTURAL REGIONS ACROSS CALIFORNIA

Our participants serve:



Cities/Neighborhoods



Farmland/Irrigation



State/Environment

equating to **24+ million people** and  
over **500,000 acres of farmland**

The Sites Project Authority is working in collaboration with a broad coalition of project participants throughout California to address our statewide water supply challenges and create resilient water future.

- Working in close collaboration with California Department of Water Resources and Bureau of Reclamation to add operational flexibility to the State Water Project and Central Valley Project.
- Spirit of teamwork and regional collaboration to advance a practical solution for our statewide water management challenges.



## OUR STRENGTH IS IN OUR DIVERSE STATEWIDE PARTICIPATION

### BROAD STATEWIDE REPRESENTATION OF PUBLIC AGENCIES ADVANCING SITES



#### 70IR

- Participants include counties, cities, water and irrigations districts
- Urban and Rural
- Sacramento Valley
- San Joaquin Valley
- Bay Area
- Southern California



## OUR STRENGTH IS IN OUR DIVERSE STATEWIDE PARTICIPATION

### Sacramento Valley

Carter Mutual Water Company  
City of American Canyon  
Colusa County  
Colusa County Water Agency  
Cortina Water District  
Davis Water District  
Dunnigan Water District  
Glenn County  
Glenn-Colusa Irrigation District  
LaGrande Water District  
Placer County Water Agency  
Reclamation District 108  
City of Roseville  
Sacramento County Water Agency  
City of Sacramento  
Tehama-Colusa Canal Authority  
Westside Water District  
Western Canal Water District

### Bay Area

Santa Clara Valley Water District  
Zone 7 Water Agency

### San Joaquin Valley

Wheeler Ridge-Maricopa Water Storage District

### Southern California

Antelope Valley – East Kern Water Agency  
Coachella Valley Water District  
Desert Water Agency  
Metropolitan Water District  
San Bernardino Valley Municipal Water District  
San Geronio Pass Water Agency  
Santa Clarita Valley Water Agency



## RIGHTSIZED TO MEET OUR CURRENT AND FUTURE WATER SUPPLY NEEDS

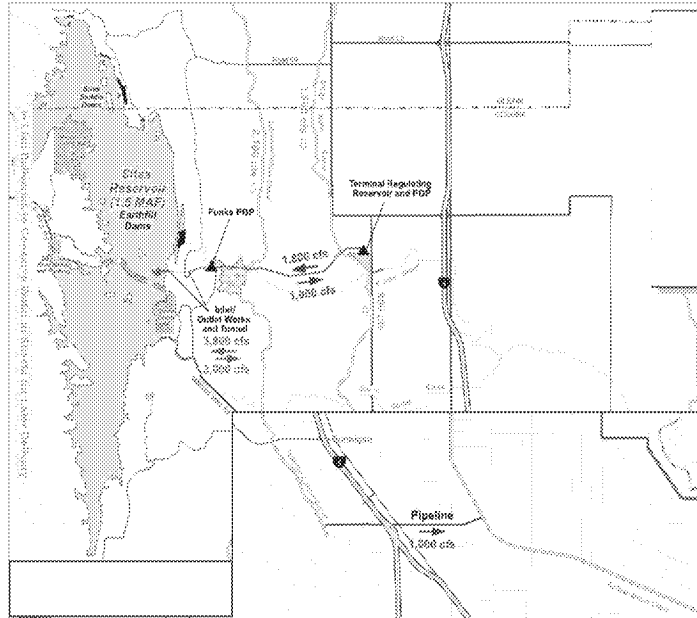
### SITES RESERVOIR HAS BEEN DESIGNED AND OPTIMIZED TO MEET OUR WATER SUPPLY NEEDS FOR TODAY AND IN THE FUTURE

- The Sites Project Authority conducted a **rigorous Value Planning effort** to review the project's proposed operations and facilities to develop a project that is "right sized" for our investors and participants while still providing water supply reliability and enhancing the environment.
- Rightsizing the reservoir was **responsive to input** from state and federal agencies, NGOs, elected officials, landowners and local communities.
- The **feedback we received** through a robust outreach effort was **critical** to developing a reservoir that is the **right size for both people and the environment**.



## RIGHTSIZED TO MEET OUR CURRENT AND FUTURE WATER SUPPLY NEEDS

- The Value Planning process identified a “rightsized” project
- 1.5 million acre-feet of storage
- Utilizes the existing Glenn-Colusa Irrigation District and Tehama-Colusa Canal Authority canals to convey water to Sites Reservoir from the Sacramento River
- Delivers water back to the Sacramento River through the Tehama-Colusa Canal and through the Colusa Basin Drain for participant deliveries and for the environment





# RIGHTSIZED TO MEET OUR CURRENT AND FUTURE WATER SUPPLY NEEDS

Member	Reservoir Participation (AFY)
<b>Public Water Agencies</b>	
North of Delta	52,142
South of Delta	140,750
<b>Subtotal Public Water Agencies</b>	<b>192,892</b>
State of CA	~ 40,000
<b>Total Requirement</b>	<b>~230,000</b>

## Participant Demand

- Participant water subscriptions allocated in the **current participation agreement**
- Allocation of State of California water subscription is based on the **Proposition Prop 1 water investment**
  - Water for Delta Smelt
  - Water for Refuges

Year Type	1,000 cfs Release Capacity (TAP) to the Colusa Basin Drain
Wet	90 - 120
Above Normal	260 - 290
Below Normal	245 - 275
Dry	355 - 385
Critically Dry	210 - 240

## Release Capacity from Sites

- The “rightsized” project can deliver water to meet the demands of our participants and California’s investment of water for the environment



**RIGHTSIZED TO MEET OUR CURRENT AND FUTURE WATER  
SUPPLY NEEDS**

ADD SLIDE REGARDING PERMIT YIELDS



## RIGHTSIZED TO MEET OUR CURRENT AND FUTURE WATER SUPPLY NEEDS

Reservoir Size (MAF)	1.5
Project Cost (2019\$, billions)	\$2.4 – \$2.7
Contingency Cost (2019\$, billions)	\$0.6
Total Project Cost (2019\$, billions)	\$3.0 - \$3.3
Annualized AF/year release (AF/year)	240
Range of Annual Costs During Repayment Without WIFIA Loans (2020\$, \$/AF)	\$650 - \$710
Range of Annual Costs During Repayment With WIFIA Loans (2020\$, \$/AF)	\$600 - \$660

- The rightsized project is roughly \$2 Billion less than the 2017 preferred alternative
- Cost savings primarily from the removal of the Delevan Diversion facility on the Sacramento River and the Delevan Pipeline
- Lowered the Annual Cost during repayment (\$ A/F)
- Significant savings to participants with finance through a WIFIA government backed loan



## RIGHTSIZED TO MEET OUR MEET OUR CURRENT AND FUTURE WATER SUPPLY NEEDS

- ◆ The Value Planning process has resulted in a project that has a smaller footprint and operated in a different manner than originally designed
- ◆ Due to these changes the Authority will recirculate its Draft EIR/EIS
- ◆ Work with landowners, tribes, stakeholders, NGOs, and local communities to develop a collaborative environmental review process.
- ◆ It is essential that we build a project now that makes sense for all our participants – local, state, and federal



# PROVIDES STATEWIDE BENEFITS FOR GENERATIONS TO COME

## SITES RESERVOIR PROVIDES MANY MULTI-LAYERED BENEFITS



### Off-stream Storage

Does not create a barrier to native fish migration



### Cooperative Operation

Increases effectiveness and efficiency of existing water storage infrastructure



### Federal and State Agencies Manage Environmental Water

Adaptable to current and future conditions and priorities



### Adaptable to Climate Change

Contributes to system reliability and performance with climate change



### Local Leadership and Cooperation

Aligns with Sacramento Valley's values and fosters regional and statewide collaboration



### Dry Year Water Supply

Reliable dry year water supply for California's communities, farms and businesses



### Recreational Opportunities

Provides northern Sacramento Valley with additional opportunities for recreation



### Environmental Support

Provides environmental water in drier periods for native fish, and habitat for native species and birds



## PROVIDES STATEWIDE BENEFITS FOR GENERATIONS TO COME

### SITES RESERVOIR PROVIDES WATER DEDICATED TO ENVIRONMENTAL USE

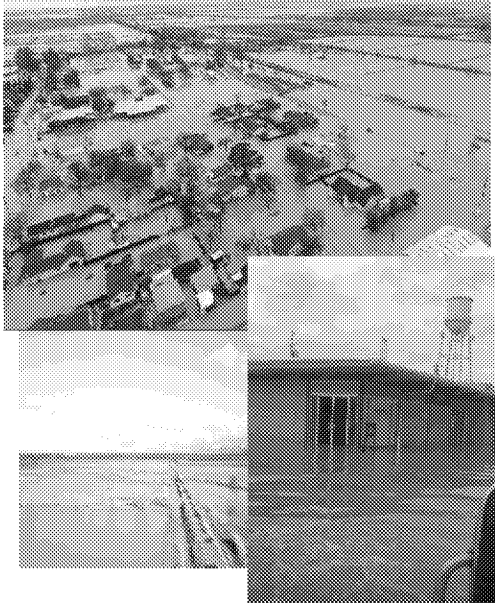
- A significant portion of the Sites Reservoir Project's annual water supplies will be dedicated to environment uses :
  - Preserve cold-water pools in Lake Shasta later into the summer months to support salmon development, spawning and rearing
  - Provide a reliable supply of refuge water to improve Pacific Flyway habitat for migratory birds and other native species
  - Provide water dedicated to help improve conditions for the Delta Smelt
- Water dedicated for the environment provided by Sites Reservoir will be managed by state resources agency managers who will decide how, and when, this water would be used - creating a water asset for the state that does not currently exist.

Insert pictures or graphic



PROVIDES STATEWIDE BENEFITS FOR GENERATIONS TO COME

## SITES RESERVOIR PROVIDES REGIONAL FLOOD PROTECTION BENEFITS



- Provides significant **regional flood protection benefits** for the Sacramento Valley
- Will capture and store **flood flows** that would normally impact the communities of **Maxwell** and **Williams** - protecting homes, business and farms.
- Will help to **limit "down stream" flooding issues** by capturing storm flows that sometimes overwhelm the regions flood control facilities



## PROVIDES STATEWIDE BENEFITS FOR GENERATIONS TO COME

### **SITES RESERVOIR WILL BENEFIT THE LOCAL AND REGIONAL ECONOMY**

- Create hundreds of construction-related jobs during each year of the construction period, and long-term jobs related to operations.
- Creates new recreation opportunities in the Sacramento Valley which adds to the region's economy
- Adding resiliency to the water supply will strengthen the statewide economy and business that rely on a reliable source of water for their operations – particularly agriculture

Insert pictures or graphic





## WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE PEOPLE OF CALIFORNIA

### Sites Project Authority has accomplished a lot since it was formed

- **2010** Sites Project Authority is formed
- **2016** Reservoir Committee is formed
- **2016** Released a Draft Environment Impact Report/Environmental Impact Statement (DEIR-EIS) in partnership Bureau of Reclamation
- **2018** Sites Reservoir Project was awarded **\$816 million in state investment** to advance the project, the largest award given to any project requesting Proposition 1 support.
- **2018** Awarded a **\$449 million loan** from the US Department of Agriculture's Rural Development program.
- **2019** The project receives **\$6 million**, bringing the total in Congressional Appropriations from the Water Infrastructure Improvements for the Nation (WIIN) Act to **\$10 million**.
- **2020** Sites Reservoir is specifically named as one of **only two priority project** in the Governor's **2019 Water Resilience Draft Portfolio**—a plan to provide reliability and resiliency to statewide water supplies.



## WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE PEOPLE OF CALIFORNIA

### Next Steps for 2020 – 2021 – Environmental Planning

- Finalization of the EIR/EIS Project Description Chapter, both construction and operations/maintenance of the project and alternatives
- Desk top research to update environmental baseline, where appropriate, to better support analysis and the administrative record
- Continued outreach to Landowners, Agencies, NGOs, Tribes, and other stakeholders to minimize risk of extensive comments later
- Prepare and circulate a revised Draft EIR/EIS
- Review, categorize and draft initial responses to comments received on the recirculated Draft EIR/EIS
- Prepare and submit an Environmental Summary Report to support CWC feasibility determination



**WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE  
PEOPLE OF CALIFORNIA**

**Next Steps for 2020 – 2021 – Environmental Permitting**

- **Submit required permits in support of planned Geotechnical field activities**
- **Submit Section 401 permit application**
- **Submit Section 106 Action Plan**
- **Submit Water Rights application**
- **Updated Biological Assessment (BA) and Biological Opinion (BO)**
- **Development agreement on approach for Section 404 & 408 permit and streambed alteration agreement**



## **WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE PEOPLE OF CALIFORNIA**

### **Next Steps for 2020 – 2021 – Engineering**

- Complete **Final Federal Feasibility Report** in coordination with Bureau of Reclamation
- Engage with **Division of Safety of Dams (DSOD)** on dam design and construction approach
- Continuing **collecting and analyzing of focused geotechnical data** in support of design
- Develop the project-wide **Geotechnical Investigation Plan**
- Updated and refine the **project-wide cost estimate**
- Support the Environmental Planning and Permitting teams with **engineering and design support**



**WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE  
PEOPLE OF CALIFORNIA**

**ADD FINANCIAL SLIDES**

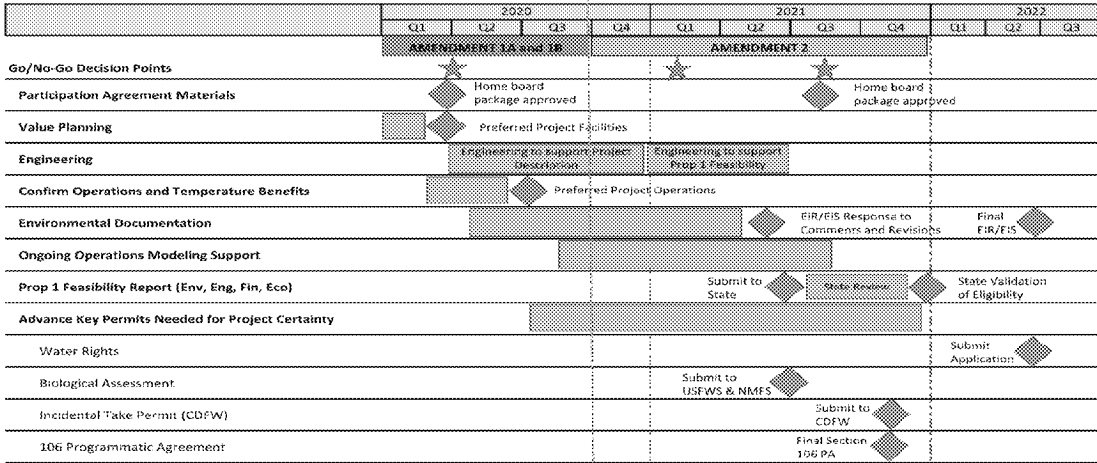


# WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE PEOPLE OF CALIFORNIA

## Near-term Project Schedule

Sites Reservoir Program  
 Updated 2020-2021 Schedule Drivers

September 1, 2020



**NOTE:** This graphic includes schedule drivers only and does not include all activities/deliverables. This work plan is based on current participation commitments.



## **WE ARE ON-TRACK TO DELIVER THIS VITAL PROJECT FOR THE PEOPLE OF CALIFORNIA**

### **Key Accomplishments at end of 2021**

- **Meet eligibility requirements under Prop 1 (WSIP) in order to access the remaining \$776 Million in funding**
- **Draft EIR/EIS with responses to comments**
- **Feasibility Report**
- **Greater environmental permit certainty and draft permit applications**
- **Updated and refined cost estimate and affordability analysis**
- **Adopted Storage Policy that can be used to meet individual investor needs**
- **Better definition of SWP/CVP exchange, including Operations Plan**
- **Stronger landowner, stakeholder & NGO engagement**



**21<sup>ST</sup> CENTURY SOLUTION TO CALIFORNIA'S WATER  
RELIABILITY CHALLENGES**

**ADD "WHY" SITES**





# QUESTIONS

 **Sites**

---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/9/2020 5:45:20 AM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]; John Spranza (john.spranza@hdrinc.com) [john.spranza@hdrinc.com]  
**Subject:** RE: Sites - Monthly Update for Res Comm

I added this to Reclamation coordination:

Drafted environmental feasibility technical memo summarizing EIR/EIS process to date to support Reclamation's Feasibility Report findings.

---

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Wednesday, April 8, 2020 6:43 PM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; John Spranza (john.spranza@hdrinc.com) <john.spranza@hdrinc.com>  
**Subject:** Sites - Monthly Update for Res Comm

I have officially lost steam. Can you both take a look at the monthly update? I know there is more but I have just lost steam and cant think of anything else. Marcia needs this ASAP. Sorry for the rush.

It's here:

[https://sitesreservoirproject.sharepoint.com/:w:/r/reservoircommittee/Shared%20Documents/1-Res%20Comm%20Agenda/2020/04%20-%20April%202020/Working%20Files/04-02.1A%20Res%20Comm Attachment Monthly%20Status%20Report\(2020April17\).docx?d=w28591e206adc4cb8bc9be13c04b32e12&csf=1&web=1&e=MPP7sp](https://sitesreservoirproject.sharepoint.com/:w:/r/reservoircommittee/Shared%20Documents/1-Res%20Comm%20Agenda/2020/04%20-%20April%202020/Working%20Files/04-02.1A%20Res%20Comm%20Attachment%20Monthly%20Status%20Report(2020April17).docx?d=w28591e206adc4cb8bc9be13c04b32e12&csf=1&web=1&e=MPP7sp)

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 |  
aforsythe@sitesproject.org | [www.SitesProject.org](http://www.SitesProject.org)

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---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/9/2020 8:00:20 AM  
**To:** Spranza, John [John.Spranza@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** RE: Sites - Monthly Update for Res Comm

Baseline is covered in the EIR/EIS restart bullet – we're good there. Agree on the PD.

---

**From:** Spranza, John [mailto:John.Spranza@hdrinc.com]  
**Sent:** Thursday, April 9, 2020 7:57 AM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Sites - Monthly Update for Res Comm

I take that back, they did get in there. I did not include PD or baseline as I thought it was too soon.

John Spranza

D 916.679.8858 M 818.640.2487

---

**From:** Spranza, John  
**Sent:** Thursday, April 9, 2020 7:52 AM  
**To:** 'Alicia Forsythe' <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Sites - Monthly Update for Res Comm

I made changes to this on Tuesday and somehow they did not get include in this file....UGH. I will de add.

John Spranza

D 916.679.8858 M 818.640.2487

---

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Wednesday, April 8, 2020 6:43 PM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Spranza, John <John.Spranza@hdrinc.com>  
**Subject:** Sites - Monthly Update for Res Comm

CAUTION: [EXTERNAL] This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

I have officially lost steam. Can you both take a look at the monthly update? I know there is more but I have just lost steam and cant think of anything else. Marcia needs this ASAP. Sorry for the rush.

It's here:

[https://sitesreservoirproject.sharepoint.com/:w:/r/reservoircommittee/Shared%20Documents/1-Res%20Comm%20Agenda/2020/04%20-%20April%202020/Working%20Files/04-02.1A%20Res%20Comm Attachment Monthly%20Status%20Report\(2020April17\).docx?d=w28591e206adc4cb8bc9be13c04b32e12&csf=1&web=1&e=MPP7sp](https://sitesreservoirproject.sharepoint.com/:w:/r/reservoircommittee/Shared%20Documents/1-Res%20Comm%20Agenda/2020/04%20-%20April%202020/Working%20Files/04-02.1A%20Res%20Comm%20Attachment%20Monthly%20Status%20Report(2020April17).docx?d=w28591e206adc4cb8bc9be13c04b32e12&csf=1&web=1&e=MPP7sp)

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 |  
[aforsythe@sitesproject.org](mailto:aforsythe@sitesproject.org) | [www.SitesProject.org](http://www.SitesProject.org)

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---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/10/2020 4:33:31 PM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** RE: Sites - Project Description Development - Internal Team Meeting  
**Attachments:** Documentation and Filing.docx; CEQA Administrative Record.docx

Hi Ali,

Sorry for the delay – it seems there is never enough time. Please see the attached sections of the PMP related to documentation and the admin record. I tried to keep it succinct and just realized we will need to add FOIA paragraph. The list of what goes into the admin record is separate since I think it needs to be accessible as a standalone document. However, I can add it in to the body of the text if you prefer.

Have a good weekend,

Laurie

---

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Friday, April 10, 2020 9:40 AM  
**To:** John Spranza (john.spranza@hdrinc.com) <john.spranza@hdrinc.com>; Kevin Spesert <kspesert@sitesproject.org>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Jelica Arsenijevic (Jelica.Arsenijevic@hdrinc.com) <Jelica.Arsenijevic@hdrinc.com>; Linda Fisher (linda.fisher@hdrinc.com) <linda.fisher@hdrinc.com>; Frederikson Lee (Lee.Frederiksen@hdrinc.com) <Lee.Frederiksen@hdrinc.com>  
**Subject:** Sites - Project Description Development - Internal Team Meeting

Hi all – Almost forgot – I’ve uploaded the risk matrix to SharePoint. Please feel free to add / modify the file.

Here’s the link again:

<https://sitesreservoirproject.sharepoint.com/:f/r/ProjectDescription/Shared%20Documents/Project%20Management?csf=1&web=1&e=zDYt9d>

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 |  
[aforsythe@sitesproject.org](mailto:aforsythe@sitesproject.org) | [www.SitesProject.org](http://www.SitesProject.org)

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## 1.1 Documentation and Filing

Public Resources Code 21167.6 (e) provides a list of the types of documents that comprise an administrative record. This list is included as Attachment XX of the PMP. The following document management procedures are required for all project staff and consultants involved in preparing the EIR and any other components of the project. A consistent file structure has been established in SharePoint that will be maintained by the Integration Team on behalf of the Authority. However, all project staff and consultants (herein referred to as the Project Team) will be required to contribute to project documentation and the retention of appropriate documents.

**Commented [LWH1]:** I included it as an attachment so it can be a stand-alone document for reference purposes

### 1.1.1 Required Documentation

The Project Team will prepare and retain, as appropriate, the documents that are relevant and necessary to support the overall effort and the preparation of a complete administrative record for the Project. Sites Project templates for reports, technical memos, agendas, meeting minutes and meeting notes are available on SharePoint<sup>1</sup>. File naming conventions have also been established and can also be found on SharePoint<sup>2</sup>.

#### Meeting Agendas and Minutes

Identify the type and number of meetings or workshops. Identify project team members who should attend.

To the extent feasible, meeting agendas will be prepared and provided for review 24 hours prior to meetings. Meetings will be documented and meeting minutes will be distributed to team members, as appropriate. After approval of the meeting minutes by Authority staff, meeting minutes will be uploaded to SharePoint. Define the project documentation requirements, particularly any deviations from standard procedures:

#### Correspondence

Communications to be documented for this project include letters, emails, telephone conversations, and any other personal communications with bearing on the technical direction of the project. Calls and personal communications must be documented with a record of conversation or follow-up email outlining the contents and decisions of the conversation. Correspondence may have attachments relevant to the administrative record (e.g., requests for information, schedules, mailing lists, etc.) which should also be retained.

#### Workshops and Other Meetings

The Project Team will be responsible for organizing workshops and other meetings with agencies and other stakeholders. Workshop materials, notices, etc. will be prepared in advance of meetings for review by Authority staff. All materials will be uploaded to SharePoint.

<sup>1</sup> <https://sitesreservoirproject.sharepoint.com/Templates/Forms/AllItems.aspx>

<sup>2</sup> [https://sitesreservoirproject.sharepoint.com/w:/r/PMP/\\_layouts/15/Doc.aspx?sourcedoc=%7BDF827D1A-FDB8-4164-BFF2-C6085896B317%7D&file=PMPA03-Documents%20Management%20Plan%20File%20Naming%20Convention%20Handout.docx&action=default&mobileRedirect=true](https://sitesreservoirproject.sharepoint.com/w:/r/PMP/_layouts/15/Doc.aspx?sourcedoc=%7BDF827D1A-FDB8-4164-BFF2-C6085896B317%7D&file=PMPA03-Documents%20Management%20Plan%20File%20Naming%20Convention%20Handout.docx&action=default&mobileRedirect=true)

## Deliverables

All deliverables and associated QA/QC forms will be uploaded to the appropriate working draft folders on SharePoint. It is assumed that all consultant deliverables will be subject to internal QA/QC review prior to submittal. Authority staff and Integration Team leads will coordinate review of deliverables with other parties. All documents created by the Project Team will use one of the following labels or a variant in the header or footer and will always include a version date:

- **Confidential Attorney-Client Communication – Not for Public Distribution** (for communications *to or from* Client, internal and/or outside counsel).
- **Internal Draft – Not for Public Review** or **Administrative Draft – Not for Public Review** (for administrative drafts restricted to the Project Team and/or other agencies, but not publicly distributed, e.g., Administrative Draft Initial Study or Administrative Draft Environmental Impact Report (EIR)).
- **Screen Check Draft – Not for Public Review** (for Screen Check drafts restricted to the Project Team and/or other agencies, but not publicly distributed; e.g., Screen Check Draft EIR)
- **Public Draft** (for draft documents shared with the public, e.g., published Draft EIR circulated for public comment).
- **Final** (for final, public versions of documents, e.g., Final EIR).

### 1.1.2 Document Retention Policy

The following provides general guidance on the retention of project documents.

1. Internal Administrative Drafts – in most cases, discard once the public draft or final is published. However, the Project Team should retain any internal administrative drafts that provide substantial evidence supporting the ultimate CEQA decisions (e.g., a substantive change to the methodology or impact analysis).
2. Redline comments on internal administrative drafts – in most cases, discard once public draft or final is published and if not needed for staff review. Similar to # 1, above, the Project Team should retain any redline comments that provide substantial evidence supporting the ultimate CEQA decisions.
3. Drafts (and comments, including redline comments) of memoranda, reports or other documents constituting substantial evidence supporting the CEQA document or the Findings – retain if the drafts and comments provide substantial evidence supporting the ultimate CEQA decisions.
4. Drafts of staff reports, Findings of Fact and Statements of Overriding Considerations – same as #3 above.
5. Proposed schedules – should be discarded.
6. Non-substantive emails – should be discarded.
7. Copies of agendas or other hand-outs at meetings – retain as noted in Section 1.1.1.
8. Handwritten notes – same as #3 above.

9. Documents related to the subject but not part of the CEQA process – should be kept if they would be kept in the ordinary course of business. Such documents would not normally be part of the CEQA process but could be the subject to Public Records Act requests or could be discoverable documents during litigation. Examples of these types of documents include materials developed by the Project Team for meetings conducted outside the CEQA process (e.g., presentations or notes from any stakeholder meetings).
10. Documents from, to, or copied to an attorney – a copy should be kept in a confidential folder in the project files. These documents would be reviewed for legal privilege but may be part of the CEQA record, a Public Records Act request or for other reasons.
11. Litigation “hold”– If litigation is initiated, do not dispose of any Project-related documents and/or e-mails until the litigation is finally resolved.

### **1.1.3 Reference Documents, Models and Data**

As part of the CEQA administrative Record, the Project Team must also retain copies of the following types of materials, whether they are developed or just used by staff and consultants:

- A. References listed in a bibliography or reference list in the CEQA documents and/or supporting technical studies.
- B. Documents incorporated by reference in the CEQA documents and/or supporting technical studies.
- C. Other documents relied upon by the consultants that may not be listed in the CEQA documents, including technical studies and analyses.

The Project Team will save a PDF file of every source referenced or relied upon in the technical analysis. Files will be organized in the order listed in the reference list or bibliography. The PDF of each reference will be labeled consistent with the in-text citation. For example, if a source is listed in the references as “DWR 2014,” the electronic file name should include “DWR\_2014.”

#### **Reference Materials**

**Books:** The references must indicate the portions of a book or manual relied upon for document preparation and the consultants shall include a PDF copy of those portions in the administrative record.

**Periodicals/Scientific Articles:** The consultants will provide a copy of the entire article referenced. As many scientific and technical periodicals, particularly older issues, are not readily available, it is critical to obtain copies from the consultants that used them.

**Websites:** The consultants will print or save a PDF of any document reviewed on or retrieved from the internet at the time it is being used. This includes web pages and is especially critical since websites change regularly.

**Models:** Output from models are an important part of the record. An appendix or attachment with a discussion of how the model functions, how it was used, and what the results were may be sufficient.

**Data:** Raw data that is cited should be included in the record. There may be an appropriate way of demonstrating the data that was used without including extensive pages of raw data.

#### **Other Documents**



**Staff/Consultant Notes:** Staff and consultant notes may be needed for an administrative record to defend a CEQA litigation challenge. While all notes do not belong in the administrative record, the Project Team may keep notes related to the CEQA document process or the project as they do in the normal course of business. Meeting notes and conference call notes that relate to the substance of the CEQA document or project will be retained on SharePoint.

**Other items:** Copies of other documents relevant to project activities should be uploaded for general reference. Examples might include newspaper clippings, maps, periodicals, scientific research, meeting handouts, etc.

If there is any question about whether to keep a record or discard it, check first with Authority staff, in coordination with legal counsel.

## CEQA Administrative Record

Pursuant to California Public Resources Code § 21167.6(e)<sup>1</sup> and CRC 3.2205<sup>2</sup>, the record of proceedings shall include, but is not limited to, all of the following items in the order specified by CRC 3.2205(a)(1).

- (A) Notice of Determination
- (B) Resolutions or ordinances adopted by Lead Agency approving the project
- (C) CEQA Findings and Statement of Overriding Considerations
- (D) The Final EIR, including the Draft EIR or a revision of the Draft EIR, all other matters included in the Final EIR, and other types of environmental impact documents prepared under CEQA, e.g., Negative Declaration, MND, addenda.
- (E) Initial Study
- (F) All staff reports and related documents prepared by the respondent public agency with respect to its compliance with the substantive and procedural requirements of CEQA and with respect to the action on the project; all staff reports prepared for any administrative bodies providing subordinate approvals or recommendations to the Lead Agency (in chronological order).
- (G) Transcripts or minutes of the proceedings at which the decisionmaking body of the respondent public agency heard testimony on, or considered any environmental document on, the project, and any transcript or minutes of proceedings before any advisory body to the respondent public agency that were presented to the decisionmaking body prior to action on the environmental documents or on the project. (in chronological order)
- (H) The remainder of the administrative record in chronological order. This may include:
  - All project application materials.
  - All notices issued by the respondent public agency to comply with CEQA or with any other law governing the processing and approval of the project.
  - Any other written comments received in response to, or in connection with, environmental documents prepared for the project, including responses to the NOP.
  - All written evidence or correspondence submitted to, or transferred from, the lead agency with respect to compliance with CEQA or with respect to the project.
  - Any proposed decisions or findings submitted to the decisionmaking body of the lead agency by its staff, or the project proponent, project opponents, or other persons.
  - All documents relied on in the adopted Findings or SOC.
  - Any other written materials relevant to the respondent public agency's compliance with CEQA or to its decision on the merits of the project, including any drafts of any environmental document, or portions thereof, that have been released for public review, and copies of studies or other documents relied upon in any environmental document prepared for the project and either made available to the public during the public review period or included in the respondent public agency's files on the project.
  - All internal agency communications, including staff notes and memoranda related to the project or to compliance with CEQA.
  - The full written record before any inferior administrative decisionmaking body whose decision was appealed to a superior administrative decisionmaking body prior to the filing of litigation.

---

<sup>1</sup> [https://leginfo.legislature.ca.gov/faces/codes\\_displaySection.xhtml?sectionNum=21167.6.&lawCode=PRC](https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=21167.6.&lawCode=PRC)

<sup>2</sup> [https://www.courts.ca.gov/cms/rules/index.cfm?title=three&linkid=rule3\\_2205](https://www.courts.ca.gov/cms/rules/index.cfm?title=three&linkid=rule3_2205)

---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/14/2020 10:02:01 AM  
**To:** Monique Briard (Monique.Briard@icf.com) [Monique.Briard@icf.com]; Williams, Nicole [Nicole.Williams@icf.com]  
**CC:** Heydinger, Erin (Erin.Heydinger@hdrinc.com) [Erin.Heydinger@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** FW: [EXTERNAL] RE: Sites NEPA strategy

Good morning --

Please see the dates/times that Reclamation is available and let me know what works for you. I'll send out an invitation once we confirm.

Thanks,

Laurie

---

**From:** Davis, Ryan A [mailto:rdavis@usbr.gov]  
**Sent:** Tuesday, April 14, 2020 9:23 AM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Cc:** Grimes, Russell W <RWGrimes@usbr.gov>; Heydinger, Erin (Erin.Heydinger@hdrinc.com) <Erin.Heydinger@hdrinc.com>; Martin, Nathaniel J <nmartin@usbr.gov>  
**Subject:** RE: [EXTERNAL] RE: Sites NEPA strategy

Hey Laurie,

Russell Grimes, Nate Martin, and I will be attending from Reclamation.

I checked our schedules and we are available:

Thursday, 4/16/2020, 10am-12pm

Wednesday, 4/22/2020, 10-11am

Thursday, 4/23/2020, 9-11am

Thanks,

Ryan A. Davis, EIT  
*Project Manager, Water Supply Planning Branch*  
US Bureau of Reclamation  
Interior Region 10: California-Great Basin  
2800 Cottage Way, Sacramento, CA 95825  
Email: [rdavis@usbr.gov](mailto:rdavis@usbr.gov)  
Office: (916) 978-5083  
Cell: (916) 206-5133

---

**From:** Laurie Warner Herson <[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)>  
**Sent:** Friday, April 10, 2020 1:04 PM  
**To:** Davis, Ryan A <[rdavis@usbr.gov](mailto:rdavis@usbr.gov)>  
**Cc:** Grimes, Russell W <[RWGrimes@usbr.gov](mailto:RWGrimes@usbr.gov)>; Heydinger, Erin ([Erin.Heydinger@hdrinc.com](mailto:Erin.Heydinger@hdrinc.com)) <[Erin.Heydinger@hdrinc.com](mailto:Erin.Heydinger@hdrinc.com)>  
**Subject:** FW: [EXTERNAL] RE: Sites NEPA strategy

Hi Ryan,

Prior to Kellye's reassignment, we had been trying to schedule a meeting with Reclamation staff to discuss the NEPA process moving forward (see below). As you know, the Authority has undertaken a Value Planning (VP) process to identify an alternative that meets the needs of the the Participants. The Value Planning Work Group will be taking their recommendations to the Sites Board this month. This includes a recommended project, VP7. It is assumed at this time that this alternative will necessitate a revised and recirculated Draft EIR to comply with CEQA.

We need to coordinate with Reclamation regarding NEPA requirements and process, with the assumption that we continue with a joint CEQA/NEPA document. We probably need at least an hour to meet with you and have prepared the following draft agenda for your consideration:

1. Overview of Alternatives
  - a. Locally Preferred Project - brief overview of VP process and anticipated outcome
  - b. USBR feasibility report
- i. Current Status
- ii. Changes since 2017 draft
- iii. Does it identify a preferred alternative (local and/or NED)
  - c. Other potential alternatives
2. Sites Likely Path Forward for CEQA Compliance and Schedule
3. Federal Action and Reclamation Likely Path Forward for NEPA Compliance
4. Potential Considerations if Recirculating Joint Document:
  - a. Secretarial Order and page / time limits
  - b. New NEPA regulations (if adopted by CEQ) and scope of the recirculated document
  - c. Other considerations?

Please Let me know if you have time in the next couple of weeks to meet and provide a list of who from Reclamation we should invite to the meeting. We will be including the Authority's environmental consultant leads – Monique Briard and Nicole Williams from ICF. We have been using WebEx to hold meetings online so we can share screens. Hopefully, this works for you.

Thank you,

Laurie

Laurie Warner Herson  
Sites Integration Team

Principal/Owner



**Environmental Planning**

916.201.3935

[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)

State of California Small Business (#1796182)

Supplier Clearinghouse Women Business Enterprise (#16000323)

<http://phenixenv.com/>

-----Original Message-----

From: Kennedy, Kellye J [<mailto:kkennedy@usbr.gov>]  
Sent: Thursday, March 26, 2020 8:49 AM  
To: Laurie Warner Herson <[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)>  
Cc: Erin Heydinger <[Erin.Heydinger@hdrinc.com](mailto:Erin.Heydinger@hdrinc.com)>  
Subject: RE: [EXTERNAL] RE: Sites NEPA strategy

Hi Laurie-

Yea, let's get the discussion started. Looking at both Russ and my schedule we are available all day on the 7th, and the afternoons of April 8-10.

Doing well. Hope you are too.

Kellye

-----Original Message-----

From: Laurie Warner Herson <[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)>  
Sent: Thursday, March 26, 2020 8:09 AM  
To: Kennedy, Kellye J <[kkennedy@usbr.gov](mailto:kkennedy@usbr.gov)>  
Cc: Erin Heydinger <[Erin.Heydinger@hdrinc.com](mailto:Erin.Heydinger@hdrinc.com)>  
Subject: [EXTERNAL] RE: Sites NEPA strategy

Hi Kellye,

I heard from Erin that you would like to go ahead and schedule the EIS discussion soon. I will be looking for dates the week of April 6th to set up a conference call or WebEx meeting. I hope to get a draft agenda to you on Monday and we can establish who should attend at that time.

I hope you are doing well,

Laurie

-----Original Message-----

From: Laurie Warner Herson  
Sent: Monday, February 24, 2020 11:33 AM  
To: Kellye J Kennedy <[kkennedy@usbr.gov](mailto:kkennedy@usbr.gov)>  
Cc: Erin Heydinger <[Erin.Heydinger@hdrinc.com](mailto:Erin.Heydinger@hdrinc.com)>  
Subject: Sites NEPA strategy

Hi Kellye,

We are trying to refine the schedule for the recirculated DEIR/DEIS and a lot depends on the NEPA process and Reclamation reviews. Please let me know when you confirm who I should reach out to at Reclamation for a strategy discussion.

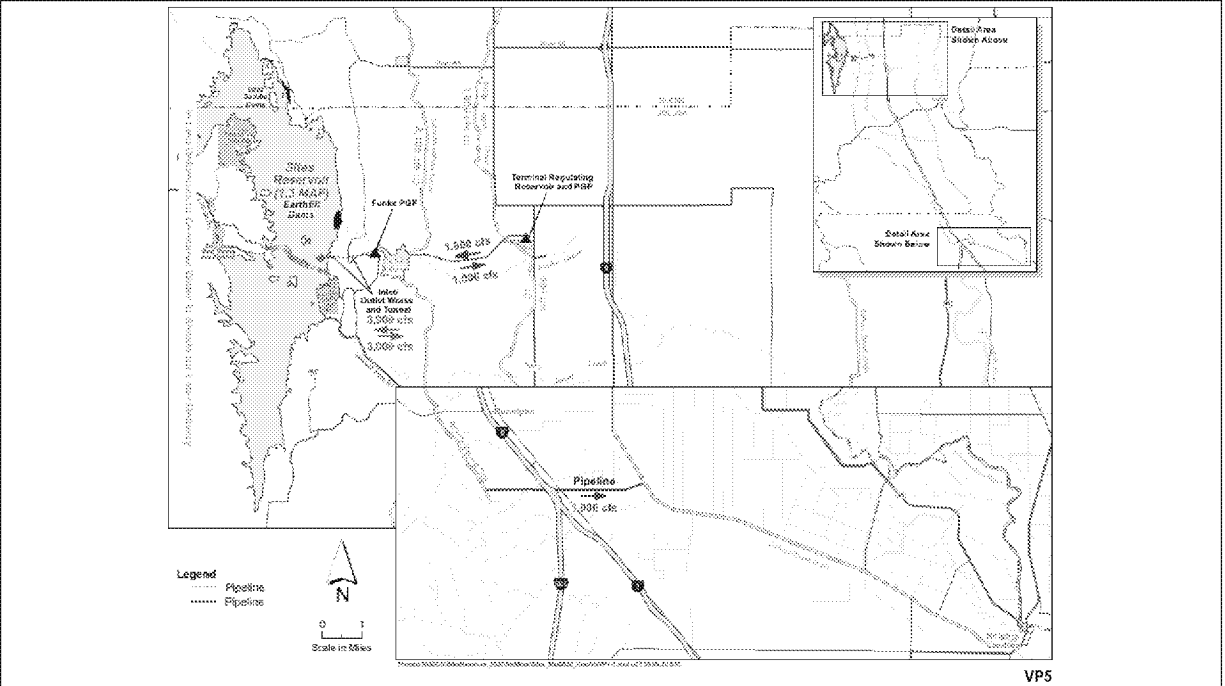
By the way, we can come to your office for the next meeting.

Thank you,

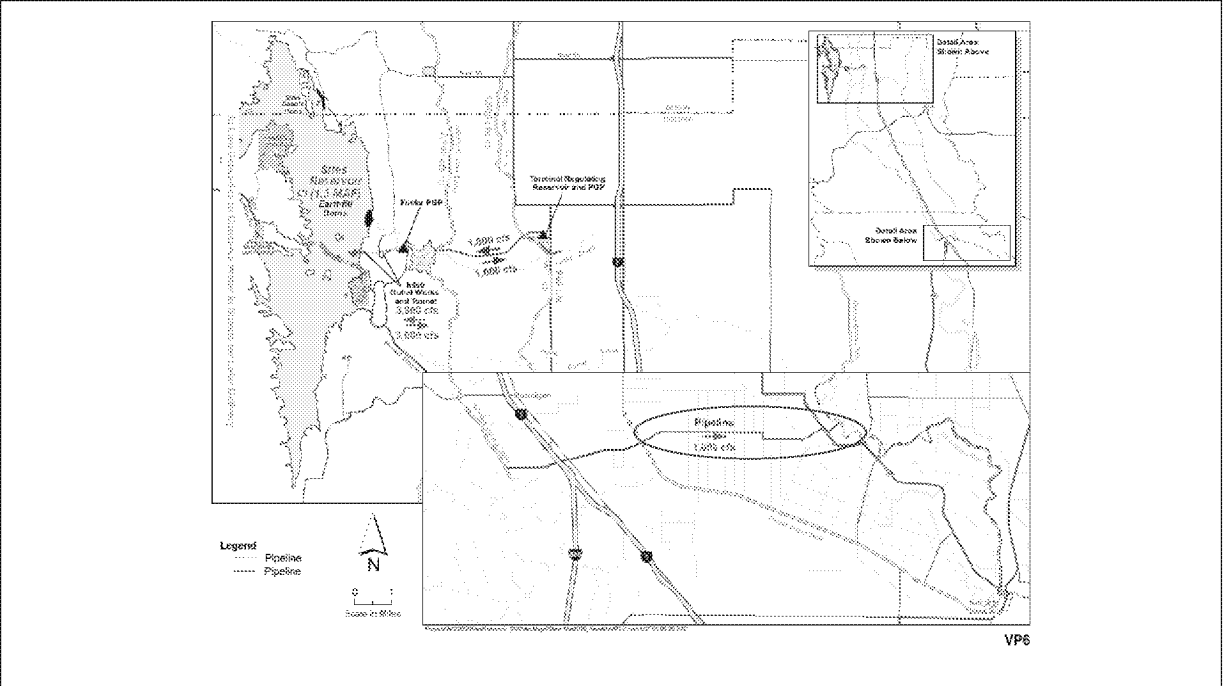
Laurie

Sent from my iPhone

# VP Alternatives







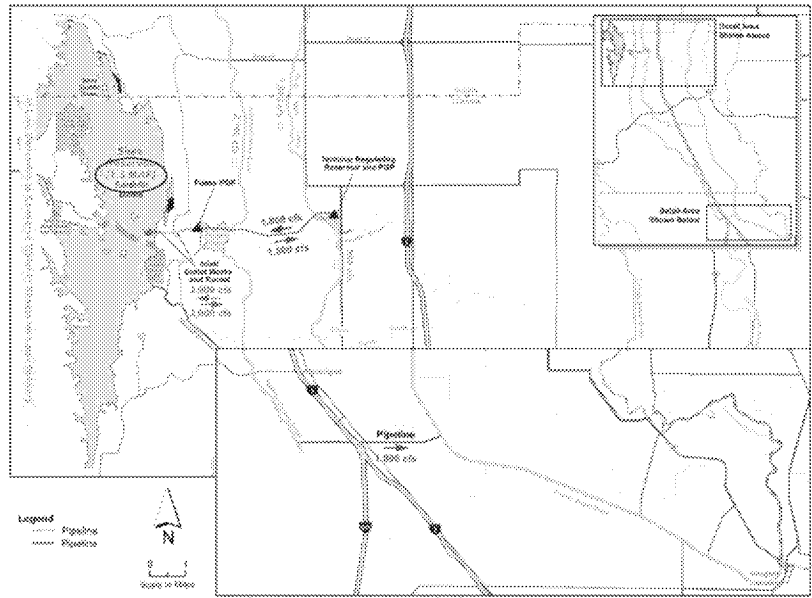


FIGURE B-1. RECOMMENDED VALUE PLANNING ALTERNATIVE (VP7)

# AECOM Role

Reservoir Engineering – Mike Forrest, PM

## AECOM (Engineering – Reservoir Area)

- Golden Gate Dam
- Sites Dam
- Saddle Dams/Spillways/Ridge Grouting
- South Bridge
- Roads
- I/O Tower
- I/O Tunnel
- Creek Diversions
- Salt Pond

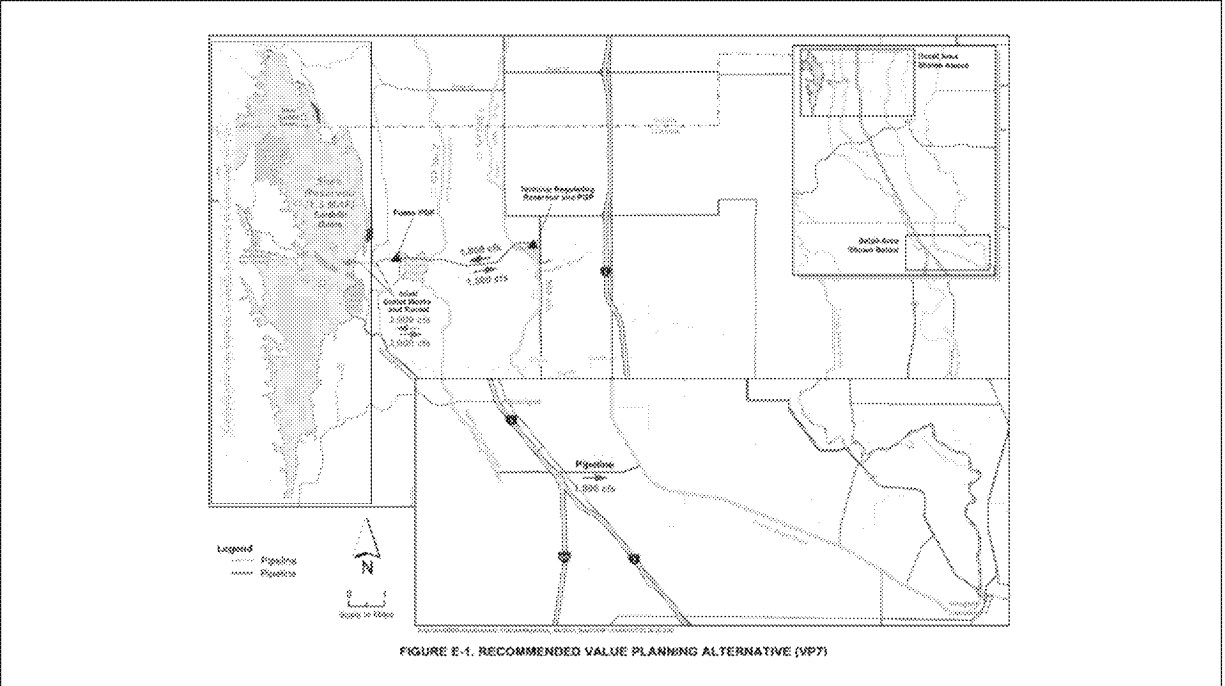


FIGURE E-1. RECOMMENDED VALUE PLANNING ALTERNATIVE (VP7)

# Scope of Work

## **Task 1 (May-August)**

- CAD/GIS Standards
- Coordinate EIR/S Alternatives
- Develop Engineering Tech Memos
- Develop CAD Drawings
- Develop Facility Descriptions

## **Task 2 (September 20 – December 21)**

- Develop GIS Figure
- Develop Cost Estimate
- Engineering Support to Environmental Team
- Prepare Feasibility Report

---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/15/2020 4:02:18 PM  
**To:** Arsenijevic, Jelica [Jelica.Arsenijevic@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [Erin.Heydinger@hdrinc.com]  
**CC:** Spranza, John [John.Spranza@hdrinc.com]; Frederiksen, Lee E. [Lee.Frederiksen@hdrinc.com]; Boling, Robert M. [Robert.Boling@hdrinc.com]; Fisher, Linda [Linda.Fisher@hdrinc.com]  
**Subject:** RE: Sites - Project Description Team Meeting

Great job Jelica – almost identical to my notes so I have nothing to add!

---

**From:** Arsenijevic, Jelica [mailto:Jelica.Arsenijevic@hdrinc.com]  
**Sent:** Wednesday, April 15, 2020 3:33 PM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>; Heydinger, Erin <Erin.Heydinger@hdrinc.com>  
**Cc:** Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Frederiksen, Lee E. <Lee.Frederiksen@hdrinc.com>; Boling, Robert M. <Robert.Boling@hdrinc.com>; Fisher, Linda <Linda.Fisher@hdrinc.com>  
**Subject:** RE: Sites - Project Description Team Meeting

Hey Ali/Erin

Great call! I learn something new with every call we have! Here are my notes from meeting that you may be able to tap into

- VP Overview (Jeff Herrin)
- VP 5 -
- 1.3 MAF, reduced in the VP alternatives, several roads associated with it.
- Filling reservoir from 2 existing canals
- Pumping into reservoir
- Ellen B - How much info will be available for parking lots, use areas. Jeff says there is conceptual figure with trails, parking, roads but a long way from being finalized. For example Stone Corral recreation area there will be a road that provides access to Sites Dam. Road will need be ironed as part of the process. County will be designing those. We haven't received their input.
- Canal to CBD
- VP 6
- 1.3
- 1,000 cfs release into Sacramento River through CBD (underneath)
- VP 7 - preferred
- 1.5 MAF
- 1,000 cfs to CBD.
- Inlet/outlet reservoir (taller)
- Discussed what level of design we have for feasibility, including how much of previous design can we use, how much is new?
- Jeff-
- there are new facilities that are completely new (Dunnigan pipeline to CBD). A lot of facilities haven't changed drastically in terms of footprint. All dams are still going in the same locations as previously ID'd. Some of the saddle

dams may all be eliminated, small minimal structures. Locations are in the same place as previously shared. We have good start on design, but have to redesign for new elevation of reservoir.

- Tower essentially same location . Bridge design same location with a little different design.
- Recreation areas not moving from where we had them earlier.
- TRR - same size as previous document. Type of gates will change, but the size of TRR is same. Pumping plant same location but a little larger
- Pumping plant at Funks is new, and some pumping plants went away.
- About 10% design level for previously accounted for facilities.
- Pete asked if there are drawings of pipeline from Funks to Sites Reservoir. Jeff reports that there are drawings and the federal feasibility report includes them
- Overall drawings range between 0 and 10% design. Goal is 10% for water commission submission For commission and EIR/EIS is 10%.
- Discussed that 10% design is considered conceptual . 35% is further design with greater detail.
- Rob Tull - VP from operations side of things
- VP document assumes no Reclamation investment in Sites (which is different)
- AECOM engineering responsibility
- reservoir and associated facilities whereas as Jacobs is providing engineering support related to conveyance (on east side). Mike Forrest is the PM. Jeff will be liaison .
- Golden gate dam
- Sites dam
- Saddle dam/spillways / ridge grouting
- South bridge
- Roads
- I/O tower and tunnel
- Creek diversions
- Salt pond.
- Under contract in a few weeks. First task(May through August 2020) is CAD/GIS standards, coordinate EIR/S alternatives, develop engineering tech memos (defining basis for design), develop CAD drawings, develop facilities descriptions. Second task (September 2020 through December 2021) - develop GIS figure, develop cost estimate, engineering support to environmental team, prepare feasibility report.
- Action items - BDCP EIR/EIS project description to SharePoint
- Action item : Notes, send those over to Ali and Erin.
- Next steps:
- Respond to Doodle Poll for kickoff meeting rescheduled.
- Focus on PMP during kickoff meeting .

Happy Wednesday

Jelica Arsenijevic

**Due to COVID-19, I will be working from home. Please contact me via cell # listed below. Be safe out there!**

D 916-679-8854  
M 209-329-6897



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-----Original Appointment-----

**From:** Alicia Forsythe [<mailto:aforsythe@sitesproject.org>]

**Sent:** Monday, April 6, 2020 2:32 PM

**To:** Alicia Forsythe; Spranza, John; Laurie Warner Herson; Frederiksen, Lee E.; Heydinger, Erin; Monique Briard ([Monique.Briard@icf.com](mailto:Monique.Briard@icf.com)); Jim Lecky ([jim.Lecky@icf.com](mailto:jim.Lecky@icf.com)); Williams, Nicole; Tull, Robert/SAC; Rude, Pete/RDD; Jim Watson; Boling, Robert M.; Forrest, Michael; Herrin, Jeff; Marcia Kivett; Jerry Brown; Arsenijevic, Jelica; Fisher, Linda; Kevin Spesert; [conner@cmdwest.com](mailto:conner@cmdwest.com)

**Cc:** Berryman, Ellen; Unsworth, Ellen

**Subject:** Sites - Project Description Team Meeting

**When:** Wednesday, April 15, 2020 1:00 PM-3:30 PM (UTC-08:00) Pacific Time (US & Canada).

**Where:** Conference Call Only - See Webex below

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Password: Sites1234

Join by phone

+1-408-418-9388 United States Toll

Access code: 968 270 724

<< File: 20200417\_Project Description Team\_Meeting-AGN.docx >>

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**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/15/2020 4:40:32 PM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]; John Spranza [John.Spranza@hdrinc.com]; Erin Heydinger [Erin.Heydinger@hdrinc.com]  
**Subject:** Fwd: Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

FYI - more to think about in terms of alternatives and federal investment

Begin forwarded message:

**From:** "Herrin, Jeff" <jeff.herrin@aecom.com>  
**Date:** April 15, 2020 at 4:23:06 PM PDT  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Cc:** "erin.heydinger@hdrinc.com" <erin.heydinger@hdrinc.com>  
**Subject:** RE: Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

I was talking specifically about the creek diversions, two tunnels, and spillway. Those will be described in the engineering appendix. Nicole had a question about whether those facilities had ever been described.

Reclamation has two brand new alternatives for sensitivity analysis, Alternatives A1 and D1. The facilities are generally the same, but Holthouse Reservoir is eliminated and replaced with Fletcher. We now have the new facilities cited above. Pumping plant foundations and pipeline alignments have changed. Quantities have changed in the dams. The operations are quite different because they include Reclamation investment/acquisition of storage/CVP operational flexibility. There is a lot of water going to the CVP. These alternatives will still need to be reconciled in a post-authorization report, but the descriptions of alternatives (including the no action alternative which now includes ROC on LTO and the amended COA) have been revised. It has changed a lot in the last 6 months.

---

**From:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Sent:** Wednesday, April 15, 2020 4:15 PM  
**To:** Herrin, Jeff <jeff.herrin@aecom.com>  
**Cc:** Heydinger, Erin (Erin.Heydinger@hdrinc.com) <Erin.Heydinger@hdrinc.com>  
**Subject:** [EXTERNAL] FW: Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

Hi Jeff,

Just a point of clarification – you said today that the Reclamation Feasibility Report will have descriptions of the project facilities. I assume you mean descriptions of the facilities that are common to both the original alternatives (A-D) and the VP alternatives. My understanding from Reclamation was that they are not revising the description of alternatives in the Feasibility Report but will reconcile in a Post-Feasibility Report later.

Can you confirm?

Thanks,

Laurie

---

**From:** Williams, Nicole [mailto:Nicole.Williams@icf.com]  
**Sent:** Wednesday, April 15, 2020 3:40 PM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Heydinger, Erin (Erin.Heydinger@hdrinc.com)

<Erin.Heydinger@hdrinc.com>

**Cc:** Briard, Monique <Monique.Briard@icf.com>

**Subject:** RE: Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

Hi Laurie and Erin – following up on this email thread because something that Jeff mentioned today made me think about it.

It sounded like Jeff said that all facilities will be described in the upcoming feasibility report for Reclamation and that there has been some work that has been done on the spillway – and it should be in there.

But I understood that the Reclamation feasibility report is looking at the previous alternatives evaluated Alts A through D – and I didn't think the spillway that Jeff described today was in those alternatives (but I could be wrong).

I guess it would still be helpful to see some of the draft sections of Reclamation's feasibility report to help us think through the packaging/describing the alternatives.

Thanks for the call today, it was really informative.

Cheers, Nicole

**NICOLE L. WILLIAMS**  
Senior Environmental Planner  
ICF  
o 916.231.9614  
*icf.com*

---

**From:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>

**Sent:** Tuesday, April 07, 2020 10:21 AM

**To:** Williams, Nicole <Nicole.Williams@icf.com>

**Cc:** Briard, Monique <Monique.Briard@icf.com>; Heydinger, Erin (Erin.Heydinger@hdrinc.com) <Erin.Heydinger@hdrinc.com>

**Subject:** RE: Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

Hi Nicole,

At this point, I don't have the most recent version. I will ask Reclamation if they can share draft sections. Kellye had originally said that they would but they may be waiting to send us the entirety of the report for review rather than sections.

My understanding is that the revised feasibility report will address the same alternatives as the 2017 report. They have told us that it is too late in the process to update the report with new alternatives, although they are having Jacobs do a sensitivity analysis based on ROC on LTO.

I will confirm the timing with Ryan and get back to you.

Thanks,

Laurie

---

**From:** Williams, Nicole [mailto:Nicole.Williams@icf.com]

**Sent:** Tuesday, April 7, 2020 10:06 AM

**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>

**Cc:** Briard, Monique <[Monique.Briard@icf.com](mailto:Monique.Briard@icf.com)>

**Subject:** Sites Reservoir - Follow up on Alternatives Request from Ali at Friday (4/3) Meeting

Hi Laurie – I was wondering if you have the most current version of Reclamation’s feasibility report and if we could see a description of the alternative(s) evaluated. I understand they have elected not to identify a “preferred alternative” in the feasibility report, but I think seeing the project description/alternatives description of the feasibility report would help us on the task that Ali assigned last Friday (ICF to prepare bullet points supporting the description of different alternatives). Many thanks.

Cheers, Nicole

NICOLE L. WILLIAMS | Senior Environmental Planner | (o) 916.231.9614 | (m) 530.867.0470 | [nicole.williams@icf.com](mailto:nicole.williams@icf.com) | [icf.com](http://icf.com)  
ICF | 980 9th Street Suite 1200 Sacramento CA 95814 |



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---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/16/2020 10:59:12 AM  
**To:** Spranza, John [John.Spranza@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** RE: Res Committee Dry Run and Mtg

Place of Use appears in the growth inducement chapter:

All users of CVP and SWP water must use the water within the Place of Use designated by the State SWRCB in the water rights issued to the Reclamation and DWR. The Place of Use was established in the agricultural areas based upon areas that have been historically irrigated by CVP and/or SWP water supplies. The CVP water users also must submit annual reports to Reclamation, indicating the types and extent of crop patterns with the amount of CVP water used to irrigate those crops.

I haven't checked appendices yet.

-----Original Message-----

**From:** Spranza, John [mailto:John.Spranza@hdrinc.com]  
**Sent:** Thursday, April 16, 2020 10:48 AM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>  
**Cc:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

I will give it a look now.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Thursday, April 16, 2020 10:47 AM  
**To:** Spranza, John <John.Spranza@hdrinc.com>  
**Cc:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

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On our res comm committee prep call, Jerry just said that he doesn't see a need for consultants support after item 2.2. The water right topic is 3 something. So I think you can stand down.

However, one super quick question - can you scan the Draft EIR/EIS quickly to see if it spoke to the place of use for the water right at all?

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org | [https://urldefense.proofpoint.com/v2/url?u=https-3A\\_\\_nam05.safelinks.protection.outlook.com\\_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bdata-3DiYzsEmvPATq4gGp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAW&c=eUGZstcaTD1lviEN8b7jXrwqOf-v5A\\_CdpnVfiMM&r=51Di\\_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqwpRnG7pqY5i5&m=C7WYV21twmC-1\\_PUsm1Ne1pFyL-hug\\_MGBTvpZkQU4g&s=tFYD0EzyxxAN\\_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A__nam05.safelinks.protection.outlook.com_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bdata-3DiYzsEmvPATq4gGp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAW&c=eUGZstcaTD1lviEN8b7jXrwqOf-v5A_CdpnVfiMM&r=51Di_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqwpRnG7pqY5i5&m=C7WYV21twmC-1_PUsm1Ne1pFyL-hug_MGBTvpZkQU4g&s=tFYD0EzyxxAN_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=)

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-----Original Message-----

**From:** Alicia Forsythe  
**Sent:** Thursday, April 16, 2020 10:36 AM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; John Spranza <John.Spranza@hdrinc.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

Well I was wrong on permitting. The water right item is on the agenda. Totally forgot about this.

John, would you like to call in also? We are going to push this to the future and ID that we're going to create a water right strategy and bring back to them in August. So it should be quick, but you're more than welcome to call in.

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org | [https://urldefense.proofpoint.com/v2/url?u=https-3A\\_\\_nam05.safelinks.protection.outlook.com\\_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bsdata-3DiYzsEmvPATq4Gp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAw&c=eugZstcaTD1lviEN8b7jXrwqOf-v5A\\_CdpnVfiiMM&r=5lDi\\_dRX9hZur3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqWpRnG7poqY5i5&m=C7WYV2ltwmC-1\\_Pusm1Ne1pFyL-hug\\_MGBTvpZkQU4g&s=tFYD0EzyxxAN\\_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A__nam05.safelinks.protection.outlook.com_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bsdata-3DiYzsEmvPATq4Gp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAw&c=eugZstcaTD1lviEN8b7jXrwqOf-v5A_CdpnVfiiMM&r=5lDi_dRX9hZur3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqWpRnG7poqY5i5&m=C7WYV2ltwmC-1_Pusm1Ne1pFyL-hug_MGBTvpZkQU4g&s=tFYD0EzyxxAN_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=)

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-----Original Message-----

From: Alicia Forsythe  
Sent: Thursday, April 16, 2020 8:52 AM  
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Cc: John Spranza <John.Spranza@hdrinc.com>  
Subject: RE: Res Committee Dry Run and Mtg

Yes. Since we have the EIR recirculation on the agenda, please call in for both. Thank you!

John, I think you can stand down as there isn't anything on the agenda on permitting topics.

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org | [https://urldefense.proofpoint.com/v2/url?u=https-3A\\_\\_nam05.safelinks.protection.outlook.com\\_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bsdata-3DiYzsEmvPATq4Gp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAw&c=eugZstcaTD1lviEN8b7jXrwqOf-v5A\\_CdpnVfiiMM&r=5lDi\\_dRX9hZur3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqWpRnG7poqY5i5&m=C7WYV2ltwmC-1\\_Pusm1Ne1pFyL-hug\\_MGBTvpZkQU4g&s=tFYD0EzyxxAN\\_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A__nam05.safelinks.protection.outlook.com_-3Furl-3Dhttp-253A-252F-252Fwww.sitesproject.org-252F-26amp-3Bdata-3D02-257C01-257CJohn.Spranza-2540hdrinc.com-257C493e7846b96142d809af08d7e22e1ca2-257C3667e201cbdc48b39b425d2d3f16e2a9-257C0-257C0-257C637226559986740304-26amp-3Bsdata-3DiYzsEmvPATq4Gp911t3BhXdY4Jryz32TT7q7aPe8QI-253D-26amp-3Breserved-3D0&d=DwIFAw&c=eugZstcaTD1lviEN8b7jXrwqOf-v5A_CdpnVfiiMM&r=5lDi_dRX9hZur3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqWpRnG7poqY5i5&m=C7WYV2ltwmC-1_Pusm1Ne1pFyL-hug_MGBTvpZkQU4g&s=tFYD0EzyxxAN_avQus7SqF4dEiLhGMOKvgxbjyQaoq0&e=)

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-----Original Message-----

From: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Sent: Thursday, April 16, 2020 7:29 AM  
To: Alicia Forsythe <aforsythe@sitesproject.org>  
Cc: John Spranza <John.Spranza@hdrinc.com>  
Subject: Res Committee Dry Run and Mtg

Hi Ali,

Just checking in to see if you want me to call in to the Res Committee dry run today and whether you need me for the meeting tomorrow. If not, I will likely still call in tomorrow but not announce myself and not bill my time.

Thanks,

Laurie

---

**From:** Spranza, John [John.Spranza@hdrinc.com]  
**Sent:** 4/16/2020 11:03:15 AM  
**To:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** RE: Res Committee Dry Run and Mtg  
  
**Flag:** Follow up

So the place of use is within the existing SWP and CVP place of use. There is no explicit notation to Sites applying for any specific water right with a POU, it is inferred from the analysis using the primary, secondary and extended study areas, which include all of the SWP and CVP POU.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

**From:** Laurie Warner Herson [mailto:laurie.warner.herson@phenixenv.com]  
**Sent:** Thursday, April 16, 2020 10:48 AM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <John.Spranza@hdrinc.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

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Will do - I'll let you know.

-----Original Message-----

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Thursday, April 16, 2020 10:47 AM  
**To:** John Spranza <John.Spranza@hdrinc.com>  
**Cc:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

On our res comm committee prep call, Jerry just said that he doesn't see a need for consultants support after item 2.2. The water right topic is 3 something. So I think you can stand down.

However, one super quick question - can you scan the Draft EIR/EIS quickly to see if it spoke to the place of use for the water right at all?

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 | aforsythe@sitesproject.org |  
[https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.proofpoint.com%2Fv2%2Fur1%3Fu%3Dhttp-3A\\_\\_www.SitesProject.org%26d%3DDwIFAw%26c%3DeuGZstcaTD11vimEN8b7jXrwqOf-v5A\\_CdpnVfiiMM%26r%3D51Di\\_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqWpRnG7poqY5i5%26m%3D54YnfzhtxqD1MsZ05Ao-ZZ21HMHGJG51T1IglAFGbeY%26s%3Do6wYzQV0wncSx-z2m90Kwu21xJSfshIozMHWExdrKQ%26e%3D&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7Cdef84a9516de4db7cb8d08d7e22e54b3%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C0%7C637226560953872828&sdata=UOF49jQpTCqeq%2BPBbmGEePiHdmgHe67TZ0FWdaPlbI0%3D&reserved=0](https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.proofpoint.com%2Fv2%2Fur1%3Fu%3Dhttp-3A__www.SitesProject.org%26d%3DDwIFAw%26c%3DeuGZstcaTD11vimEN8b7jXrwqOf-v5A_CdpnVfiiMM%26r%3D51Di_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqWpRnG7poqY5i5%26m%3D54YnfzhtxqD1MsZ05Ao-ZZ21HMHGJG51T1IglAFGbeY%26s%3Do6wYzQV0wncSx-z2m90Kwu21xJSfshIozMHWExdrKQ%26e%3D&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7Cdef84a9516de4db7cb8d08d7e22e54b3%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C0%7C637226560953872828&sdata=UOF49jQpTCqeq%2BPBbmGEePiHdmgHe67TZ0FWdaPlbI0%3D&reserved=0)

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**Subject:** RE: Res Committee Dry Run and Mtg

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John, would you like to call in also? We are going to push this to the future and ID that we're going to create a water right strategy and bring back to them in August. So it should be quick, but you're more than welcome to call in.

Ali

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Subject: RE: Res Committee Dry Run and Mtg

Yes. Since we have the EIR recirculation on the agenda, please call in for both. Thank you!

John, I think you can stand down as there isn't anything on the agenda on permitting topics.

Ali

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Cc: John Spranza <John.Spranza@hdrinc.com>  
Subject: Res Committee Dry Run and Mtg

Hi Ali,

Just checking in to see if you want me to call in to the Res Committee dry run today and whether you need me for the meeting tomorrow. If not, I will likely still call in tomorrow but not announce myself and not bill my time.

Thanks,

Laurie



---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/16/2020 1:15:13 PM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** RE: Res Committee Dry Run and Mtg  
**Attachments:** 20200416\_Talking Points for Reservoir Committee 2-1-d\_lwh.docx

Just a few comments.

-----Original Message-----

From: Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
Sent: Thursday, April 16, 2020 10:54 AM  
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Subject: RE: Res Committee Dry Run and Mtg

Laurie - Attached is my talking points file for the recirculation discussion. I was going to keep it pretty short as we've just recently discussed this and I think they were all supportive.

Please make any changes or suggestions that you see.

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org | [https://urldefense.proofpoint.com/v2/url?u=http-3A\\_\\_www.SitesProject.org&d=DwIFAw&c=eUGZstcaTD1lvmEN8b7jXrwqOf-v5A\\_CdpnVfiiMM&r=5lDi\\_dRX9hZur3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqWpRnG7poqY5i5&m=J8fq\\_Ep9VZhxy\\_p419wt05spkAJ5coEvg\\_zu44HHT-8&s=smVJhSVwGurMjZwZqnLrq0SKmwaiU12nWY4xLboeMjo&e=](https://urldefense.proofpoint.com/v2/url?u=http-3A__www.SitesProject.org&d=DwIFAw&c=eUGZstcaTD1lvmEN8b7jXrwqOf-v5A_CdpnVfiiMM&r=5lDi_dRX9hZur3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqWpRnG7poqY5i5&m=J8fq_Ep9VZhxy_p419wt05spkAJ5coEvg_zu44HHT-8&s=smVJhSVwGurMjZwZqnLrq0SKmwaiU12nWY4xLboeMjo&e=)

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Subject: RE: Res Committee Dry Run and Mtg

Will do - I'll let you know.

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To: John Spranza <John.Spranza@hdrinc.com>  
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Subject: RE: Res Committee Dry Run and Mtg

On our res comm committee prep call, Jerry just said that he doesn't see a need for consultants support after item 2.2. The water right topic is 3 something. So I think you can stand down.

However, one super quick question - can you scan the Draft EIR/EIS quickly to see if it spoke to the place of use for the water right at all?

Ali

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Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
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Thanks,

Laurie

**Talking Points for Reservoir Committee – Recirculation EIR**  
**Agenda Item 2.1d – April 17, 2020 Meeting**

In February 2020, the Reservoir Committee and Board both approved a recommendation to re-start efforts on the EIR.

At that time, we were continuing development of the Value Planning Report and were awaiting the final report outcome and identification of the recommended project.

As you're all aware, as part of item 2.1a today, you recommended the approval of the Value Planning Report and approved VP-7 as the recommended alternative.

VP-7 does include areas, primarily the Dunnigan Canal and connection to the Colusa Basin Drain, that we outside of the footprint of the project alternatives in the 2017 Draft EIR/EIS.

Based on our previous discussions, for full and open disclosure, to provide the opportunity for the public to comment on the new alternative, staff will begin development of the revised EIR.

We will coordinate with BOR on the path forward for the EIS with the goal of continuing on the current path of a joint EIR/EIS document.

We will return to the Board to:

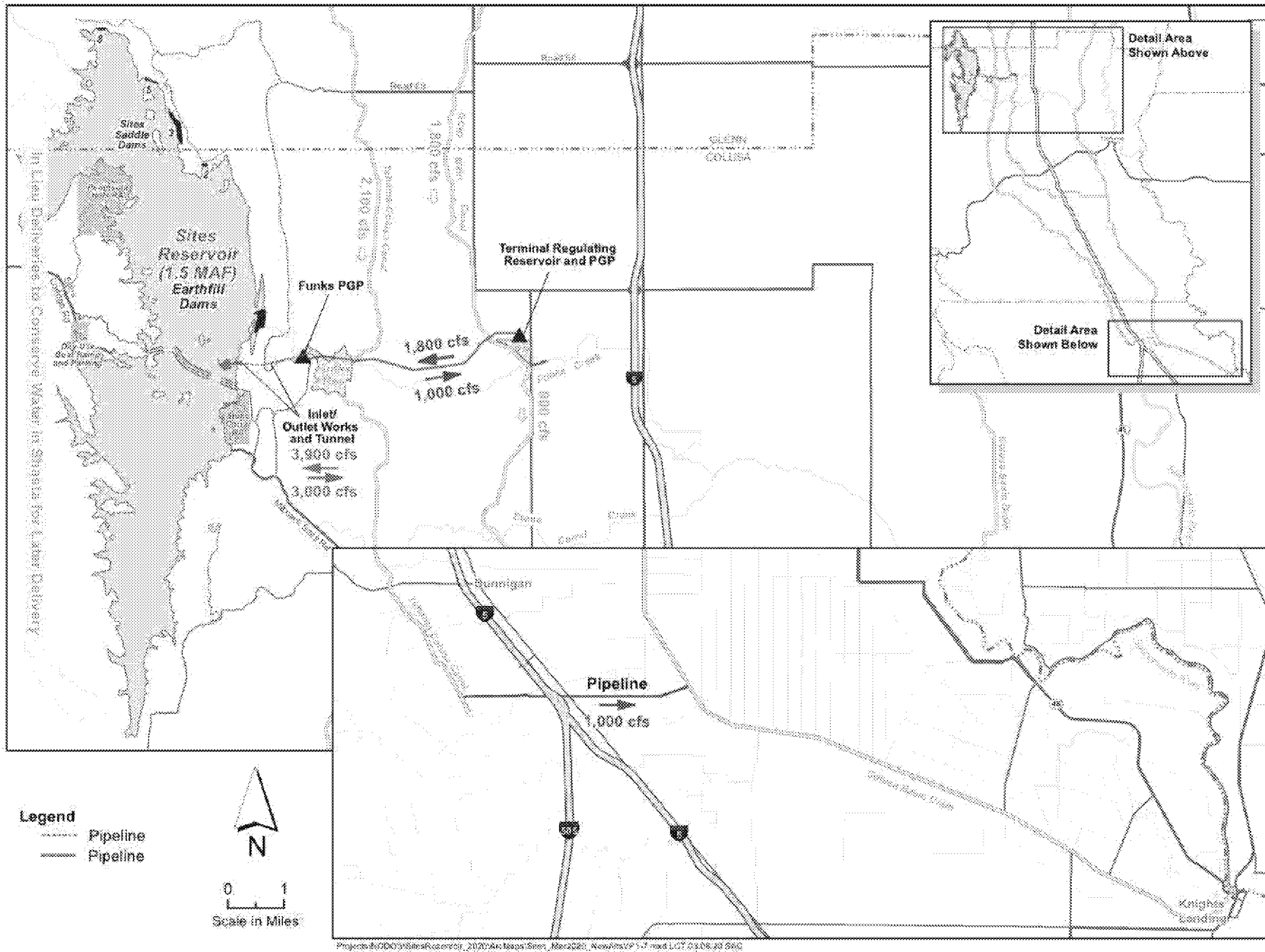
1. ID a preferred alternative for the purposes of CEQA once a more complete description of the range of alternatives is developed; and to
2. Review and approve the release of the recirculated Draft EIR.

We are seeking a recommendation to direct staff to revise ~~the~~ and recirculate the Draft EIR to analyze the environmental effects of the options identified in the Value Planning Report, including VP7.

**Commented [LWH1]:** Are they taking action on VP7 specifically? I'm a little worried about appearing pre-decisional.

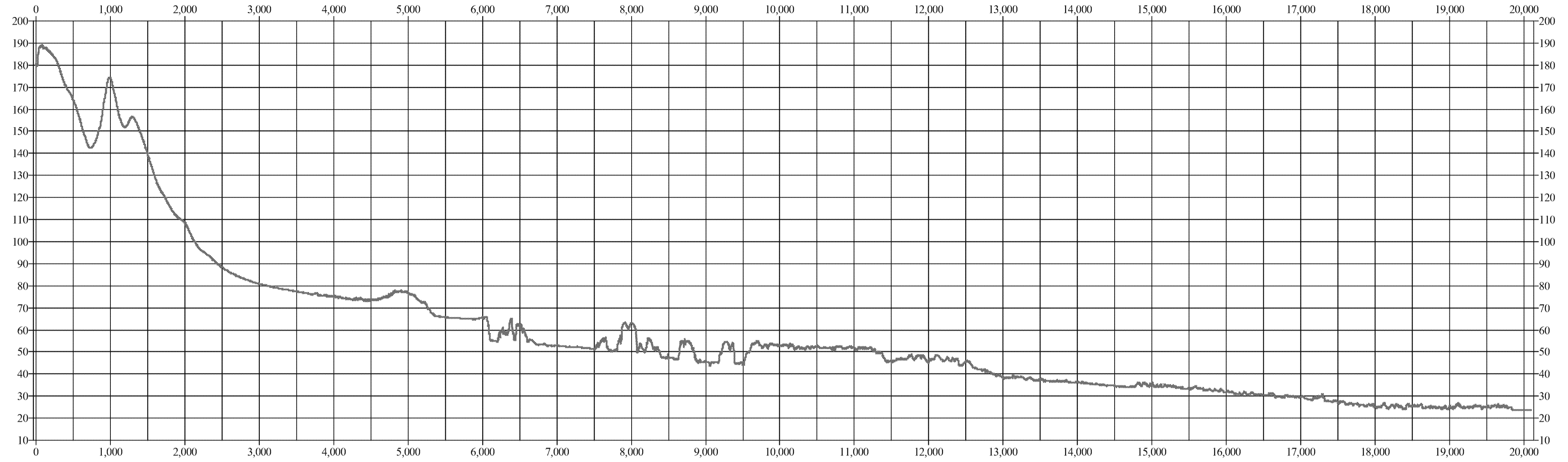
If they are not actually approving VP7, it might be better to say that they "recommended the approval of the Value Planning Report which includes VP7 as the recommended alternative."

**Commented [LWH2]:** Just confirming that recirculation is being requested



**FIGURE E-1. RECOMMENDED VALUE PLANNING ALTERNATIVE (VP7)**

ALTERNATE 6A-2-CBD



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**From:** Spranza, John [John.Spranza@hdrinc.com]  
**Sent:** 4/17/2020 7:57:15 AM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Subject:** RE: Res Committee Dry Run and Mtg

Did you see this from Laurie yesterday?

Place of Use appears in the growth inducement chapter:

All users of CVP and SWP water must use the water within the Place of Use designated by the State SWRCB in the water rights issued to the Reclamation and DWR. The Place of Use was established in the agricultural areas based upon areas that have been historically irrigated by CVP and/or SWP water supplies. The CVP water users also must submit annual reports to Reclamation, indicating the types and extent of crop patterns with the amount of CVP water used to irrigate those crops.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Friday, April 17, 2020 7:52 AM  
**To:** Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

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Thanks John. I took a second look at this just to make sure I could accurately describe it to the Res Comm if they asked.

The extended study area appears to include the CVP and SWP districts. But its not the CVP and SWP Place of Use. The Place of Use is larger than the actual districts.

I do think on our recirculated document, we should include the CVP and SWP Place of Use in our study area. This way, we can have CEQA coverage for Sites water being used within the entire place of use - so members could do sales, transfer and exchanges to others as long as they are within the place of use. Including this in the document will also facilitate the State Board's decision to give us such as expansive place of use.

Ali

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**From:** Spranza, John <John.Spranza@hdrinc.com>  
**Sent:** Thursday, April 16, 2020 11:03 AM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Alicia Forsythe <aforsythe@sitesproject.org>  
**Subject:** RE: Res Committee Dry Run and Mtg

So the place of use is within the existing SWP and CVP place of use. There is no explicit notation to Sites applying for any specific water right with a POU, it is inferred from the analysis using the primary, secondary and extended study areas, which include all of the SWP and CVP POU.

John Spranza

D 916.679.8858 M 818.640.2487

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Sent: Thursday, April 16, 2020 10:47 AM  
To: John Spranza <John.Spranza@hdrinc.com>  
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Subject: RE: Res Committee Dry Run and Mtg

On our res comm committee prep call, Jerry just said that he doesn't see a need for consultants support after item 2.2. The water right topic is 3 something. So I think you can stand down.

However, one super quick question - can you scan the Draft EIR/EIS quickly to see if it spoke to the place of use for the water right at all?

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org |  
[https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Furlddefense.proofpoint.com%2Fv2%2Furl%3Fu%3Dhttp-3A\\_\\_www.SitesProject.org%26d%3DDwIFAw%26c%3DeuGZstcaTD11vimEN8b7jXrwqOf-v5A\\_CdpnVfiiMM%26r%3D51Di\\_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc\\_MkofTH8fiDFwXqWpRnG7poqY5i5%26m%3D54YnfzhtxqD1MsZ05Ao-ZZ21HMhGJG51T1IglAFGbey%26s%3Do6WYzQV0wncSx-z2m90Kwu21xJSfhsliOzMHwExdrKQ%26e%3D&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7C94fb98fa08ef416523d708d7e2def043%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C0%7C637227319458750245&sdata=no8rnNC10oNbwB30yXOrp1rE7QX320a1FaBnjRp1%2Fs%3D&reserved=0](https://nam05.safelinks.protection.outlook.com/?url=https%3A%2F%2Furlddefense.proofpoint.com%2Fv2%2Furl%3Fu%3Dhttp-3A__www.SitesProject.org%26d%3DDwIFAw%26c%3DeuGZstcaTD11vimEN8b7jXrwqOf-v5A_CdpnVfiiMM%26r%3D51Di_dRX9hZUr3uaaaVnGL7X3t7keCUI33rc_MkofTH8fiDFwXqWpRnG7poqY5i5%26m%3D54YnfzhtxqD1MsZ05Ao-ZZ21HMhGJG51T1IglAFGbey%26s%3Do6WYzQV0wncSx-z2m90Kwu21xJSfhsliOzMHwExdrKQ%26e%3D&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7C94fb98fa08ef416523d708d7e2def043%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C0%7C637227319458750245&sdata=no8rnNC10oNbwB30yXOrp1rE7QX320a1FaBnjRp1%2Fs%3D&reserved=0)

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-----Original Message-----

From: Alicia Forsythe  
Sent: Thursday, April 16, 2020 10:36 AM  
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; John Spranza <John.Spranza@hdrinc.com>  
Subject: RE: Res Committee Dry Run and Mtg

Well I was wrong on permitting. The water right item is on the agenda. Totally forgot about this.

John, would you like to call in also? We are going to push this to the future and ID that we're going to create a water right strategy and bring back to them in August. So it should be quick, but you're more than welcome to call in.

Ali

-----  
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To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Cc: John Spranza <John.Spranza@hdrinc.com>  
Subject: RE: Res Committee Dry Run and Mtg

Yes. Since we have the EIR recirculation on the agenda, please call in for both. Thank you!

John, I think you can stand down as there isn't anything on the agenda on permitting topics.

Ali

-----  
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| aforsythe@sitesproject.org |  
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-----Original Message-----

From: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Sent: Thursday, April 16, 2020 7:29 AM  
To: Alicia Forsythe <aforsythe@sitesproject.org>  
Cc: John Spranza <John.Spranza@hdrinc.com>  
Subject: Res Committee Dry Run and Mtg

Hi Ali,

Just checking in to see if you want me to call in to the Res Committee dry run today and whether you need me for the meeting tomorrow. If not, I will likely still call in tomorrow but not announce myself and not bill my time.

Thanks,

Laurie



---

**From:** Spranza, John [John.Spranza@hdrinc.com]  
**Sent:** 4/17/2020 8:34:46 AM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Subject:** RE: Res Committee Dry Run and Mtg

Cool, I think they left it a bit murky on purpose.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Friday, April 17, 2020 8:23 AM  
**To:** Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

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I did. Thank you both!

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org |  
<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.sitesproject.org%2F&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7C081320a3ad3b41c9a77b08d7e2e3432c%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C1%7C637227338022325874&data=N%2B71tPhL92gqH1I5JtF8ueZBA15ijm4YzmkYeAXJ2yk%3D&reserved=0>

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**From:** Spranza, John <John.Spranza@hdrinc.com>  
**Sent:** Friday, April 17, 2020 7:57 AM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

Did you see this from Laurie yesterday?

Place of Use appears in the growth inducement chapter:

All users of CVP and SWP water must use the water within the Place of Use designated by the State SWRCB in the water rights issued to the Reclamation and DWR. The Place of Use was established in the agricultural areas based upon areas that have been historically irrigated by CVP and/or SWP water supplies. The CVP water users also must submit annual reports to Reclamation, indicating the types and extent of crop patterns with the amount of CVP water used to irrigate those crops.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

**From:** Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
**Sent:** Friday, April 17, 2020 7:52 AM  
**To:** Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Subject:** RE: Res Committee Dry Run and Mtg

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Thanks John. I took a second look at this just to make sure I could accurately describe it to the Res Comm if they asked.

The extended study area appears to include the CVP and SWP districts. But its not the CVP and SWP Place of Use. The Place of Use is larger than the actual districts.

I do think on our recirculated document, we should include the CVP and SWP Place of Use in our study area. This way, we can have CEQA coverage for Sites water being used within the entire place of use - so members could do sales, transfer and exchanges to others as long as they are within the place of use. Including this in the document will also facilitate the State Board's decision to give us such as expansive place of use.

Ali

-----  
Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676  
| aforsythe@sitesproject.org |  
<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.sitesproject.org%2F&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7C081320a3ad3b41c9a77b08d7e2e3432c%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C1%7C637227338022325874&data=N%2B71tPhL92gqH1I5JtF8ueZBA15ijm4YzmkyeAXJ2yk%3D&reserved=0>

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-----Original Message-----

From: Spranza, John <John.Spranza@hdrinc.com>  
Sent: Thursday, April 16, 2020 11:03 AM  
To: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Alicia Forsythe <aforsythe@sitesproject.org>  
Subject: RE: Res Committee Dry Run and Mtg

So the place of use is within the existing SWP and CVP place of use. There is no explicit notation to Sites applying for any specific water right with a POU, it is inferred from the analysis using the primary, secondary and extended study areas, which include all of the SWP and CVP POU.

John Spranza

D 916.679.8858 M 818.640.2487

-----Original Message-----

From: Laurie Warner Herson [mailto:laurie.warner.herson@phenixenv.com]  
Sent: Thursday, April 16, 2020 10:48 AM  
To: Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <John.Spranza@hdrinc.com>  
Subject: RE: Res Committee Dry Run and Mtg

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Will do - I'll let you know.

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From: Alicia Forsythe [mailto:aforsythe@sitesproject.org]  
Sent: Thursday, April 16, 2020 10:47 AM  
To: John Spranza <John.Spranza@hdrinc.com>  
Cc: Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
Subject: RE: Res Committee Dry Run and Mtg

On our res comm committee prep call, Jerry just said that he doesn't see a need for consultants support after item 2.2. The water right topic is 3 something. So I think you can stand down.

However, one super quick question - can you scan the Draft EIR/EIS quickly to see if it spoke to the place of use for the water right at all?

Ali

-----  
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z2m90Kwu21xJSfshliOzMHwExdrKQ%26e%3D&data=02%7C01%7CJohn.Spranza%40hdrinc.com%7C081320a3ad3b41c9a77b0  
8d7e2e3432c%7C3667e201cbdc48b39b425d2d3f16e2a9%7C0%7C637227338022325874&data=aXN3Pt5EUqQdmQ8cwiR  
8b1b5P0Qhujja%2BP5bcvNTqVXQ%3D&reserved=0

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Well I was wrong on permitting. The water right item is on the agenda. Totally forgot about this.

John, would you like to call in also? We are going to push this to the future and ID that we're going to create a water right strategy and bring back to them in August. So it should be quick, but you're more than welcome to call in.

Ali

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Yes. Since we have the EIR recirculation on the agenda, please call in for both. Thank you!

John, I think you can stand down as there isn't anything on the agenda on permitting topics.

Ali

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Thanks,

Laurie

---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/20/2020 4:35:20 PM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]; Spranza, John [John.Spranza@hdrinc.com]  
**Subject:** FW: [EXTERNAL] Revised NODOS/Sites Feasibility Report

FYI

---

**From:** Davis, Ryan A [mailto:rdavis@usbr.gov]  
**Sent:** Monday, April 20, 2020 4:16 PM  
**To:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Cc:** Heydinger, Erin (Erin.Heydinger@hdrinc.com) <Erin.Heydinger@hdrinc.com>  
**Subject:** RE: [EXTERNAL] Revised NODOS/Sites Feasibility Report

Hey Laurie,

They have changed a lot.

- Operations have changed to remove water quality and replace it with Yolo Bypass releases for Delta smelt and CVP operational flexibility
- Several facilities have changed – most notably Fletcher Reservoir replaced Holthouse Reservoir

There are lots of other changes, but those are the major ones. We haven't received the text from AECOM yet but I just asked them to send the descriptions as soon as they are ready.

Best,

Ryan A. Davis, EIT  
*Project Manager, Water Supply Planning Branch*  
US Bureau of Reclamation  
Interior Region 10: California-Great Basin  
2800 Cottage Way, Sacramento, CA 95825  
Email: [rdavis@usbr.gov](mailto:rdavis@usbr.gov)  
Office: (916) 978-5083  
Cell: (916) 206-5133

---

**From:** Laurie Warner Herson <laurie.warner.herson@phenixenv.com>  
**Sent:** Monday, April 20, 2020 3:38 PM  
**To:** Davis, Ryan A <rdavis@usbr.gov>  
**Cc:** Heydinger, Erin (Erin.Heydinger@hdrinc.com) <Erin.Heydinger@hdrinc.com>  
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Thank you,

Laurie

Laurie Warner Herson  
Principal/Owner



**Environmental Planning**

916.201.3935

[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)

State of California Small Business (#1796182)

Supplier Clearinghouse Women Business Enterprise (#16000323)

<http://phenixenv.com/>

---

**From:** Spranza, John [John.Spranza@hdrinc.com]  
**Sent:** 4/21/2020 7:27:10 AM  
**To:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**CC:** Heydinger, Erin [Erin.Heydinger@hdrinc.com]  
**Subject:** RE: [EXTERNAL] Revised NODOS/Sites Feasibility Report

Thanks.

The water quality component has a story to it, we need to find out why that was made. Was it Op Flex related, was it due to Alt A not being able to provide the required water out of Shasta? Inquiring minds want to know!

**John Spranza**

D 916.679.8858 M 818.640.2487

---

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**Sent:** Monday, April 20, 2020 4:35 PM  
**To:** Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <John.Spranza@hdrinc.com>  
**Subject:** FW: [EXTERNAL] Revised NODOS/Sites Feasibility Report

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FYI

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Principal/Owner



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[laurie.warner.herson@phenixenv.com](mailto:laurie.warner.herson@phenixenv.com)  
State of California Small Business (#1796182)  
Supplier Clearinghouse Women Business Enterprise (#16000323)

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---

**From:** Laurie Warner Herson [laurie.warner.herson@phenixenv.com]  
**Sent:** 4/21/2020 7:42:08 AM  
**To:** Spranza, John [John.Spranza@hdrinc.com]  
**CC:** Alicia Forsythe [aforsythe@sitesproject.org]; Heydinger, Erin [Erin.Heydinger@hdrinc.com]  
**Subject:** Re: [EXTERNAL] Revised NODOS/Sites Feasibility Report

Yes indeed...once we get through this NEPA meeting and we get to review the full Feasibility Report, we should have another meeting to ask these and other questions.

On Apr 21, 2020, at 7:27 AM, Spranza, John <John.Spranza@hdrinc.com> wrote:

Thanks.

The water quality component has a story to it, we need to find out why that was made. Was it Op Flex related, was it due to Alt A not being able to provide the required water out of Shasta? Inquiring minds want to know!

**John Spranza**

D 916.679.8858 M 818.640.2487

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Laurie

Laurie Warner Herson  
Principal/Owner  
<[image001.png](#)>  
**Environmental Planning**

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# Project Description Development Meeting Minutes



## Meeting Information:

<b>Date:</b> April 15, 2020	<b>Location:</b> WebEx Meeting
<b>Start Time:</b> 1 p.m.	<b>Finish Time:</b> 3:30 p.m.
<b>Notes By:</b> HDR - Sites Integration	<b>Reviewed By:</b> Ali Forsythe
<b>Purpose:</b> Overview of Value Planning Report and Introduction of Team Members' Roles	

## Meeting Participants (indicate absent invitees):

Jelica Arsenijevic, Sites Integration	Lee Frederiksen, HDR	Robert Tull, CH2M
Ellen Berryman, ICF	Ali Forsythe, Sites Authority	Ellen Unsworth, ICF
Robert Boling, HDR	Jeff Herrin, AECOM	Laurie Warner Herson, Sites Integration
Monique Briard, ICF	Erin Heydinger, HDR	Jim Watson, Sites Authority
Jerry Brown, Sites Authority	Jim Lecky, ICF	Nicole Williams, ICF
Linda Fisher, Sites Integration	Pete Rude, CH2M	
Michael Forrest, AECOM	Kevin Spesert, Sites Authority	
	John Spranza, Sites Integration	Additional Team Members

## Action Items:

Action Item	Owner	Deadline	Notes
1 BDCP EIR/EIS Project Description	Authority & Integration	Prior to next meeting	Upload BDCP EIR/EIS project description to SharePoint
2 Meeting notes	Authority & Integration	Prior to next meeting	Compile meeting notes from 4/15/2020 meeting and distribute to meeting attendees prior to next meeting.

## Meeting Minutes:

### 1. Value Planning Report and VP5, VP6, and VP7 Overview

Jeff Herrin (AECOM) provided an overview of the Value Planning process, including an overview of the recommended value planning alternatives – VP5, VP6, and VP 7

- VP 5 includes:
  - 1.3 MAF, several roads associated with it.
  - Filling reservoir from 2 existing canals
  - Pumping into reservoir
  - Canal to CBD

Ellen Berryman (ICF) in regards to recreation areas, asked how much available information is available (e.g., parking lots, use areas, etc.). Jeff Herrin reported that there is conceptual figure with trails, parking,

roads but detailed design information is far from being finalized. For example, Stone Corral Recreation Area identifies the need for a road that will provide access to Sites Dam. The road will need be ironed as part of the design process. Colusa County will be designing the road; however, the team has yet to receive their input.

- VP 6 includes:
  - 1.3 MAF
  - 1,000 cfs release into Sacramento River through CBD (underneath)
- VP 7 (preferred) includes:
  - 1.5 MAF
  - 1,000 cfs to CBD.
  - Inlet/outlet reservoir (taller)

Discussed what level of design the team has for feasibility, including how much of previous design can we use, how much is new?

- Jeff Herrin explained:
  - There are completely new facilities that were identified during the VP process (e.g., Dunnigan pipeline to CBD). Many facilities haven't changed drastically in terms of footprint. All dams are still going in the same locations as previously identified. Some of the saddle may be eliminated, some may be smaller in size (minimal structures). Locations of the dams are the same place as previously shared. Jeff Herrin's team has a good start on design, but have to redesign some features for new elevation of reservoir.
  - Tower essentially in the same location as previously identified. The bridge is in the same location with a little different design.
  - Location of recreation areas remain the same.
  - TRR - same size as previous document. Type of gates will change, but the size of TRR is same. Pumping plant same location but a little larger.
  - Pumping plant at Funks Reservoir is new, and some pumping plants previously identified were eliminated.
  - Engineering team is at an approximately 10% design level for previously accounted for facilities.

Pete Rude asked if there are available drawings of pipeline from Funks Reservoir to Sites Reservoir. Jeff Herrin reports that there are drawings and the federal feasibility report includes them.

Jeff Herrin reported that the overall completeness of drawings range between 0 and 10% design. Goal is 10% for water commission submission and 10% for EIR/EIS.

Rob Tull (Jacobs) provided brief overview of operations analysis conducted for VP analysis. He pointed out that the VP analysis assumes no Reclamation investment in Sites, which is different than past assumptions.

## 2. Project Team Presentations –

- Ali Forsythe gave overview of overall her role and of the overall integration role. John Spranza supports Ali Forsythe with permitting Laurie Warner Herson provides environmental planning support and Erin Heydinger supports Operations and Reclamation coordination. Other integration roles include engineering (Lee Frederiksen) and real estate (Conner McDonald).
- Jeff Herrin provided a brief overview of their role with the development of the project description. AECOM responsibilities lie with designing the Sites Reservoir and associated facilities (listed below), whereas Jacobs is providing engineering support related to conveyance. Jeff Herrin

introduced Mike Forrest as the project manager. Jeff Herrin will be the liaison between environmental permitting and planning and the AECOM team for information needs.

Associated facilities AECOM is responsible for include:

- Golden Gate Dam
- Sites Dam
- Saddle dam/spillways / ridge grouting
- South bridge
- Roads
- Inlet/Outlet tower and tunnel
- Creek diversions
- Salt pond

AECOM under contract in a few weeks. First task (May through August 2020) is developing CAD/GIS standards, coordinate with environmental planning team to develop EIR/EIS alternatives, develop engineering technical memorandums which define the basis of design, develop CAD drawings, develop facilities descriptions. Second task (September 2020 through December 2021) - develop GIS figure, develop cost estimate, engineering support to environmental team, prepare feasibility report.

- Monique Briard provided a brief overview of the ICF environmental planning and permitting responsibilities and tasks. Monique introduced key ICF team members. She provided an overview of Task 1B Scope of Work (through August 31, 2020).

Monique also informed the meeting participants of data needs that are required for the development of the EIR/EIS and key permits project descriptions. The level of detail available from Sites Project Authority team (engineering and operations) will direct the decision on the technical approach – programmatic versus a project-level analysis.

### 3. Action Item Review

See above for action items

### 4. Next Steps:

Meeting participants to respond to Doodle Pool for rescheduled kickoff meeting. Kickoff meeting will focus on Project Management Plan for the project description.

**From:** Tull, Robert/SAC [Robert.Tull@jacobs.com]  
**Sent:** 4/22/2020 4:39:19 PM  
**To:** Heydinger, Erin [Erin.Heydinger@hdrinc.com]; Alicia Forsythe [aforsythe@sitesproject.org]  
**CC:** Leaf, Rob/SAC [Rob.Leaf@jacobs.com]; Whittington, Chad/SAC [Chad.Whittington@jacobs.com]; Thayer, Reed/SAC [Reed.Thayer@jacobs.com]; Micko, Steve/SAC [Steve.Micko@jacobs.com]  
**Subject:** Value Planning Facilities Sensitivity with CDFW Scenario A  
**Attachments:** Sites\_Reservoir\_Facility\_Sizing\_Analysis\_for\_Scenario\_A\_20200416\_v1 (002).docx

**Flag:** Follow up

Ali,

Attached is a brief draft write up on the sensitivity analysis conducted to evaluate reservoir and conveyance sizing using CDFW Scenario A diversion criteria.

As shown below we are not able to achieve the average annual reservoir release target of 230 TAF/year under Scenario A.

Let us know if you have any questions.

Thanks,  
 Rob

Internal - Preliminary -Sensitivity			
Conveyance Release Analysis - Scenario A			
Sites Reservoir Release (TAF)			
Long-term Average			
Storage Capacity (MAF)	Scenario A - 1,500 cfs Release Capacity	Scenario A - 1,000 cfs Release Capacity	Scenario A - 750 cfs Release Capacity
1.5	194	188	184
1.3	184	180	180
1.0	163	154	149

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---

**From:** Cordova, Daniel A [dcordova@usbr.gov]  
**Sent:** 4/24/2020 8:25:54 AM  
**To:** Arsenijevic, Jelica [Jelica.Arsenijevic@hdrinc.com]  
**CC:** Ivie, Melissa M [mivie@usbr.gov]; Carper, Mark A [mcarper@usbr.gov]; Davis, Ryan A [rdavis@usbr.gov]; Alicia Forsythe [aforsythe@sitesproject.org]; Spranza, John [John.Spranza@hdrinc.com]; Laurie Warner Herson [laurie.warner.herson@phenixenv.com]; Briard, Monique [Monique.Briard@icf.com]; Tannourji, Danielle [Danielle.Tannourji@icf.com]; christian.havelaar@icf.com; Davis, Ryan A [rdavis@usbr.gov]  
**Subject:** Re: [EXTERNAL] Sites/NODOS Phase 1 Geotechnical Post-Construction Monitoring Report Summaries - Biological and Archaeological

Since this is being provided to the FWS for reporting, I think clarifying the phases in the memos is appropriate. Perhaps removing the term "phase" and just explaining that the work detailed in the memos has been completed would suffice.

Thank you,

Dan

---

**From:** Arsenijevic, Jelica <Jelica.Arsenijevic@hdrinc.com>  
**Sent:** Friday, April 24, 2020 8:15 AM  
**To:** Cordova, Daniel A <dcordova@usbr.gov>  
**Cc:** Ivie, Melissa M <mivie@usbr.gov>; Carper, Mark A <mcarper@usbr.gov>; Davis, Ryan A <rdavis@usbr.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Briard, Monique <Monique.Briard@icf.com>; Tannourji, Danielle <Danielle.Tannourji@icf.com>; christian.havelaar@icf.com <christian.havelaar@icf.com>; Davis, Ryan A <rdavis@usbr.gov>  
**Subject:** RE: [EXTERNAL] Sites/NODOS Phase 1 Geotechnical Post-Construction Monitoring Report Summaries - Biological and Archaeological

Good morning Dan

The intent of using the Phase 1 term was to distinguish what activities were completed vs. what remains. Now that you've brought that to attention, we agree that there is no context.

Would you like us to revise the introduction section of the memo's to provide context – highlighting that the initial intent (what is in the original PD) identified 36 bore locations and 20 CPT tests? I'm confident that ICF can revise memo fairly quickly. If yes, both memo's will be revised and resent.

Thanks!

**Jelica Arsenijevic**

**Due to COVID-19, I will be working from home. Please contact me via cell # listed below. Be safe out there!**

D 916-679-8854  
M 209-329-6897

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

---

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**Sent:** Friday, April 24, 2020 7:00 AM

**To:** Arsenijevic, Jelica <Jelica.Arsenijevic@hdrinc.com>

**Subject:** Re: [EXTERNAL] Sites/NODOS Phase 1 Geotechnical Post-Construction Monitoring Report Summaries - Biological and Archaeological

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Thanks Jelica,

The report calls the work conducted "Phase I", but doesn't put it into context. I don't recall the project description we sent to FWS having the project broken into phases. Can you tell me how the phases have been identified?

Thanks,

Dan

---

**From:** Arsenijevic, Jelica <Jelica.Arsenijevic@hdrinc.com>

**Sent:** Thursday, April 23, 2020 2:50 PM

**To:** Cordova, Daniel A <dcordova@usbr.gov>; Ivie, Melissa M <mivie@usbr.gov>; Carper, Mark A <mcarper@usbr.gov>

**Cc:** Davis, Ryan A <rdavis@usbr.gov>; Alicia Forsythe <aforsythe@sitesproject.org>; Spranza, John <John.Spranza@hdrinc.com>; Laurie Warner Herson <laurie.warner.herson@phenixenv.com>; Briard, Monique <Monique.Briard@icf.com>; Tannourji, Danielle <Danielle.Tannourji@icf.com>; christian.havelaar@icf.com <christian.havelaar@icf.com>

**Subject:** [EXTERNAL] Sites/NODOS Phase 1 Geotechnical Post-Construction Monitoring Report Summaries - Biological and Archaeological

Hello

Hope this note finds you doing well. Attached are the biological and archaeological post-construction monitoring's report summaries for Phase 1 geotechnical studies. ICF did an outstanding job monitoring and summarizing their efforts.

If, by chance, your email system stripped the attachments (due to size), I can upload the documents to OneDrive.

Please let us know if you have any questions or concerns.

**Jelica Arsenijevic**  
*Environmental Project Manager*

**Due to COVID-19, I will be working from home. Please contact me via cell # listed below. Be safe out there!**



2379 Gateway Oaks Drive, Suite 200  
Sacramento, CA 95833  
D 916-679-8854  
M 209-329-6897

[Jelica.Arsenijevic@hdrinc.com](mailto:Jelica.Arsenijevic@hdrinc.com)

[hdrinc.com/follow-us](http://hdrinc.com/follow-us)

Draft\_0001797





~~April~~January 28~~15~~, 2020

Mr. Rex Bohn, Chairman  
Board of Supervisors  
County of Humboldt  
825 5th Street, Suite 111  
Eureka, CA 95501-1153

Subject: Request to Protect Humboldt County's Trinity River Interests from Adverse Impacts that may be Caused by Sites Reservoir Project -- Update to our January 15, 2020 letter.

Dear Chairman Bohn:

~~Thank you for your letter of December 17, 2019 and for the opportunity for Alicia Forsythe of the Sites Project Authority (Authority) to come speak at your December 10, 2019 Board of Supervisors meeting.~~

~~On January 15, 2020, the Authority responded to your letter of December 17, 2019 which had requested protection of the County's Trinity River from any adverse effects that may be caused by the Sites Reservoir Project. In your letter, you identified a January 21, 2019 report prepared by Kamman Engineering and Hydrology in which Mr. Kamman identifies two concerns affecting the Trinity River based on information and analyses in the Project's Draft EIR/EIS. In our letter of January 15, 2020 we indicated that we were reviewing the Kamman Report in detail and would consider your December 17, 2019 letter, as well as the January 21, 2019 Kamman Engineering and Hydrology Report, as a comment to the Site Project's Draft EIR/EIS and respond to both in detail in the Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS).~~

~~The Authority recently completed a rigorous Value Planning effort to review the project's proposed operations and facilities in an effort to develop a project that is "right sized" for current participants while still providing water supply reliability and enhancing the environment. As a result of optimizing the Sites Reservoir, the project will include facilities and operations that are different than originally proposed in the Draft EIR/EIS released for public review in 2017 (<https://sitesproject.org/wp-content/uploads/2020/04/Sites-News-Release-EIR-Recirculation-Announcement-FINAL-2020-04-22.pdf>).~~

**Commented [LWH1]:** Attach the press release or provide a link (or both) ?

~~Rather than moving forward with a Final EIR/EIS, the Authority, as the California Environmental Quality Act (CEQA) lead agency, has decided to prepare a revised Draft EIR for recirculation in 2021. Recirculation of the Draft EIR will provide the public with a meaningful~~



P.O. Box 517  
Maxwell, CA 95955  
530.438.1309



opportunity to comment on changes to the project, consistent with the CEQA Guidelines (Section 15088.5). As we move forward in determining the approach to recirculation we will reach out to prior commenters with clarification on how we will address the comments received on the 2017 Draft EIR/EIS and how to provide comments on the recirculated Draft EIR. We anticipate that, similar to the 2017 Draft EIR/EIS, the revised document will be a joint EIR/EIS with Reclamation as the federal lead agency.

As noted in our January 15, 2020 letter, the Authority remains committed to the assurances that we provided in our January 15, 2018 letter — the construction and operation of the Sites Reservoir Project such that there will be result in no additional demands for diversions of Trinity River water to the Sacramento River Basin or would otherwise adversely affect the Trinity River. We remain committed to continue working with Humboldt County to address your concerns as the Project’s facilities and operations are refined. Ms. Forsythe, Sites Project Authority Environmental Planning and Permitting Manager, will contact you to determine how best to move forward with this effort.

The Sites Project Authority, as the California Environmental Quality Act (CEQA) State lead agency, and the Bureau of Reclamation (Reclamation), as the National Environmental Policy Act (NEPA) Federal lead agency, have prepared the Sites Reservoir Project Draft Environmental Impact Report / Environmental Impact Statement (Draft EIR/EIS) to address the environmental effects of the Sites Project, including the No-Action Alternative and four action alternatives. The Draft EIR/EIS was made available for a 154-day public review and comment period, from August 14, 2017 to January 15, 2018. In your recent letter, you identify a January 21, 2019 report prepared by Kamman Engineering and Hydrology in which Mr. Kamman identifies two concerns affecting the Trinity River based on information and analyses in the Project’s Draft EIR/EIS. We are reviewing the Kamman Report in detail and will consider your December 17, 2019 letter, as well as the January 21, 2019 Kamman Engineering and Hydrology Report, as a comment to the Site Project’s Draft EIR/EIS and respond to both in detail in the Final EIR/EIS.

We Again, thank you for your letter of December 17, 2019 and for the opportunity for Alicia Forsythe of the Sites Project Authority (Authority) to come speak at your December 10, 2019 Board of Supervisors meeting. We appreciate the continued support from the Humboldt County Board of Supervisors and are committed to working collaboratively to resolve your concerns.

Sincerely,



P.O. Box 517  
Maxwell, CA 95955  
530.438.1309



Fritz Durst, Chair

cc: Senator Dianne Feinstein  
Senator Kamala Harris  
Congressman Jared Huffman  
Congressman John Garamendi  
Congressman Doug LaMalfa  
Senator Mike McGuire  
Trinity County Board of Supervisors  
Karuk Tribal Council  
Hoopa Valley Tribal Council  
Yurok Tribal Council  
California Water Commission  
Charles Bonham, California Department of Fish and Wildlife  
Karla Nemeth, California Department of Water Resources  
Ernest Conant, Bureau of Reclamation



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**From:** Spranza, John [John.Spranza@hdrinc.com]  
**Sent:** 4/28/2020 2:28:43 PM  
**To:** Evan Sawyer - NOAA Federal [evan.sawyer@noaa.gov]; Kundargi, Kenneth (Kenneth.Kundargi@wildlife.ca.gov) [Kenneth.Kundargi@wildlife.ca.gov]; Davis-Fadtke, Kristal@Wildlife [Kristal.Davis-Fadtke@wildlife.ca.gov]; Boyd, Ian@Wildlife [Ian.Boyd@Wildlife.ca.gov]; Williams, Jonathan@Wildlife [Jonathan.Williams@wildlife.ca.gov]; Sullivan, Lauren [lauren\_sullivan@fws.gov]; Cathy Marcinkevage - NOAA Federal [cathy.marcinkevage@noaa.gov]; stephen.maurano@noaa.gov; Roberts, Jason@Wildlife [Jason.Roberts@wildlife.ca.gov]  
**CC:** Kevin Spesert [kspesert@sitesproject.org]; CFitzer@esassoc.com; Jim Lecky (jim.Lecky@icf.com) [jim.Lecky@icf.com]; Monique Briard (monique.briard@icf.com) [monique.briard@icf.com]; Greenwood, Marin [Marin.Greenwood@icf.com]; Grimaldo, Lenny [Lenny.Grimaldo@icf.com]; Alicia Forsythe [aforsythe@sitesproject.org]; Arsenijevic, Jelica [Jelica.Arsenijevic@hdrinc.com]; Heydinger, Erin [Erin.Heydinger@hdrinc.com]; laurie.warner.herson [laurie.warner.herson@phenixenv.com]; Berryman, Ellen (Ellen.Berryman@icf.com) [Ellen.Berryman@icf.com]; Jerry Brown [jbrown@sitesproject.org]; Frederiksen, Lee E. [Lee.Frederiksen@hdrinc.com]  
**Subject:** Sites Project Update: Revised Project and EIR Recirculation  
**Attachments:** INT-REP-Value Planning Appraisal Report-FinalCompressed.pdf; Sites-News-Release-EIR-Recirculation-Announcement-FINAL-2020-04-22.pdf

Good Afternoon and Greetings from the Sites Team,

As mentioned in my March 23<sup>rd</sup> email, the Authority has been working on a “Value Planning” process to review the project’s proposed operations and facilities in an effort to develop a project that is “right sized” for current participants while still providing water supply reliability, enhancing the environment and addressing comments provided during and after the release of the 2017 Draft EIR/EIS. We are excited to announce that the process is complete and the Board has accepted the *Final Value Planning Appraisal Report* and the recommended Value Planning project to move forward with; Alternative VP7. This revised project would be a 1.5 MAF reservoir (reduced from 1.8) that utilizes the existing Sacramento River diversions at Red Bluff and Hamilton City. Diverted water stored in Sites would be released through the existing Tehama-Colusa Canal (T-C Canal) and a new 1,000 cfs pipeline would be constructed near the southern terminus of the T-C Canal to deliver Sites water into the Colusa Basin Drain for distribution to the participants.

I have attached the *Final Value Planning Appraisal Report* for you to review, the Executive Summary provides a good general description of the evaluation process, recommendations and major changes from the previously proposed project (Alternative D in the 2017 Draft EIS/EIR). Some of the major changes include:

- Reduced project size and footprint
- Reduced Sacramento River diversions
- Elimination of Delevan Sacramento River diversion and release facility
- Elimination of Delevan Pipeline and associated impacts to landowners and wildlife refuges along that alignment
- Release capacity to the Sacramento River will be reduced from 1,500 to 1,000 cfs
- No pump-back hydropower generation

The Value Planning process has resulted in a revised project that includes facilities and operations that are different than originally proposed in the 2017 Draft EIR. Due to these changes, the Authority as the California Environmental Quality Act lead agency will revise and recirculate its Draft EIR. For your convenience I have attached the press release from April 22, 2020 that discusses this further.

We will be following up with each of you soon to continue the discussions and processes that were slowed down while we went through this important activity. If you have any immediate questions and I’d be happy to work to get them answered so feel free to email or call me.

Please feel free to forward this to anyone I failed to include on the update, and be safe during these stressful and challenging times.

Regards,

John

**John Spranza, MS, CCN**  
*Senior Ecologist / Regulatory Specialist*

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**For Immediate Release:**

April 22, 2020

**Contact: Sara M. Katz**

(619) 813-9551

**Sites Project Authority to “Right size” Sites Reservoir to Meet Current and Future Water Supply Needs**

*Revised Environmental Documents Slated for Recirculation in 2021*

*Sacramento, Calif.* – The Sites Project Authority (Authority) today announced its intent to revise and recirculate its environmental document for the Sites Reservoir project. Over the past several months, the Authority has undertaken a rigorous Value Planning effort to review the project’s proposed operations and facilities in an effort to develop a project that is “right sized” for current participants while still providing water supply reliability and enhancing the environment.

The process has resulted in a project that includes facilities and operations that are different than originally proposed in the Draft Environmental Impact Report (EIR) released for public review in 2017. Due to these changes, the Authority as the California Environmental Quality Act lead agency will revise and recirculate its Draft EIR and work with landowners, tribes, stakeholders, non-governmental organizations, and local communities to conduct a collaborative environmental review process. The Authority will also coordinate with the Bureau of Reclamation to confirm the appropriate approach to comply with the National Environmental Policy Act.

“The Value Planning process was responsive to input from our investors, state and federal agencies, non-governmental organizations, elected officials, landowners and local communities. By optimizing our plans for Sites Reservoir, we can design a water storage project that meets the needs of our participants and the environment today and in the future.” said Fritz Durst, chairman of the Sites Project Authority.

Sites Reservoir is a generational opportunity to construct a multi-benefit water storage project that helps restore flexibility, reliability, and resiliency to our statewide water supply. Located 10 miles west of Maxwell in rural Glenn and Colusa counties, Sites Reservoir would be an off-stream storage facility that captures and stores stormwater flows in the Sacramento River—after all other water rights and regulatory requirements are met—for release primarily in dry and critical years for environmental use and for California communities, farms and businesses when it is so desperately needed.

“By creating a resilient and reliable water supply for people and the environment during dry periods, Sites Reservoir provides a unique benefit that closely aligns with Governor Newsom’s Water Resiliency Plan,” said Jerry Brown, executive director for the Sites Project Authority.

Sites Reservoir would provide federal and state resource agencies with a dedicated and reliable supply of water they can manage to provide environmental benefits, especially during drier years. A substantial portion of the project’s water would be dedicated to environmental flows, which would help to improve conditions for Delta smelt, and help preserve the cold-water pool in Lake Shasta later into the summer months to support salmon development, spawning and rearing. In addition, it would improve the Pacific Flyway habitat for migratory birds and other native species.

Revisions to the EIR are underway. A revised and recirculated EIR is expected to be released for public review in Summer 2021. The Authority is coordinating with the Bureau of Reclamation on how best to move forward with the Environmental Impact Statement (EIS) with the goal of remaining a joint EIR/EIS to facilitate the public review process.

*Sites is an off-stream reservoir proposed north of the Sacramento-San Joaquin Delta, where it would provide unique water supply and environmental benefits during dry and critical water years, and especially during extended drought periods. Additional information can be found at [www.sitesproject.org](http://www.sitesproject.org) or on Facebook and Twitter at @SitesProject.*

###

**File Provided Natively**



**SPECIAL NOTICE REGARDING  
CORONAVIRUS DISEASE 2019 (COVID-19)  
AND PARTICIPATION IN PUBLIC MEETINGS**

On March 4, 2020, Governor Newsom declared a State of Emergency resulting from the threat of COVID-19. Governor Newsom issued Executive Order N-25-20 (3-12-20) and Executive Order N-29-20 (3-17-20) which temporarily suspend portions of the Brown Act relative to conducting public meetings. Subsequent thereto, Governor Newsom issued Executive Order N-33-20 (3-19-20) ordering all individuals to stay at home or at their place of residence. Accordingly, it has been determined that all Board and Workshop meetings of the San Bernardino Valley Municipal Water District will be held pursuant to the Brown Act and will be conducted via teleconference. There will be no public access to the meeting venue.

**BOARD OF DIRECTORS WORKSHOP - RESOURCES  
THURSDAY, JUNE 4, 2020 – 2:00 P.M.**

**PUBLIC PARTICIPATION**

Public participation is welcome and encouraged. You may participate in the June 4, 2020, meeting of the San Bernardino Valley Municipal Water District online and by telephone as follows:

**Dial-in Info: 877 853 5247 US Toll-free  
Meeting ID: 979 215 700**

**<https://us02web.zoom.us/j/979215700>**

If you are unable to participate online or by telephone, you may also submit your comments and questions in writing for the District's consideration by sending them to [comments@sbvmd.com](mailto:comments@sbvmd.com) with the subject line "Public Comment Item #" (insert the agenda item number relevant to your comment) or "Public Comment Non-Agenda Item". Submit your written comments by 6:00 p.m. on Wednesday, June 3, 2020. All public comments will be provided to the Chair and may be read into the record or compiled as part of the record.

**IMPORTANT PRIVACY NOTE: Participation in the meeting via the Zoom app is strongly encouraged. Please keep in mind: (1) This is a public meeting; as such, the virtual meeting information is published on the World Wide Web and available to everyone. (2) Should you participate remotely via telephone, your telephone number will be your "identifier" during the meeting and available to all meeting participants. Participation in the meeting via the Zoom app is strongly encouraged; there is no way to protect your privacy if you elect to call in to the meeting. The Zoom app is a free download.**





**SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT**  
380 E. Vanderbilt Way, San Bernardino, CA 92408

**BOARD OF DIRECTORS WORKSHOP - RESOURCES**

**AGENDA**

**2:00 PM Thursday, June 4, 2020**

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**CALL TO ORDER -**

*Chairperson: Director Hayes*

*Vice-Chair: Director Harrison*

**1. INTRODUCTIONS**

**2. PUBLIC COMMENT** - *Any person may address the Board on matters within its jurisdiction.*

**3. SUMMARY OF PREVIOUS MEETING**

- 3.1. May 7, 2020, Meeting (Page 3)  
Summary Notes BOD Workshop - Resources 050720

**4. PRESENTATIONS**

- 4.1. Introduction of the New Sites Reservoir Executive Director, Mr. Jerry Brown (Page 5)  
Staff Memo - Introduction of New Sites Reservoir Executive Director, Mr. Jerry Brown  
Sites Reservoir Executive Director Press Release

**5. DISCUSSION ITEMS**

- 5.1. Consider Selection of Consultant for Water Use Efficiency Assessment (Page 8)  
Staff Memo - Consider Selection of Consultant for Water Use Efficiency Assessment  
Maureen Erbeznik Proposal
- 5.2. Consider Cost Share Agreement with Orange County Water District and Chino Basin Watermaster for Aerial Imagery and LiDAR Data Collection and Processing (Page 35)  
Staff Memo - Consider Cost Share Agreement with Orange County Water District and Chino Basin Watermaster for Aerial Imagery and LiDAR Data Collection and Processing  
OCWD Request for Proposals

DMI Proposal  
OCWD Cost Share Agreement

- 5.3. Consider Entering into an Agreement with Riverside County Parks and Open Space District to Fund Positions for Patrol and Maintenance of our Tributaries Restoration Sites (Page 85)  
Staff Memo - Consider Entering into an Agreement with Riverside County Parks and Open Space District to Fund Positions for Patrol and Maintenance of our Tributaries Restoration Sites  
Map of Restoration and Mitigation Projects  
Map of Unauthorized Camps  
Photographs of Unauthorized Camps

**6. DIRECTOR REQUESTS FOR CONSIDERATION**

- 6.1. Director Requests for Consideration 06042020 (Page 93)  
Staff Memo - Director Requests for Consideration  
Hayes - Emergency Manual Update  
Hayes - Directors' Compensation Annual Review  
Hayes - Cultural Intelligence Training  
Hayes - Jurassic Parliament Training  
Hayes - West Valley Water District Letter

**7. ADJOURNMENT**

PLEASE NOTE:

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection in the District's office located at 380 E. Vanderbilt Way, San Bernardino, during normal business hours. Also, such documents are available on the District's website at [www.sbvnmwd.com](http://www.sbvnmwd.com) subject to staff's ability to post the documents before the meeting. The District recognizes its obligation to provide equal access to those individuals with disabilities. Please contact Lillian Hernandez at (909) 387-9214 two working days prior to the meeting with any special requests for reasonable accommodation.



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**DATE:** June 4, 2020

**TO:** Board of Directors' Workshop - Resources

**FROM:** Staff

**SUBJECT:** Summary of May 7, 2020 Board of Directors' Workshop – Resources

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The Resources Workshop convened on May 7, 2020, via Zoom teleconference. Director Hayes chaired the meeting; President Harrison and Directors Kielhold, Longville and Navarro participated in the Workshop. Heather Dyer, Cindy Saks, Bob Tincher, Wen Huang, Kai Palenscar, Matt Howard, and Melissa Zoba, of staff, participated in the workshop.

### **3. Summary of Previous Meeting**

The meeting notes from the April 16, 2020, Board of Directors Workshop – Resources were reviewed. There were no additions or changes to the meeting minutes.

#### **4.1 Summary of Santa Ana River Watermaster Annual Report for Water Year 2018-19**

Staff provided a summary of the Santa Ana Watermaster Annual Report for Water Year 2018-19 along with the history of the Judgments at Workshop. This year, as in prior years, the Watermaster Committee determined that all provisions of the Orange County Judgment are satisfied.

**Action Item(s):** Staff will email a copy of the presentation slides to the Directors and incorporate the presentation slides in the agenda packet so they are available for the public.

#### **4.2 Presentation of the Results from 2019 Change in Groundwater Storage Calculation**

Staff presented the results of the 2019 Change in Storage calculation. Given the slightly

above average Precipitation Index in 2019 and historic amount of State Water Project imported by SBVMWD and the San Bernardino Groundwater Council, the annual change in storage for the San Bernardino Basin, Rialto-Colton, and Yucaipa Basins increased in 2019. However, the total storage for the San Bernardino Basin (SBB) and Rialto-Colton Basin continues to be near historic lows which is largely due to the current drought which began in about 1998. The Board decided to receive and file this report.

**Action Item(s):** Staff will post the 2019 Change in Storage report on the District website for view by the Board of Directors and general public.

#### **4.3 Consider Terms for an Agreement with West Valley Water District for the Cactus Basin #2 Project**

Staff presented the terms of an agreement between West Valley Water District and Valley District to manage vegetation within Cactus Basin #2. West Valley discharges water into Basin #2 in order to manage a perchlorate plume. This discharge has grown vegetation and both vector control and San Bernardino County Flood Control require this vegetation to be removed. If an agreement is formalized, environmental permitting and funding compensatory mitigation would be the obligation of West Valley. Valley District would contribute Staff time to help with environmental permitting as well as allow West Valley to mitigate impacts at Hidden Valley Wetlands, a Valley District restoration project. The Board clarified that the terms as described in the term sheet were not clearly written as true "terms". In concept the Board supported the roles and responsibilities described for West Valley and Valley District associated with the term sheet. An estimate of Staff time needed to support West Valley permitting needs will be provided to the Board when this item is next discussed.

**Action Item(s):** 1) Staff was requested by the Board to develop the term sheet into an agreement with West Valley for consideration at a future Board meeting.

#### **5. Director Requests for Consideration**

None

#### **6. Adjournment**

#### **Staff Recommendation**

Receive and file.



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**DATE:** June 4, 2020  
**TO:** Board of Directors Workshop – Resources  
**FROM:** Heather Dyer, General Manager  
**SUBJECT:** Introduction of new Sites Reservoir Executive Director, Mr. Jerry Brown

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Staff will introduce the Board of Directors and staff to the new Executive Director of the Sites Reservoir Project. Mr. Brown was appointed in late March 2020, by the Sites Reservoir Authority, in order to provide leadership and strategy for a successful transition through the next phase of project planning, including negotiations with Wildlife Agencies and the many interested stakeholders. Mr. Brown will provide an update on recent project accomplishments and an overview of upcoming milestones.

**Fiscal Impact**

There is no fiscal impact related to this item.

**Staff Recommendation**

Receive and File.

**Attachment**

Jerry Brown Press Release, March 26, 2020



**For Immediate Release:**

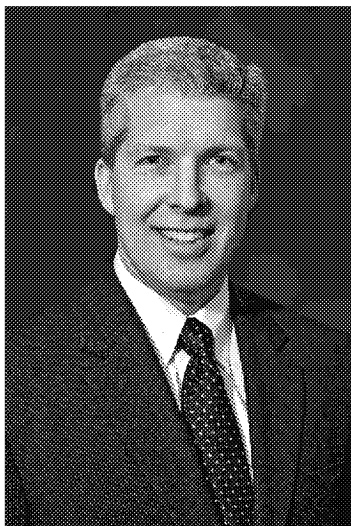
March 26, 2020

**Contact:**

Sara M. Katz  
619-813-9551

**Jerry Brown Joins Sites Project Authority as Executive Director**

*Brown's Expertise Critical in Supporting Next Project Stages*



**Sacramento, Calif.** – Following a comprehensive outreach and recruitment effort, the Sites Project Authority Board of Directors has selected Jerry Brown as the Executive Director for Sites Reservoir.

Jerry Brown previously served as general manager of Contra Costa Water District where he oversaw the operations and management of a large water system that served more than 500,000 customers. In this role, he also oversaw development of the first Los Vaqueros Reservoir expansion in 2012. Since leaving CCWD in 2019, he has been working closely with Bay Area water agencies, refuge managers and Central Valley water users to develop the second expansion of Los Vaqueros as a regional asset funded by Prop 1, similar to Sites Reservoir.

“As we enter the next phase of developing Sites Reservoir, the Authority Board was looking for someone with experience navigating the complexity of water storage development that could accelerate the pace of development. Among a well-qualified pool of candidates, Mr. Brown stood out as the person we needed to take the project through the next stage,” said Fritz Durst, chairman of the Sites Project Authority.

Last year, in response to a comprehensive organizational assessment directed by the Sites Project Authority and Reservoir Committee membership, the Sites Project Authority began recruitment for an executive director who could meet the needs of the project throughout the next phase of development. Mr. Brown will assume this role effective March 30, 2020.

“I’m looking forward to this exciting opportunity, especially working with the Authority Board and the local community which is so vital to the success of the project. My skills and experience along with the amazing team of professionals already working on the project make-up a strong, dedicated group that share in the commitment to get this project done in a manner that protects and enhances fish and wildlife and water reliability,” said incoming executive director Jerry Brown.

Located 10 miles west of the town of Maxwell in rural Glenn and Colusa counties, the Sites Reservoir would be an off-stream storage facility that captures and stores stormwater flows in the Sacramento River—after all other water rights and regulatory requirements are met—for release in dry and critical years for environmental use and for California communities, farms and businesses when it is so desperately needed.

Now more than ever, California needs to address its statewide water management challenges by implementing innovative solutions that address the need for a sustainable and affordable water supply. Sites Reservoir will provide a new water supply for both people and the environment, and significantly improve the state’s water management system in drier periods and restore much needed flexibility and reliability in the system.



*Sites is an off-river reservoir proposed north of the Sacramento-San Joaquin Delta, where it would provide unique water supply and environmental benefits during dry and critical water years, and especially during extended drought periods. Additional information can be found at: <https://www.sitesproject.org>. Follow the Sites Project on social media @SitesProject.*



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**DATE:** June 4, 2020

**TO:** Board of Directors Workshop – Resources

**FROM:** Kristeen Farlow, Manager of Water Use Efficiency/External Affairs

**SUBJECT:** Discuss Selection of Consultant for Water Use Efficiency Assessment

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Over the last few years, the Valley District has seen a decrease in participation in the rebate programs and reimbursement that we offer. In order to better understand the reason(s) for the decline in participation, staff recommended that Valley District perform a Water Use Efficiency Community Assessment (Assessment). This Assessment will help Valley District better understand the water use efficiency “saturation levels” for the communities we serve, identify barriers that may be inhibiting higher rates of participation, and identify strategies to increase participation.

### **Background**

On February 13, 2020, staff proposed to the Board of Directors that Valley District conduct a Water Use Efficiency Assessment to evaluate program saturation levels. Since that time, staff has prepared and issued the Request for Proposal (RFP) as well as conducted consultant interviews. Kristeen Farlow and Bob Tincher, of District staff, reviewed the proposals received and coordinated consultant interviews via GoToMeeting, which occurred on May 6, 2020. The consultant presentations focused on the RFP’s main goals of evaluating current programs and assessing success rates, identifying future opportunities, as well as an implementation plan and associated costs. Both proposals considered addressed the main goals of the project, however it throughout the interview process it became clear that Maureen Erbeznik and Associates (MEA) was the consultant of choice.

MEA has managed 50 successful water use efficiency programs and developed 24 water use efficiency plans for water agencies, similar to what Valley District aims to achieve through our Water Conservation Program. Plans developed by MEA have helped other agencies develop goals and establish long-term water use efficiency programs throughout



California. Their proposal directly addressed the objectives that Valley District is hoping to accomplish through our Assessment. It is anticipated that the results of the Assessment will be a catalyst for development of a more robust long-term water conservation plan that lays our strategy for reducing water demand over the next 5-10 years.

The second proposal was from RDN (Robert D. Niehaus, Inc.). RDN is a consultant in California, mostly with experience focused on designing water budgets for retail water providers. While they had good experience and have worked with a number of water agencies, their focus historically has been on the development and implementation of water budgets and not on water use efficiency assessments. Due to this difference in direct experience that we are seeking for this project, staff recommends using MEA for Valley District's Water Use Efficiency Assessment project.

It is anticipated that the first step in the Assessment will include interviews with Valley District's Board of Directors, our General Manager, and interviews with Valley District's retail water providers. The consultant will review all of the Valley District participation rates for the water conservation programs over the last few years, identifying trends in participation. The timeline to complete this project is 12 weeks, but with the current climate of holding web-based meetings, it may be extended. Staff will bring updates back to the Board Workshop as appropriate.

#### **Fiscal Impact**

The cost for this project is \$49,545. The Valley District budgeted \$50,000 for this project in budget category 6640 for fiscal year 2020/2021.

#### **Recommended Action**

Direct staff to place a consulting agreement with Maureen Erbeznik and Associates, in the amount of \$49,545 to complete a Water Use Efficiency Assessment, on the next regular Board of Directors meeting for consideration.

#### **Attachment**

Water Use Efficiency Assessment Proposal from Maureen Erbeznik and Associates



Maureen Erbeznik  
& Associates



PROPOSAL FOR

San Bernardino Valley  
Municipal Water District  
Water Use Efficiency Assessment

April 22, 2020

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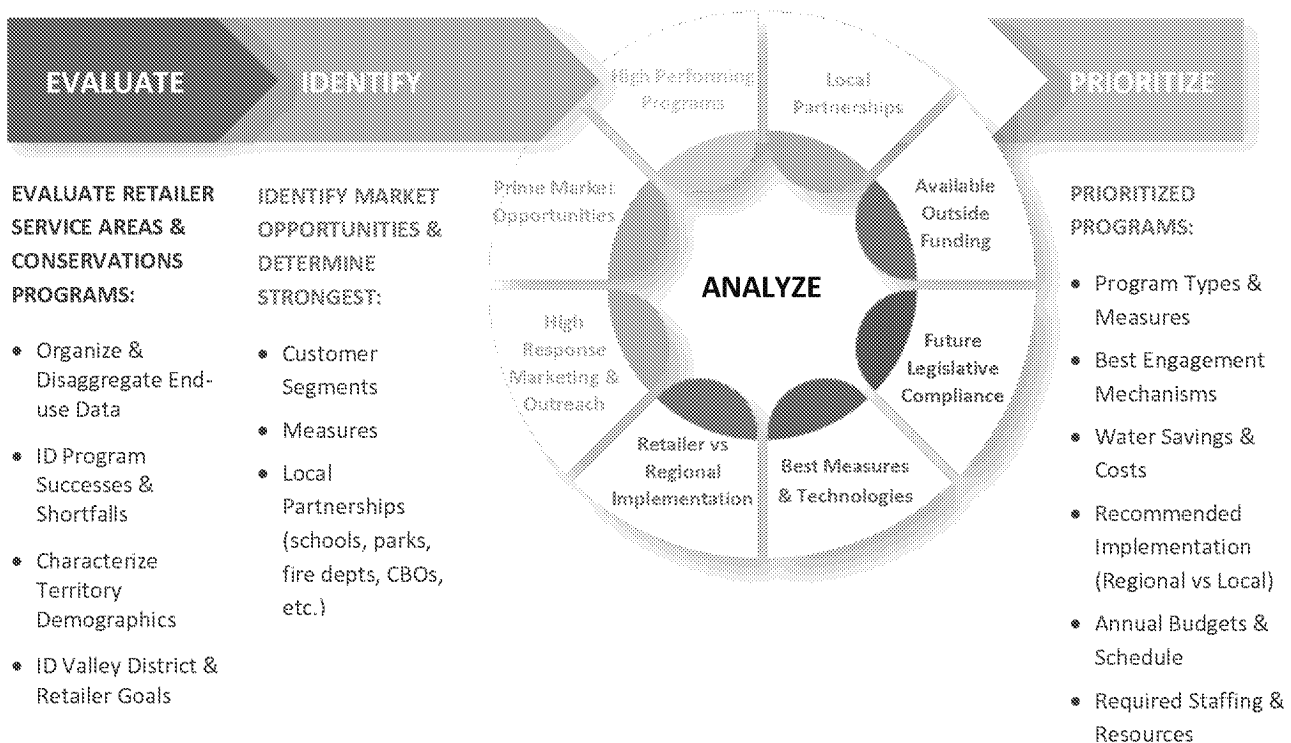
## Project Understanding

Maureen Erbeznik & Associates (MEA) is pleased to respond to the San Bernardino Valley Municipal Water District's (Valley District) RFP for a Water Use Efficiency Assessment. Our team possesses a full understanding of the work scope and has the experience to capably and proficiently perform all required tasks as stated in the RFP.

The team will begin by critically examining end-use data, program successes/shortfalls, and distinct socio-demographic characteristics. The findings will be evaluated according to the impact on retail agency and regional priorities, needs and goals.

Consultants will next analyze existing and potential market opportunities. Since new markets spring from a range of possible sources, the team will look at demographic groups not currently participating, as well as customers with unmet program needs. New partnerships and outreach networks will be explored, with the goal to bolster customer engagement.

There will also be a search for innovative, new-to-market program measures, technologies, and delivery mechanisms. Each will be scrutinized for program suitability based on cost-effectiveness, water savings potential, and projected customer response. Valley District and the retailers will have the opportunity to rate existing and potential measures, program designs, and outreach methods utilizing a score card evaluation process developed by MEA. From the prioritized results, consultant will create a 5 to 10 year plan of approach to implement a portfolio of effective water use efficiency programs.



## Project Approach

The work approach will be conducted in a logical, efficient and transparent manner. Tasks will be well detailed prior to the start of the process, with clearly defined deliverables for each task milestone. The project tasks are discussed below, followed by detailed tables of specific tasks and deliverables.

### Task 1: Evaluation of Conservation Programs

#### *Task 1.0 – Conduct Evaluation of Retail Agency Territories and Existing Conservation Programs*

The first step will be to meet with Valley District and individual retailers to garner information on both their service area and implemented conservation programs. The Consultant Team will examine each WUE program format, annual activity, budget, and resource requirements, as well as customer feedback and barriers. Future budgets and available resources will be determined, and retailer priorities will be established.

Consultants will examine housing data and land usage for each retail territory and the overall region. Socio-demographic information (such as age, race, sex, number in household, languages spoken, income levels, poverty levels, etc.) will be reviewed. The data will identify characteristics and provide a deeper understanding of the region, individual retail territories and unique microcosms within each. This data will greatly enhance the team’s ability to design programs and outreach approaches that more specifically address customer needs.

The team will work with Valley District and its retailers to identify partnership opportunities that can further the implementation of cost-effective conservation programs. These opportunities include state programs, energy efficiency programs, local businesses and industries, community-based organizations and working partnerships with other local governments, schools, and fire departments.

The team will review all data and information with the key focus on water use reduction opportunities, heightened customer engagement, and resource needs. The table below shows the anticipated tasks and deliverables for Tasks 1.0.

<b>Task 1.0: Evaluation of Retailer Territories and Conservation Programs</b>	
Conduct Interviews with SCVMWD and Retailer Water Conservation Staff	<ul style="list-style-type: none"> <li>◆ Budget projections (increasing vs decreasing)</li> <li>◆ Level of customer interest/barriers in programs</li> <li>◆ Priorities for specific measures or customer sectors</li> <li>◆ Potential partners or resource in their service area</li> </ul>
Gather Information on Retailer Programs Implemented	<ul style="list-style-type: none"> <li>◆ Measure offered &amp; targeted customers</li> <li>◆ Delivery mechanism (incentive, direct install, etc.)</li> <li>◆ Duration and annual activity</li> <li>◆ Costs and required resources</li> <li>◆ SCVWD/Grant funding provided</li> <li>◆ Water savings and cost effectiveness</li> </ul>
Gather End Use Data and Organize End Users by Sector	<ul style="list-style-type: none"> <li>◆ Customer counts by sector</li> <li>◆ Summary of demand by sector</li> <li>◆ Target list of highest demand and largest volume customers</li> </ul>

Collect General Housing and Community Demographics	<ul style="list-style-type: none"> <li>Type and age of housing stock</li> <li>General demographics such as age, race, education, income, languages spoken</li> </ul>
Evaluate Past Programs	<ul style="list-style-type: none"> <li>Assessment and scoring of past programs</li> <li>Estimated saturation of devices</li> </ul>
Evaluate Opportunities for Partnerships	<ul style="list-style-type: none"> <li>List of potential partners and stakeholders and other critical groups needed to work with to achieve district goals</li> </ul>

The data and information, resulting from the above tasks (historical water conservation programs, customer counts and end use, demographic information, etc.) will be evaluated for measure and market opportunities.

A scorecard will be created to include evaluation criteria for existing and new programs. The key will be to carefully develop screening criteria that will consider a broad range of factors. The team will meet with Valley District to finalize the list of criteria. Potential criteria include:

**Potential Scorecard Criteria for Evaluation of Programs:**

<ul style="list-style-type: none"> <li>Total budget</li> </ul>	<ul style="list-style-type: none"> <li>Fits District and retailer's overall goals and plan</li> </ul>	<ul style="list-style-type: none"> <li>Market opportunity</li> </ul>
<ul style="list-style-type: none"> <li>Cost-effectiveness</li> </ul>	<ul style="list-style-type: none"> <li>Available resources to implement</li> </ul>	<ul style="list-style-type: none"> <li>Customer receptivity</li> </ul>
<ul style="list-style-type: none"> <li>Certainty of water savings</li> </ul>	<ul style="list-style-type: none"> <li>Ease of operation</li> </ul>	<ul style="list-style-type: none"> <li>Drives market transformation</li> </ul>
<ul style="list-style-type: none"> <li>Outside funding availability &amp; potential partnerships</li> </ul>	<ul style="list-style-type: none"> <li>Equity for all retailers</li> </ul>	<ul style="list-style-type: none"> <li>Additional benefits (i.e. watershed improvements)</li> </ul>

Existing and potential programs will be rated by Valley District and the planning team for each program's ability to deliver desired outcomes. The end goal will be to determine 1) specific market opportunities, 2) successful existing program delivery mechanisms, 3) available retailer resources, and 4) potential partnerships.

*Task 1.1 – Identify New Innovative Measures and Approaches, Build Successful Program Model and Evaluate Existing and Potential Water Conservation Programs*

The next step involves the identification of potential conservation measures, not already offered. An example of a new technology is, the PumpPod Water Recycling System, a water efficient system used for Fire Department training. In addition to being an emerging technology, the PumpPod system offers an opportunity for Valley District to, for the first time, work more closely with fire departments --a high water-consuming end user. The universe of measures will be screened for applicability to Valley District's service area based on knowledge of customer water demand, market readiness, cost-effectiveness, and input from the Valley District and retailer staff as well as experts on the project team.

With known opportunities and markets for specific technologies, the goal of Task 1.1 will be to develop programs with consideration regarding how measures can best be delivered (marketing mechanisms, education, financial incentives, local vs regional implementation, etc.), and combining these into implementable conservation programs that will be accepted by customers.

The planning team will meet with Valley District and the retailers to review the list of programs and do an initial screening. Viable programs will be reworked and refined into actual program formats. Program cut sheets will be created for each recommended program with details regarding budgets, funding, potential market, water savings estimates, regional vs local implementation, partnerships, benefits, and marketing approaches.

The programs will then be evaluated using the Alliance for Water Efficiency’s Water Conservation Tracking Tool (AWE Tracking Tool) to perform the benefit-cost analyses of all programs under consideration. As a member of AWE, Valley District can utilize this modeling tool for free. Using key drivers from Valley District’s service area, the model quickly estimates annual total water savings and costs by season, as well as economic benefits (a function of the avoided costs), unit costs, benefit-cost ratios, and water bill impacts for individual programs or groups of programs. The model also allows easy comparison of the savings and cost impacts of multiple conservation scenarios.

The full set of programs, existing and new, will then be systematically screened and ranked utilizing the evaluation criteria. The final list of programs will include programs with maximum opportunity for savings and high cost-benefit. In addition, successful education, information, and customer outreach/engagement programs will be identified.

Once the final programs have been selected, the second meeting will be held with Valley District and the retailers to gain feedback on the selected programs. The team will modify the plan based upon the feedback. The table below shows the anticipated task and deliverables for Tasks 1.1.

**Task 1.1: Develop Potential Water Conservation Programs**

Identify Potential Water Conservation Program Concepts	<ul style="list-style-type: none"> <li>◆ Program concepts list with devices, program formats, and non-device opportunities</li> <li>◆ Assess regional vs local implementation</li> </ul>
Evaluate How Market Changes Effect Conservation Programming	<ul style="list-style-type: none"> <li>◆ Models of changing market conditions, demographics, and land use and how it could impact selected programs</li> </ul>
Develop Water Conservation Program Evaluation Models	<ul style="list-style-type: none"> <li>◆ Program evaluation spreadsheet with tracking and evaluation functionality</li> </ul>
Develop Recommendations for New Water Conservation Programs	<ul style="list-style-type: none"> <li>◆ Program cut sheets for recommended new programs and high performing existing programs and strategies</li> </ul>
Perform Economic Analysis of Selected Water Conservation Programs	<ul style="list-style-type: none"> <li>◆ Economic analysis software module with budget info, annual and lifetime water savings, and potential third-party funding</li> </ul>

**Task 2: Establish the District’s Water Use Efficiency Projections and Goals**

Working in partnership with Valley District’s retail agencies, our team will gather and organize water use data for each agency by customer class and subclass. This data will be collected during Task 1 to assist in evaluating future opportunities within each of the retail agency’s service area. A collective database will be created and compiled in order to disaggregate end-use data within Valley District’s territory. Spreadsheets with details of retail agency consumption, estimated landscape usage, and market potential will be generated.

The next step will be to gather water supply and demand forecasts with and without conservation. It will be important to note where existing demand forecasts have not been identified and remove estimates of passive and active conservation.

After understanding the Valley District’s high-level water savings opportunity, the team will work with Valley District to develop short- and long-term water savings projections and goals. This will include a clear guide on how meeting the goals may change water supply and deliveries moving into the future. The table below shows the anticipated task and deliverables for Task 2.

<b>Task 2: Establish the District Water Use Efficiency Projects and Goals</b>	
Evaluate How Current and Projected Water Supplies will be Impacted by Water Conservation Activities	• Clear guide to how meeting the goals may change water supply and deliveries into the future
Develop Water Savings Goals	• Short- and long-term projections and water conservation goals

### Task 3: Implementation and Cost Plan

The team will finalize annual activity and budgets for each of the chosen programs, including education and outreach programs. It will be decided whether each program will be regionally or locally implemented and if required marketing, outreach and educational/support resources are necessary. Based upon the plan, the required Valley District staff resources and budgets will be determined. A 5-year implementation schedule will then be generated. The final task will be the creation of the complete Water Use Efficiency Assessment/Plan. The document will include:

- Valley District’s water savings goals
- Recommended and prioritized water conservation programs
- Recommended regional vs local implementation
- Quantification of water savings and econometric forecast model
- District and retail agency roles and Valley District staffing
- 5-year implementation schedule including activities and budget by year
- Potential outside funding opportunities
- Methods for tracking the effectiveness of the plans and programs as they progress

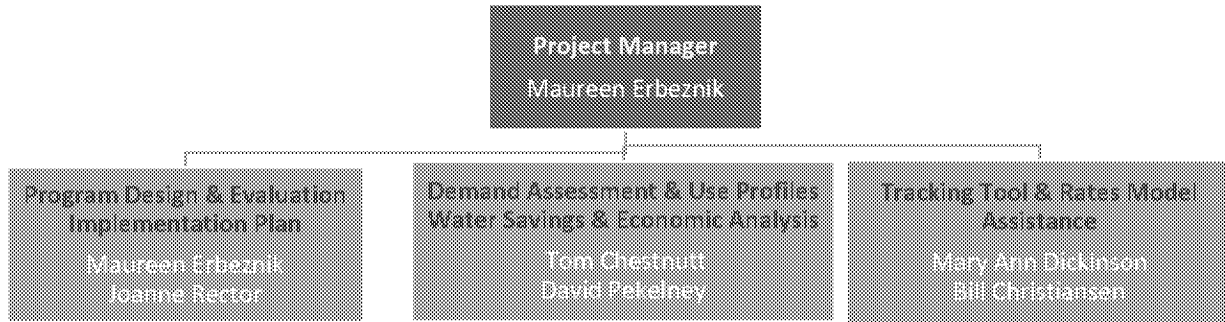
The table on the following page shows the anticipated tasks and deliverables for Task 3.

<b>Task 3: Implementation and Cost Plan</b>	
Develop Program Implementation Schedule	• 5-year schedule for program implementation
Assemble Annual Budget for Selected Programs	• Annual budgets for selected programs and projected activity levels
Construct Detailed Resource Plan	• Resource plan including District staffing, required outsourcing of implementation and marketing, and other needed resources
Finalize Water Use Efficiency Assessment	• Final Water Use Efficiency Assessment/Plan



## Consultant Team

Maureen Erbeznik & Associates has assembled an unrivaled team of water conservation experts in response to Valley District’s RFP for the Water Use Efficiency Assessment. Our consultant team has worked with, collectively, hundreds of California clients to provide analysis, customer response, program design, and resource evaluations. The team possesses the depth and breadth of experience with conservation planning to address the entire range of quantitative and qualitative requirements of Valley District’s WUE assessment. Detailed resumes for all team members are provided in the appendices.



Maureen Erbeznik & Associates	
<p><b>Maureen Erbeznik, <i>Principal</i></b></p> <p>4246 Michael Avenue, Los Angeles, CA 90066 (310) 621-4577 Merbeznik58@gmail.com</p> <p><b>Years of Experience: 31</b></p>	<p><b>Career Highlights:</b></p> <ul style="list-style-type: none"> <li>Managed over 50 successful WUE programs and developed 24 WUE strategic plans for water agencies.</li> <li>Implemented some of the most effective landscape programs including the distribution of 1.7 million nozzles and the removal of 40 million square feet of turf.</li> </ul> <p><b>Project Role:</b> Primary client contact with overall responsibility for project. Lead role in research, assessment and creation of final assessment/plan.</p>
<p><b>Joanne Rector, <i>Consultant</i></b></p> <p>1539 Best Road, Rensselaer, NY 12144 (518) 286-3428 Joanne.Rector@gmail.com</p> <p><b>Years of Experience: 39</b></p>	<p><b>Career Highlights:</b></p> <ul style="list-style-type: none"> <li>Designed, operated, &amp; marketed flagship programs for the City of San Jose, City of Santa Monica, LADWP, Metropolitan Water District, the City of Pasadena &amp; more.</li> <li>Called upon by multiple clients to “overhaul” underperforming programs--entailing assessment and re-engineering of customer outreach, program designs, and resource allocations.</li> </ul> <p><b>Project Role:</b> Assist in research, assessment and plan development.</p>

**A&N Technical Services**

**Tom Chestnutt, PhD, *President***  
 839 Second Street, Suite 5, Encinitas, CA 92024  
 (760) 809-8868  
[tom@antechserv.com](mailto:tom@antechserv.com)  
**Years of Experience: 33**

**Career Highlights:**

- Expertise in the fields of water utility efficiency, water resource economics, rate design, and demand and supply modeling.
- Empirically evaluated dozens of individual conservation programs.

**Project Role:** Demand assessment and economic modeling.

**David Pekelney, PhD, *Director of Policy Analysis***  
 11808 Stanwood Dr., Los Angeles, CA 90066  
 (310) 439-1883  
[pekelney@antechserv.com](mailto:pekelney@antechserv.com)  
**Years of Experience: 25**

**Career Highlights:**

- Developed software to calculate conservation program savings and cost-effectiveness used as basis for AWE Tracking Tool.
- Conducted water use efficiency models for over 70 water agencies.

**Project Role:** Tracking tool program costs and savings modeling, cost-effectiveness evaluation and financial analysis.

**Alliance for Water Efficiency**

**Mary Ann Dickinson, *President and CEO***  
 33 N. LaSalle Street, Suite 2275, Chicago, IL 60602  
 (773) 360-5100  
[maryann@a4we.org](mailto:maryann@a4we.org)  
**Years of Experience: 33**

**Career Highlights:**

- Founder and CEO of North America’s only organization providing assistance to water utilities in the planning for sustainable water resource management.
- Directed regional water conservation programs for Metropolitan Water District’s member agencies and sub agencies.

**Project Role:** General project advisor.

**Bill Christiansen, *Director of Programs***  
 33 N. LaSalle Street, Suite 2275, Chicago, IL 60602  
 (773) 360-5100  
[bill@a4we.org](mailto:bill@a4we.org)  
**Years of Experience: 33**

**Career Highlights:**

- Director of all AWE programs and studies.
- Provided AWE Tracking Tool model support for 15 utilities preparing data inputs and reporting on model outputs.

**Project Role:** Technical support for the AWE Tracking Tool.

## Project Schedule

With the background knowledge and experience of the project team, we are ready to hit the ground running. We have developed a detailed project approach that meets an aggressive project schedule. All meetings will be held via phone calls or on-line web meeting platforms until the COVID-19 restrictions have been lifted. It is anticipated that most program information and community demographic data will be available through on-line reports or accessible files. The schedule can be compressed if retailer water agency data is provided in an expeditious manner.

Schedule	Month 1	Month 2	Month 3	Month 4	Month 5
Initial Kick Off Meeting to Finalize Work Plan	●				
Retail Water Agency Interviews					
Collect Information on Programs Implemented					
Collect Retail Water Agency End Use Data					
Evaluate Existing Programs					
Identify Potential New Programs					
Meeting to Assess Existing and New Programs		●			
Develop Recommendation for New & High Performing Existing Programs					
Meeting to Finalize Selected Programs			●		
Evaluate How Supplies will be Impacted by WUE Activities					
Meeting to Determine Water Savings Goals				●	
Perform Economic Analysis of Selected Programs					
Develop Program Implementation Schedule					
Assemble Annual Budgets for Selected Programs					
Construct Detailed Resource Plan					
Finalize Water Use Efficiency Assessment/Plan					

## Fee Schedule

Below is the fee schedule for Valley District's Water Use Efficiency Assessment.

Task	Personnel	MEA		A&N Technical Services		AWE		Total Hours	Subtotal by Task
		Maureen Erbeznik	Joanne Rector	Tom Chesnutt	David Pekelney	Mary Ann Dickinson	Bill Christiansen		
Task 1: Evaluation of Conservation Programs		70	25	20	3	2	10	130	\$20,870
Task 2: Establish the District's Water Use Efficiency Projection and Goals		55	25	20	3	2	10	115	\$18,620
Task 3: Implementation and Cost Plan		30	20	7	1	1	5	64	\$10,055
Total Hours		155	70	47	7	5	25	309	
Billing Rate		\$150	\$150	\$220	\$190	\$200	\$125		
Labor Cost		\$23,250	\$10,500	\$10,340	\$1,330	\$1,000	\$3,125		\$49,545

## Appendices

### Appendix A – Team Strategic and Program Planning Experience

The consultant team assembled for Valley District’s Water Use Efficiency Assessment has worked together for decades on dozens of strategic plans as well as individual program evaluations. Reference contact information can be made available for any of the projects listed.

Below is a list of the WUE strategic plans the team has generated and the associated team members.

Project	Team Member(s)	Client
Apple Valley Rancho’s Water Use Efficiency Master Plan	Maureen Erbeznik   Joanne Rector	Joone Lopez 949.444.6994
California Water District’s Conservation Plans (2013-2016 and 2017-2020)	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Ken Jenkins 310.420.6789
Central Basin’s Water Conservation Strategic Plans (2005 and 2011)	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Sally Flowers 323.201.5514
City of Oxnard’s Water Conservation Master Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Dakota Corey 805.385.8339
City of San Diego’s Water Budget Based Billing and Long-Term Conservation Consulting Services	Maureen Erbeznik   Joanne Rector	Kyrsten Burr-Rosenthal 858-922-7998
City of Santa Monica’s Water Conservation Strategic Plan	Maureen Erbeznik   Joanne Rector	Brian Johnson 805.918.7119
Elsinore Valley MWD’s Water Conservation Master Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Rob Whipple 951.571.7259
Inland Empire Utilities Agency’s Drought Contingency Plan	Maureen Erbeznik   Joanne Rector	Pietro Cambiaso 909.993.1639
Inland Empire Utilities Agency’s Water Use Efficiency Strategic Plans (2010 and 2015)	David Pikelney   Maureen Erbeznik   Joanne Rector	Lisa Morgan-Perales 909.993.1520
Lake Arrowhead Community Services District’s Water Conservation Strategic Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Mary Ann Dickinson 773.360.5100
Municipal Water District of Orange County’s Water Use Efficiency Master Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Joe Berg 714.593.5008

Project	Team Member(s)	Client
San Diego County Water Authority's MWD MAAP Program Planning	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Joni German 858.522.6705
San Francisco Public Utilities Commission's Water Use Efficiency Strategic Plan	Maureen Erbeznik	Julie Ortiz 415.554.3155
Santa Clarita Valley Family of Water Suppliers Water Conservation Strategic Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Greg Milleman 408.367.8200
Upper San Gabriel Valley MWD's Water Use Efficiency Master Plan	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Elena Layugan 626.443.2297
Walnut Valley Water District's Water Use Efficiency Strategic Plan	David Pikelney   Maureen Erbeznik   Joanne Rector	Jose Martinez 909.348.8240
West Basin's Water Conservation Strategic Plans (2005 and 2010)	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Gus Meza 310.660.6209
Western MWD's Water Use Efficiency Strategic Plans (2008 and 2018)	Maureen Erbeznik   Joanne Rector	Tim Barr 951.571.7254

## Appendix B – Team Program, Measure and Market Evaluation Experience

Below is a sampling of program, measure and market evaluations the team has completed and the associated team members.

Project	Team Member(s)	Client
Alliance for Water Efficiency Landscape Transformation Study	Tom Chesnutt   David Pikelney   Maureen Erbeznik   Joanne Rector	Peter Mayer 720.318.4232
California Water Foundation and East Bay Municipal Utility District WaterSmart Home Water Report Evaluation	Tom Chesnutt   David Pikelney	Richard Harris 510.287.1675
California Water Service Company Evaluation of the CWS Multifamily Residence Bathroom	Tom Chesnutt   David Pikelney	Ken Jenkins 310.420.6789
Metropolitan Water District High-Efficiency Nozzle Evaluation, Measurement, And Verification	Tom Chesnutt   David Pikelney	Mike Hollis 213-217-7228

Project	Team Member(s)	Client
Metropolitan Water District's Smart Controller Study	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Mike Hollis 213-217-7228
Municipal Water District of Orange County Landscape Water Use Efficiency Programs Evaluation	Tom Chesnutt   David Pikelney   Maureen Erbeznik	Joe Berg 714.593.5008
Municipal Water District of Orange County and Irvine Ranch Water District Residential Runoff Reduction Study	Tom Chesnutt   David Pikelney	Joe Berg 714.593.5008
Municipal Water District of Orange County's Turf Removal Rebate Program Evaluation	Maureen Erbeznik   Joanne Rector	Joe Berg 714.593.5008
San Diego County Water Authority's DROP Grant Program Evaluation (2015)	Tom Chesnutt   David Pikelney   Maureen Erbeznik   Joanne Rector	Joni German 858.522.6705
San Diego County Water Authority's Landscape Makeover Program Evaluation	Tom Chesnutt   David Pikelney   Maureen Erbeznik   Joanne Rector	Joni German 858.522.6705
San Diego County Water Authority's Sustainable Landscape Program Evaluation (2017)	Tom Chesnutt   David Pikelney   Maureen Erbeznik   Joanne Rector	Joni German 858.522.6705
Southern California Edison Evaluation, Measurement, and Verification Plan for the Energy-Water Partnership	Tom Chesnutt   David Pikelney	Marion Brown 951.547.1111

Resumes



## Maureen Erbeznik

## Maureen Erbeznik and Associates

Maureen has thirty-one years of experience designing, implementing and evaluating water efficiency programs. Recognized for outstanding strategy design and problem assessment capabilities. Proven consensus builder with leadership style based on goal attainment and personal credibility. Maureen has strong organizational skills and coordinates all the aspects of water conservation projects ensuring each project meets its goals on time and within budget.



### Maureen Erbeznik and Associates - 2001 – Present

Maureen Erbeznik owns and operates a wholly women-owned consulting firm specializing in strategic planning, program design and assessment, implementation and marketing campaigns for water efficiency programs. On behalf of her clients, Maureen identifies strategies for water use efficiency measures and diverse customer markets; secures political and community support; obtains required funding through grants and other sources; and directs the new initiatives. Maureen has designed, implemented and/or assessed over 50 major residential and commercial water efficiency programs. She has led some of the most innovative multi-agency including the statewide multi-agency landscape program FreeSprinklerNozzles.com, MWDOC's Industrial Process Water Use Reduction Program, and MWD's Large Turf Incentive Program.

Past and present clients include:

- Los Angeles Department of Water and Power
- Los Angeles County Waterworks
- West Basin MWD
- City of Malibu
- Metropolitan Water District
- San Diego County Water Authority
- City of San Diego
- Southern California Edison
- City of Santa Monica
- Inland Empire Utilities Agency
- Santa Clarita Valley Water Agency
- Walnut Valley Water District
- California Water Service Company
- Municipal Water District of Orange County
- Central Basin MWD
- County of Santa Barbara
- Pasadena Water & Power
- Western MWD
- City of Oxnard
- Southern California Gas Company
- San Diego Gas & Electric
- Redwood City
- Upper San Gabriel Valley Water District
- San Francisco Public Utilities Commission
- Elsinore Valley Water District
- Eastern MWD

### Honeywell Utility Solutions – 1990 - 2000

Honeywell Utility Solutions is a division of Honeywell serving energy and water utilities across the nation. Honeywell Utility Solutions is contracted by utilities to provide turn-key products and services for utilities' residential and commercial customers. Company's operating environment is contract-to-contract, low margin and extremely fast-paced. Company staffing levels fluctuate dramatically from year-to-year due to market and regulatory shifts.

Maureen was responsible for start-ups, management, and profitability of all energy and water contracts in the southwest region of the United States. Maureen managed an organization of approximately 60 professional, sales, and technical employees.

#### **Key Accomplishments**

- Grew Southwest Regional revenue from \$2 million to \$6 million.
- Dramatically increased overall profitability from 12% gross margin to 30% gross margin.
- Responsible for starting up 7 new offices in 4 states.
- Received Honeywell National Employee of the Year Award – 1998.
- Made every contract start date and program performance goal. The Southwest Region was the only region in the company to achieve this standard.

**Joanne Rector**



Joanne Rector & Associates

**PROFESSIONAL SUMMARY**

**Joanne Rector & Associates, *Principal* (1995 – Present)**

Consultant for Maureen Erbeznik & Associates on a number of projects including California water utility strategic plans, program evaluations, and water industry studies. Recent projects include AWE Landscape Transformation Study and IEUA’s Drought Contingency Plan and Communications & Outreach Plans.



Other consulting services included analysis and re-designs of underperforming programs on behalf of energy and water utility clients. This included modifications to customer outreach and marketing, field operations, resource allocations, and program procedures.

**Honeywell Inc., *Regional Vice-President* (1984 – 1995)**

As Regional Vice President, Joanne was a key innovator of California’s water and energy efficiency industry. Designed, marketed, and operated flagship conservation programs for the City of Pasadena, San Jose, Santa Monica, Monterey, LADWP, Metropolitan Water District of Southern California, and more.

Many of these programs were first-of-their-kind in both *customer outreach mechanisms* (door-to-door, depot delivery, community based organization networking, etc.) and *program design* with turn-key installation formats, kit hang designs, rebate, and retailer programs among them.

Operated residential, multi-family, and commercial customer programs for energy clients included Southern California Gas Company, SCE, PG&E.

Responsible for client satisfaction, contract performance, and staff of 250-600 employees, depending on number of contracts at the time.

**DMC Energy, *Start Up Operations Manager* (1980 – 1984)**

Responsible for implementation of all new awarded contracts. This included hiring and training of office and field staff, oversight of program computer and systems programming, development of operational and accounting procedures, specific to the program.

**EDUCATION**

American University  
Washington D.C.  
Graduate- Bachelor of  
Science- Criminal Law

**Contact**

**Information**

Joanne.Rector@gmail.com  
1539 Best Road  
Rensselaer, NY 12144  
310 - 729 – 5796

## THOMAS W. CHESNUTT, Ph.D., PStat®, CAP®

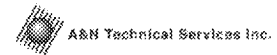
### EDUCATION

1987 Ph.D., RAND Graduate School, Public Policy Analysis, Distinction in Economics

1985 M.Phil., RAND Graduate School, Public Policy Analysis

1983 M.S., Georgia Institute of Technology, Technology and Science Policy

1980 B.A., Kenyon College, Ohio, High Honors in Economics



**Tom Chesnutt, PhD**  
Demand Assessment  
and Economics of  
Water Use Efficiency

### EXPERIENCE

**3/86-Present** — A & N Technical Services, Inc., San Diego, California

Cofounded the organization to provide state-of-the-art expertise in the fields of water sector governance, water utility efficiency, water resource economics, rate design, water conservation, and water system (demand and supply) modeling.

**9/83-9/87** — RAND, Santa Monica, California

Worked four years as a graduate fellow performing applied policy analysis under time constraints, primarily in the area of environmental policy. Specific applications include simultaneous equations, nonlinear regression, James-Stein Pre-test estimators, Bayesian inference, time series analysis, and panel data methods.

### ORGANIZATIONS

The American Association for the Advancement of Science

The American Statistical Association—Accredited Professional Statistician™ (PStat®)

The American Water Works Association & The International Water Association (IWA)

The Institute for Operations Research and the Management Sciences (INFORMS) CAP®

ProbabilityManagement.org, Society of Decision Professionals

### PUBLICATIONS

Chesnutt, T.W., et al, *Alliance for Water Efficiency Landscape Transformation Study: 2018 Analytics Report*, for the Alliance for Water Efficiency, Feb. 2019.

<https://www.allianceforwaterefficiency.org/impact/our-work/assessment-water-utility-programs-and-market-readiness-evaluation>

Chesnutt, T.W., D.M. Pekelney, and J. Spacht, “Water Conservation And Efficient Water Rates Produce Lower Water Bills In Los Angeles”, *Journal AWWA*, 111:4, April 2019, pp 24-30.

Chesnutt, T.W., D.M. Pekelney, and J. Spacht, *Lower Water Bills: The City of Los Angeles Shows How Water Conservation and Efficient Water Rates Produce Affordable and Sustainable Use*, A White Paper for the Alliance for Water Efficiency, Aug 2018.

Chesnutt, T.W., D.M. Pekelney, *Regional Recycled Water — A Framework for Thinking about Benefits*, A White Paper for the Metropolitan Water District of So. California, Nov. 2016.

Chen, G., B. Prokop, T.W. Chesnutt, and D. Trad, *Lower Water Bills: The City of Los Angeles Shows How Efficient Water Rates Produce Affordable and Sustainable Use*, UNESCO Conférence Internationale Eau, Mégapoles et Changement Global, Paris, December 2015.

Chesnutt, T.W., D.L. Mitchell, *Better Rates in an Uncertain World: Probability Management for Laypeople*, WaterSmart Innovations Conference, Las Vegas, NV, October 2015.

Chesnutt, T.W. and M.A. Dickinson, *Flexible Rates: Planning For A Revenue-Stable, Water-Efficient Future*, IWA Efficient 2015 Conference Proceedings, April 2015.

- Chesnutt, T.W., “A Balanced Approach to Water Conservation,” *Journal of the American Water Works Association*, vol. 107, no. 2, pp. 42-51, Feb. 2015.
- Chesnutt, T.W. and M. Hollis, *Permission to Stare Uncertainty in the Face: Probability Management for Water*, IWA Performance Indicators 2015 Conference, April 2015.
- Chesnutt, T.W., et al., *Building Better Water Rates in an Uncertain World*, A Water Rates Handbook for the AWE as part of the Financing Sustainable Water project, August 2014.
- Mitchell D. and T. Chesnutt, *The AWE Sales Forecasting and Rate Model*, part of the Alliance for Water Efficiency Financing Sustainable Water project, August 2014. <http://www.financingsustainablewater.org/tools/awe-sales-forecasting-and-rate-model>
- Mitchell, David and T.W. Chesnutt, *Evaluation of East Bay Municipal Utility District's Pilot of WaterSmart Home Water Reports*, Prepared for California Water Foundation & East Bay Municipal Utility District, December 2013.
- Chesnutt, T.W. and G. Hossein Parandvash, *Applications of a High Resolution Continuous-Time Aggregate Urban Water Demand Model: Recession and Weather-Induced Variation in the Pacific Northwest*, 7th IWA Efficient 2013, Paris, France. 22-25 October 2013.
- Chesnutt, T.W., *Statistical Impact Evaluation of Early Participants in Metropolitan WBIC Rebate Program A White Paper*, Prepared for MWD of Southern California, October 2012.
- Beecher, J.A. and T.W. Chesnutt, *Declining Sales and Water Utility Revenues: A Framework for Understanding and Adapting*. A White Paper for The Alliance for Water Efficiency National Water Rates Summit –Racine, Wisconsin, October 24, 2012.
- Chesnutt, T.W., D.M. Pekelney, D. Holt, G. Fiske, J.A. Beecher, D. Mitchell, and E. Rothstein, *A Balanced Approach to Water Conservation in Utility Planning*, Water Research Foundation, 2011. Contains the WRF Water Conservation Benefit Cost Model and the WRF Drought Response Model for Drought Pricing.
- Chesnutt, T.W., D. Holt, S. Mandel-Mosko, *MWDOC Smart Timer Rebate Program Evaluation*, Prepared for the Municipal Water District of Orange County, October 2011.
- Chesnutt, T.W., M. Erbeznik, Pekelney, D. Holt, *Smart Landscape Programs Comprehensive Evaluation*, Prepared for the San Diego County Water Authority, June 2011.
- Chesnutt, T.W., M. Erbeznik, D.M. Pekelney, *Case Studies of Market Transformation as a Means For Delivering Regional Conservation Results A White Paper*, Prepared for The Metropolitan Water District of Southern California, April 2011.
- Fiske, G. and T.W. Chesnutt, *The California Urban Water Conservation Council Wastewater Avoided Cost Model: Final Report*, For CUWCC and the US EPA, February 2010.
- Chesnutt, T.W., R. Yamada, D.M. Pekelney, , G. Fiske, D. Mitchell, D. Holt, *Drought Pricing As A Part Of Drought Response Planning—Lessons From Drought Prone U.S.*, IWA Water Efficient 2009 Conference, Sydney, October 2009.
- Mitchell, D.L., T.W. Chesnutt, J.A. Beecher, D.M. Pekelney, M. Dickenson, *Transforming Water: Water Efficiency as Stimulus and Long-Term Investment*, A White Paper for the Alliance for Water Efficiency, December 2008.
- Chesnutt, T.W., G. Fiske, J.A. Beecher, D.M. Pekelney, “Water Efficiency Programs for Integrated Water Management,” *Journal AWWA*, 100:5, pp.132-141, May 2008.
- Chesnutt, T.W., D.M. Pekelney, and D. W. Moroney, *Economic Analysis: Benefit and Costs of Water Augmentation Projects*, A Report for the Los Angeles San Gabriel Watershed Council, March 2008.
- Chesnutt, T.W. and D.M. Pekelney, *A Review of Planning Methods and Tools Potentially Applicable for Advanced Treatment Technology in the Net New Water Supply Study (NEWAS)*, a report for the U.S. Bureau of Reclamation, February 2006.

**Additional Publications available upon Request**

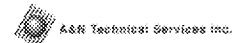
**EDUCATION**

**Ph.D., RAND Graduate School of Policy**

**Studies**, Public Policy Analysis, January 1991.

RAND Graduate School Fellowship, 1986-1991.

*Dissertation:* "Analyzing Environmental Policies for Chlorinated Solvents with a Model of Markets and Regulations." *Committee:* Drs. Frank Camm (chair), Kathleen Wolf, and Bart Bennett. *Sponsor:* National Science Foundation.



**David Pekelney, PhD**  
Demand Assessment  
& Water Use Efficiency  
Models

**M.P.P., Graduate School of Public Policy**, U.C. Berkeley, May 1986. *Thesis:* "The Use of Taxes and Fees to Fund California's Hazardous Waste Management Programs: Who Pays?"

**B.A., University of Colorado**, Boulder, Distributed Major: Political Science, Astrogeophysics, and Physics, May 1980.

**EXPERIENCE**

**A & N Technical Services, Inc.**

**Director of Policy Analysis, 1993-present**

Conduct economic evaluations and planning studies concerning environmental and natural resource policies. Develop economic and statistical models, forecasts, and data bases.

Write proposals and manage research projects.

*Water Resources Policy:* Developed economic methods and calculation tools to evaluate water recycling investments that have been used by utilities and government agencies both in the San Francisco Bay Area and in Southern California. Developed cost-benefit analysis guidelines that have since been adopted to assess urban water conservation measures in California. Developed a software planning tool used by 28 Southern California water agencies to calculate conservation program savings and cost-effectiveness. Evaluated the effectiveness of a variety of water conservation programs in California and the Southwest.

*Air Quality Policy:* Analyzed emissions trading credit allocation options under consideration for a regional haze control program in the Western U.S. Analyzed air quality cost data used to compare regulatory alternatives. Prepared issue analysis paper regarding a multi-state emissions trading program designed to control tropospheric ozone.

**South Coast Air Quality Management District**

**Policy Analyst (Air Quality Specialist), July 1991-November 1993**

Developed air quality programs and regulations. Conducted analyses of economic and air quality impacts of proposed air quality regulations.

*Market Incentives Regulation:* Designed components of RECLAIM, an emissions trading program for the South Coast Air Basin to regulate photochemical smog. Developed a linear programming model of the markets for RECLAIM pollutants used to evaluate the economic and environmental impacts of the program. Key staff to the advisory and

steering committees composed of representatives of government, environmental, labor, and industry groups that guided program development.

*Stratospheric Ozone Depletion:* Designed regulatory proposals to phase out ozone depleting compounds. Estimated the increase in demand for substitute pollutants in industries such as aerospace, electronics, foam production, and wood products.

**Research Fellow and Consulting Research Analyst  
The RAND Corporation, September 1986-July 1995**

Analyzed public policies with quantitative and qualitative research methods (e.g., microeconomics, statistics, linear/nonlinear programming, technology assessment, and regulatory analysis). Presented formal briefings, prepared research proposals, wrote documents for publication.

*Environmental Policy:* Conducted research project sponsored by the National Science Foundation on chemicals regulation. Developed an economic model that compares changes in technology and markets induced by alternative environmental regulations.

*Regulatory and Market Incentives:* Conducted a study of the incentive structure of regulations that restrict land disposal of hazardous wastes. Analyzed data on hazardous waste generation in California using a materials balance approach to determine the effects of state and federal programs.

**PROFESSIONAL ACTIVITIES**

American Water Works Association  
Association for Public Policy Analysis and Management  
Association of Environmental and Resource Economists  
Air and Waste Management Association

**PUBLICATIONS AND REPORTS**

Chesnutt, T.W., D.M. Pikelney, and J. Spacht,, *Lower Water Bills: The City of Los Angeles Shows How Water Conservation and Efficient Water Rates Produce Affordable and Sustainable Use*, A White Paper for the Alliance for Water Efficiency, Aug 2018.

Chesnutt, T.W., D.M. Pikelney, *Regional Recycled Water — A Framework for Thinking about Benefits*, A White Paper for the Metropolitan Water District of So. California, Nov. 2016.

Chesnutt, T.W., D.M. Pikelney, D. Holt, G. Fiske, J.A. Beecher, D. Mitchell, and E. Rothstein, *A Balanced Approach to Water Conservation in Utility Planning*, Water Research Foundation, 2011. Contains the WRF Water Conservation Benefit Cost Model and the WRF Drought Response Model for Drought Pricing.

Chesnutt, T.W., G. Fiske, J.A. Beecher, D.M. Pikelney, “Water Efficiency Programs for Integrated Water Management,” *Journal AWWA*, 100:5, pp.132-141, May 2008.

Mayer P., W. DeOreo, T.W. Chesnutt, L. Summers, “Water Budgets and Rates Structures: Innovative Management Tools,” *Journal AWWA*, 100:5, pp.117-131, May 2008.

Chesnutt, T.W., D.M. Pikelney, and D. W. Moroney, *Economic Analysis: Benefit and Costs of Water Augmentation Projects*, A Report for the Los Angeles San Gabriel Watershed Council, March 2008.

Mayer P., W. DeOreo, T.W. Chesnutt, D.M. Pikelney et al. *Water Budgets and Rates Structures: Awwa Research Foundation*, March 2008, 1P-4.25C-91205-03/08-NH.

## PROFESSIONAL QUALIFICATIONS

### EMPLOYMENT EXPERIENCE

7/07 to present     **President and CEO, Alliance for Water Efficiency**  
**33 N LaSalle Street, Suite 2275**  
**Chicago, IL 60602 | 773-360-5100**

Founder and CEO of North America's only organization promoting water efficiency programs and practices, providing assistance to water utilities and other stakeholders in the planning for sustainable water resource management. Based in Chicago, the non-profit organization is funded by grants and memberships and reaches out to municipalities in the United States and Canada. Responsible for program development and staff supervision. Numerous public speaking engagements at national and international events.



1/99 to 7/07     **Executive Director, California Urban Water Conservation Council**

Director of the first statewide professional conservation organization composed of 393 water agencies, environmental organizations, and professional firms. Responsible for the implementation of 14 Best Management Practices for water use efficiency, and for reporting to the State Water Resources Control Board on the State's progress on these practices. Other duties include managing Council staff, preparing reports and publications, technical assistance to members, and coordinating with governmental agencies. Numerous public speaking engagements at national and international events.

7/93 to 1/99     **Branch Manager, Legislative and Policy Development**  
**Metropolitan Water District of Southern California**

7/89 to 10/92     **Deputy Director of Public and Government Affairs, South Central Connecticut**  
**Regional Water Authority**

9/85 to 7/89     **Principal Environmental Analyst, Connecticut Department of Environmental**  
**Protection**

3/78 to 6/79     **Executive Director, Connecticut Council on Environmental Quality**

1/72 to 3/78     **Senior Environmental Analyst, Connecticut Department of Environmental**  
**Protection**



## **EDUCATION**

- Honors graduate, Grosse Pointe High School, Grosse Pointe, Michigan
- Bachelor's Degree in Environmental Planning, University of Connecticut, Storrs, CT
- Master's coursework in Renewable Natural Resources, Univ. of Connecticut, Storrs, CT

## **UNIVERSITY GUEST LECTURES GIVEN**

- Yale China Law Center Lecturer at Beijing Water Conservation Legislation Workshop
- Demand Management Course Instructor, Jordan University of Science and Technology, Irbid, Jordan
- Yale School of Forestry and Environmental Studies, New Haven, Connecticut
- Trinity College, Hartford, Connecticut
- University of Connecticut, Storrs, Connecticut
- University of California, San Diego, California
- California Polytechnical Institute, Pomona, California
- Mount San Antonio College, Pomona, California

## **CURRENT PROFESSIONAL APPOINTMENTS, AWARDS AND AFFILIATIONS**

- Efficient Urban Water Management Specialist Group, International Water Association
- Board Member and Past President, California Irrigation Institute
- Board Member, Texas Water Foundation
- Member, Water Loss Control Committee, American Water Works Association
- 2012 Ripple Award, American Water Works Association Water Conservation Division
- 2007 Excellence Award, California Urban Water Conservation Council

## **PAST PROFESSIONAL APPOINTMENTS AND AFFILIATIONS**

- President, Lake Arrowhead Community Services District Board of Directors (elected position)
- Appointed Member, EPA Advisory Commission for Safe Drinking Water Act Conservation Guidelines
- Appointed Member, California State Water Plan Advisory Committee (Bulletin 160-2003)
- Appointed Member, CALFED Water Use Efficiency Public Advisory Committee
- Chair, Water Conservation Division, American Water Works Association
- Chair, Water Conservation Committee, Association of California Water Agencies
- Board Member, US Water Alliance
- Board Member, Green Building Initiative
- Board Member, River Network
- Board Member, California South Coast Wildlands Project
- Board Trustee, Connecticut Chapter of the Nature Conservancy
- Co-Chair, Steering Committee, Connecticut Earth Day 20
- Board Member, Connecticut Audubon Society
- Treasurer and Board Member, Middlesex Land Trust
- President, Wallingford Land Trust

# WILLIAM J. CHRISTIANSEN

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## EXPERIENCE:

10/07 to present      Director of Programs, Alliance for Water Efficiency  
33 N LaSalle Street, Suite 2275, Chicago, IL 60602  
773-360-5100 | bill@a4we.org

## EXPERIENCE

18 years

## EDUCATION AND TRAINING

National Association of  
Regulatory Utility  
Commissioners, Utility  
Rate School

M.S., Geography, Southern  
Illinois University

B.S., Recreation, Parks and  
Tourism Administration,  
Western Illinois University

## AFFILIATIONS

Member, American Water  
Works Association

Committee Member,  
Standard G480 Water  
Conservation Practices,  
American Water Works  
Association

Trustee, Water Conservation  
Division, American Water  
Works Association

Director of Programs for a stakeholder-based nonprofit organization dedicated to the efficient and sustainable use of water. Conduct research and manage research projects. Assist the Alliance for Water Efficiency (AWE) membership and the public with technical inquiries and water conservation program planning. Provide guidance and education for the organization's Water Conservation Tracking Tool, an Excel based model that facilitates cost-benefit analysis of water conservation programs. Provide training on the use of the organization's Sales Forecasting and Rate Model, an Excel based model utilizing Monte Carlo simulation techniques to evaluate water utility revenue risk. Regularly presents at conferences and training workshops regarding conservation planning, water rates, and research project results.



6/10      International Fellow. Association for International  
Practical Training. China

Participated in the Association for International Practical Training's Water Here and There, International Fellows program. Traveled extensively through China with 12 other professionals for 21 days to share information and explore international collaboration on global water issues.

8/02 to 9/07      Planner. Planning and Management Consultants, LLC and  
CDM Smith Inc. Carbondale, IL

Conducted research and analysis on a variety of water resource management projects for Planning and Management Consultants, LLC, a consulting firm that was ultimately acquired by CDM Smith Inc. Primary project work involved providing assistance on water demand forecasting and water conservation program analysis. Worked on projects in California, Colorado, Oregon, Texas, New York, and Puerto Rico.



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**DATE:** June 4, 2020

**TO:** Board of Directors' Workshop - Resources

**FROM:** Chris Jones, Project Manager, Biological Resources

**SUBJECT:** Consider Cost Share Agreement with OCWD and Chino Basin Watermaster for Aerial Imagery and LiDAR Data Collection and Processing

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### **Background**

Staff is requesting the Board consider entering into a cost share agreement with the Orange County Water District (OCWD) to fund collection and processing of aerial imagery and LiDAR in areas of the Santa Ana River watershed where impacts from activities covered by the Upper Santa Ana River Habitat Conservation Plan (HCP or Plan) may occur. The resulting georeferenced aerial photographs and LiDAR data will have wide ranging application for the Biological Resources Staff and could also be used by Engineering and other staff. In particular these datasets will be used in analyses to help establish baseline topographic, vegetation, and hydrology conditions prior to the implementation of the HCP Covered Activities and Conservation projects. They will also be used in analysis for the High Flow Study in the Santa Ana River Wash, to calibrate predictive models for HCP covered species, and to inform conservation and long-term monitoring plans for the HCP and several other projects.

HCP Covered Activities could result in impacts to aquatic and riparian communities within and adjacent to the Santa Ana River. The HCP also proposes many beneficial conservation activities that are intended to increase the amount and condition of habitat in the watershed. Since it will be a requirement of the HCP to monitor change in the quality and quantity of riverine communities over time, it is crucial to establish a reliable baseline condition. A good baseline imagery and LiDAR survey memorializes the quantity and condition of habitat and topography immediately prior to the implementation of the HCP activities. The data collected will be a reference point as the HCP monitors for quantifiable changes to the abundance, distribution, and/or condition of habitat within our Plan area (either negative or positive).

Once the baseline condition is established the HCP will follow up with a long-term monitoring program in order to document changes and determine the likely cause(s) of any significant change observed. The first step is to obtain recent high-quality aerial imagery and LiDAR to understand and document the baseline condition of the surface hydrology and riparian vegetation communities within the River and its tributaries.

Georeferenced aerial imagery and LiDAR data are two very different data types that provide extremely valuable data alone, but can also be analyzed together. When data is referred to as georeferenced, it means the image is anchored to an actual point on the ground. This is useful when a dataset is put in a Geographic Information System (GIS) to conduct analyses on how things related to each other in space.

Aerial imagery is a picture of the earth taken from the air. In this case it will be taken from a fixed wing aircraft (see Image (A), below). The four-band imagery that would be gathered by the flight described in this memo would enable us to look at the land surface and vegetation using a typical red-blue-green (RGB) color ramp, but also add in the near infrared. This enables a GIS analyst to have a broader range of contrasting colors to use when analyzing differences on the image. This is useful in deciphering differentiation between different plants and plant communities, which can be extrapolated to habitats.

LiDAR, which stands for Light Detection and Ranging, is a remote sensing tool that allows for the measurement of surface topography using pulsed lasers.<sup>1</sup> The lasers are projected from a sensor on the underside of, in this case a fixed wing airplane, and bounce back off of objects between the sensor and the ground, including different layers of vegetation, buildings, rocks, and ground surface. The sensors record the 'return' of the laser. This return can be processed to determine the elevation of the point where that laser reflected or returned back to the sensor. These elevations can be analyzed to determine the structure of the various levels of canopy in a plant community, as well as topography. The first return, or top of the tallest plants, are shown in (B) of the photograph shown below. The ground surface, or last return, is shown in (C) of the image shown below. LiDAR data can be used to look not only at plan view surfaces, but also to create 3-dimensional cross-sections of vegetation structure and topography.

Using these images in tandem can enables an analyst to many different things. They can use this combined information to better determine plant types. For example, a color signature from the aerial image might appear similar between two plants, but published information might tell us that one of the two plants can grow to 10 feet tall, while the other never grows taller than 1 foot tall. The heights of plants can then be discerned from the LiDAR to help decipher which plant is which. The elevation of plants and plant communities

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<sup>1</sup> NOAA. What is lidar? National Ocean Service website, <https://oceanservice.noaa.gov/facts/lidar.html>, April 15, 2020.

relative to position on the floodplain can also be determined along with a host of other useful information.

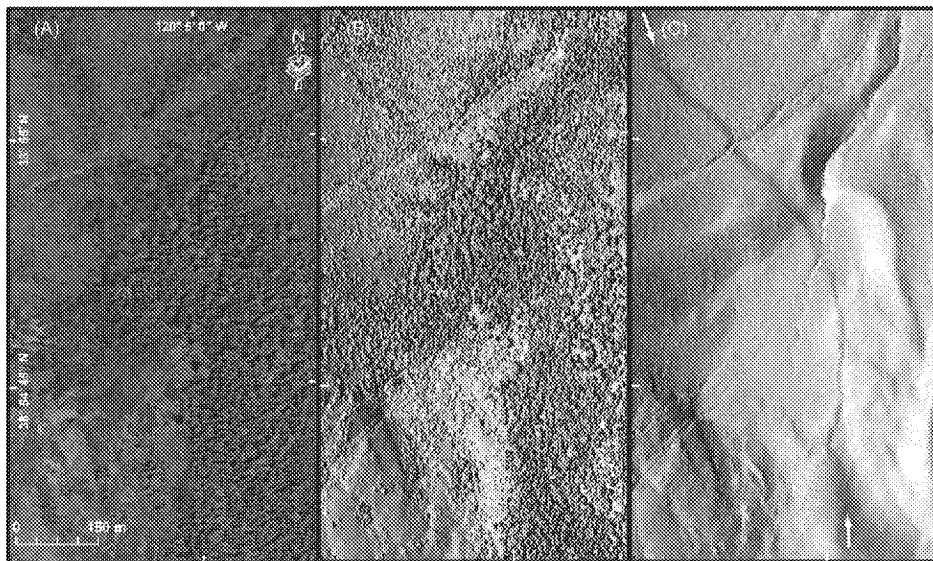


Figure 1 USGS. Comparison of Aerial Photo and LiDAR Image. <https://www.usgs.gov/media/images/comparison-aerial-photo-and-lidar-image>. Accessed May 28, 2020.

Valley District staff was approached by OCWD staff to gauge interest in partnering on a planned flight to collect aerial photographs of the Prado Basin in July 2019 and 2020. The data collection for the upcoming season would provide updated evidence of potential changes in plant communities, canopy, and structure since LiDAR will also be collected. Several large storms occurred this season that could have altered the bed, plant, and plant community structure in portions of the Santa Ana River and other areas that could be affected by covered activities. The purpose of the OCWD effort is to support their assessment of vegetation health and management of non-native plant species, including giant reed (*Arundo donax*). Since the Prado Basin represents a large portion of the area the HCP will be required to monitor and our objectives are similar, staff began to explore the possibility of collaborating on the project in a way that meets both agencies' needs and reduces cost and redundancy. Valley District staff expressed an interest in extending the proposed flight area further upstream into reaches of the River where HCP covered activities may also have impacts. This coordinated effort provides economies of scale and broader geographic coverage of data to all parties involved.

Staff from both OCWD and Valley District worked together to determine specifications of the aerial imagery and post processing. Once the specifications were worked out, OCWD released a request for proposals (RFP) for both 3-band and 3-band plus infrared, 3-inch pixel multi-spectral imagery and LiDAR (see Attachment 1). OCWD received four responses to the RFP. The names of the four firms that responded, along with their price quote is shown below.

### 2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery

Contractor	Quote
Digital Mapping, Inc	\$91,785
HANA Resources	\$98,693
Tetra Tech	\$107,820

The low bid was submitted by Digital Mapping Inc. (DMI) (see Attachment 2). Staff from both OCWD and Valley District reviewed the proposal from DMI and determined that they meet the requirements set forth in the RFP. OCWD staff has also reviewed references provided by DMI and found that they successfully completed similar work in southern California and the Santa Ana Watershed.

The geographic extent of the flight that will collect the imagery and LiDAR raw data covers the Santa Ana River from Prado Basin to the upper extent of its tributaries on the San Bernardino National Forest. The survey area is large because the HCP will be implementing either Covered Activities or Conservation projects throughout the watershed. Valley District will cover 100% of the LiDAR cost (\$43,500) since this product is not a part of the project scope that OCWD and Chino Basin Watermaster are taking on. LiDAR is important for Valley District and the Upper Santa Ana River HCP to provide topography to facilitate hydrologic analysis for the Seven Oaks Dam High Flow Study, as well as baseline topographic and vegetation canopy structure information throughout the survey area which will be key to the development of the HCP's Long Term Monitoring and Adaptive Management Program.

The costs related to aerial imagery for this project are divided based on geographic area of interest for OCWD and Chino Basin Watermaster versus Valley District. The total cost for the aerial imagery products and project management are not to exceed \$48,375. OCWD and the Chino Basin Watermaster will co-fund 30% of the overall cost (\$14,100) of the aerial image, since the Prado Basin portion of the flight covers approximately 30% of the flight area. The proposed cost for Valley District's share is not to exceed \$34,275 or 70% of the total since 70% of the flight is beyond the area where OCWD and Chino Basin Watermaster would have flown on their own.

The total cost for the HCP portion of this imagery is approximately \$77,775. Since this cost is part of the HCP implementation requirements, approximately 60%, or \$46,665, of the Valley District cost will be reimbursed by the HCP partners based on each agency's HCP impacts. Therefore, Valley District's 40% share of the HCP portion is approximately \$31,110. Additionally, the total amount will be counted towards the non-federal matching funds

requirement of the 2019 Section 6 HCP Planning Grant that was awarded by USFWS in March and was approved by the Board in May 2020.

If approved, Valley District would enter into the proposed cost share agreement with OCWD for the project (see Attachment 3) and place a line item in the fiscal year 2020/2021 budget for this work. OCWD presented a recommendation to fund DMI to fulfill the scope of work presented in the RFP at the May 20, 2020, OCWD Board Meeting. The item was approved by the OCWD Board. If Valley District chooses not to participate in the project OCWD will continue with the flight concentrating only on collection of aerial imagery in the Prado Basin.

**Fiscal Impact**

The fiscal impact of this item is \$77,775. This work is currently included in line item 6780, Environmental/HCP Implementation, of the proposed 2020/2021 General Fund budget. After reimbursement by the HCP Partners the final cost to Valley District is \$31,110.

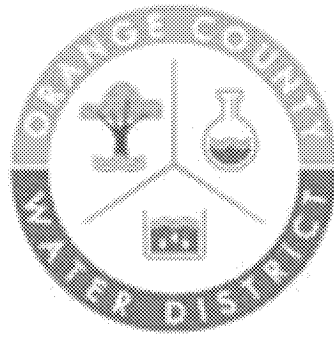
**Staff Recommendation**

Staff recommends the Board direct staff to place this item on the next Board of Directors regular meeting agenda for consideration.

**Attachments**

- 1) OCWD Request for Proposals
- 2) DMI Proposal
- 3) OCWD Cost Share Agreement

Scope of Work



SINCE 1933

**April 28, 2020**

**REQUEST FOR PROPOSAL  
FOR  
2020 PRADO BASIN AND UPPER  
SANTA ANA WATERSHED AERIAL  
IMAGERY**

**PROPOSALS DUE**

**May 6, 2020  
5:00 P.M.**



## Scope of Work

The Orange County Water District (OCWD or District) was formed in 1933 by a special act of the California State Legislature to protect Orange County's rights to water in the Santa Ana River and to manage this important groundwater basin. Since 1933, the District has replenished and maintained the groundwater basin at safe levels while more than doubling the basin's annual yield. This important source provides local groundwater producers with a reliable supply of high-quality water.

### 1 INTRODUCTION

OCWD is seeking proposals from firms that are qualified to provide orthogonal aerial and light detection and ranging (LiDAR) imagery for the area shown in Figure 1: Mapping Boundary. The goal of the imagery acquisition is to obtain high quality, high accuracy aerial imagery in Prado Basin and portions of the Upper Santa Ana Watershed for vegetation analysis and related geospatial analyses. The purpose of this Request for Proposal (RFP) is to identify firms that have the capacity to execute the project and establish a cost to provide the services for color orthophotography and LiDAR.

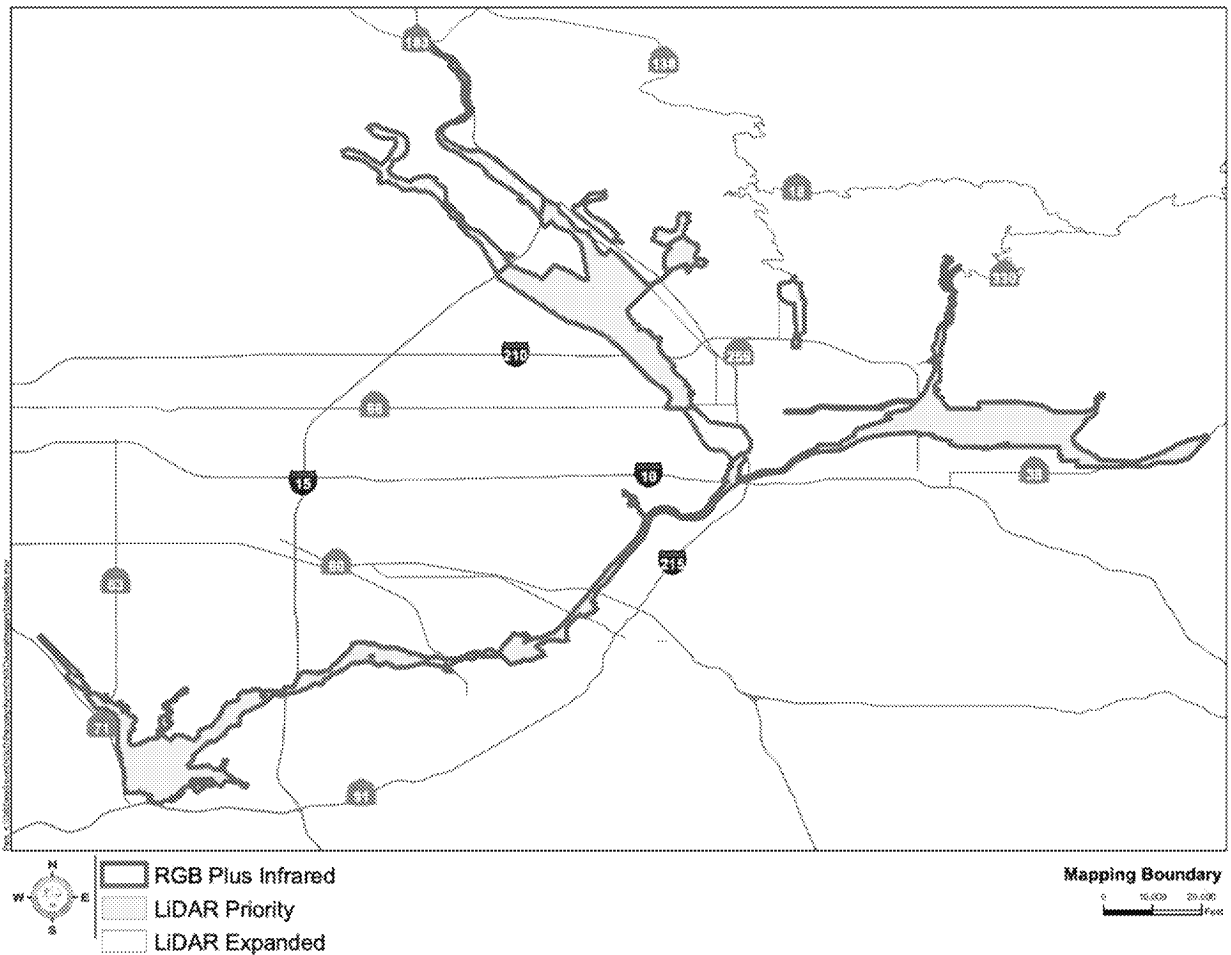


Figure 1: Mapping Boundary

## 2 PROJECT OBJECTIVES

This aerial imagery acquisition project will be true color, high resolution and spatially accurate aerial imagery that can be used by OCWD, Chino Basin Watermaster, San Bernardino Valley Municipal Water District and other stakeholders. The imagery will be flown during the summer 2020 (approximately the first week of July 2020). The project will require aerial imagery at a three-inch resolution and LiDAR that meets USGS Quality Level 1 (QL1). This RFP is written to describe OCWD's requirements. This RFP describes the project, required scope of services, project milestones, selection process and minimum information that must be included in the proposal. The proposals shall include, at a minimum the tasks outlined in the RFP.

The main objectives of this project are:

1. to obtain a seamless digital imagery product for visualization and analytical purposes that can be used in geographic information systems (GIS) and/or computer-aided design (CAD) software;
2. to acquire a product to verify and update vegetation types and classifications;
3. to acquire a product that will facilitate identification of changes from previous aerial surveys and will allow analysis in a digital environment;
4. to acquire a mosaic dataset that references the imagery and identifies metadata (to include pixel storage definitions, geo-referencing, processing, format, and so forth);
5. to obtain a product that can be used in conjunction with other digital spatial databases currently stored in ArcGIS (shapefile and geodatabase formats) or CAD;
6. to obtain a product that can be integrated with other available vector and raster data in the study area;

## 3 PROFESSIONAL STANDARDS and PRACTICES

This RFP is intended to identify aerial photography firms with the necessary equipment, experience and personnel needed to create quality geo-referenced imagery and other associated derived products in accordance with the requirements outlined in the Project Specifications. OCWD desires that firms proposing for this work be a self-contained firm with turnkey services, experience, aircraft, processing equipment and photogrammetric expertise to ensure that the vendor project team can deliver professional quality products in a timely and cost-effective manner.

## 4 COLLECTION REQUIREMENTS

### 4.1.1 AERIAL IMAGERY – RGB & INFRARED

Cloud free imagery is required for this project. Therefore, an extension of the flight collection end-date is possible if no cloud-free days occur during the proposed collection period. The imagery shall not be captured when the ground is obscured by other factors such as flooding, excessive haze, excessive heat, smoke, or other obscuring atmospheric conditions. Aerial photography will be conducted between 10:00 AM and 2:00 PM to provide required sun angle to optimize radiometry of imagery (minimum 45 degrees) to minimize shadowing. Firms shall use good professional judgment and narrow the collection window, if

## Scope of Work

necessary, to produce optimum results. The flight crew will then acquire the digital images when all the factors are satisfied. All aerial photography conducted for this project will conform to the specifications established by the American Society for Photogrammetry and Remote Sensing (ASPRS) Draft Aerial Photography Standard (1995). Airborne GPS controls will be used in the development of the digital orthophotos.

### 4.1.2 LiDAR IMAGERY

The contractor will follow LIDAR specifications to comply with a USGS Quality Level 1 (QL1) for data acquisition and processing. These include but are not limited to the following specifications:

- An aggregate nominal pulse density (ANPD) of 8 pulses per square meter or greater to allow for vegetation related studies.
- A scan angle of less than or equal to 20°
- 50% overlap with a minimum of 30%, preferably with opposing flight lines and no voids between swaths.
- Include a 50-meter buffer outside of the project boundaries delineated in Yellow and/or Green in Figure 1.
- All GPS measurements shall be made with dual frequency L1-L2 receivers with carrier-phase correction. All GPS measurements shall be made during periods with PDOP less than or equal to 3.0 and with a least 6 satellites in common view of both a stationary reference and the roving receiver.
- Stationary reference receivers shall be located at existing National Geodetic Survey (NGS) marks or at new marks. In the case of an existing mark, its location shall be verified by processing one GPS sessions of at least two hours duration and comparing the computed position with the position published by NGS. Each new mark shall be located by tying to one or more NGS Continuously Operating Reference Stations (CORS) by static GPS methods. If the distance to the nearest CORS is less than 80 km, use at least 2 independent GPS sessions, each at least 2 hours long. If the distance to the nearest CORS is greater than 80 km, use at least 2 sessions each at least 4 hours long.
- The coordinate system should be the same as the color imagery.

Product deliverables shall include:

- Classified LAS 1.4 files
- Bare earth raster surface at 1-m resolution or better
- Highest hit (first return) raster surface with the same resolution and extent as the bare earth raster surface
- Intensity image
- Shapefiles with flight trajectories, tiling and swath boundaries
- A Report of the work performed describing survey methods, the identity, published position, and measured position of all existing NGS marks used for reference stations, flight boundaries, coordinate systems and datums, results, spatial accuracy assessment, including RMSE for relative and absolute accuracies and formal

## Scope of Work

metadata as specified by the Federal Geographic Data Committee's (FGDC).

### 5 IMAGERY SPECIFICATIONS – REQUIREMENTS

Each imagery specification option will be priced separately with any optional elements that the successful firm desires to present. The OCWD Project Team will require the following in the scope of services at the time of agreement award:

- a. The aerial photography for three-inch (3") pixel (GSD = Ground Sample Distance) (1"=50' mapping scale) imagery will be acquired for the entire RGB area in Figure 1 which in total is approximately 62.5mi<sup>2</sup>/161.9km<sup>2</sup>. The photo scale of 1"=50', for all geographic extents abovementioned. Specifically, the imagery needs to be with a horizontal accuracy to National Map Standards 1"=50' (+/- 1.6 ft) from true location at 90% confidence level.
- b. Natural Color Imagery (RGB):
  - Option 1: 24 bit (3 bands x 8 bits/band) digital camera collections will include collection of multi-spectral imagery. This true color imagery will be required in two raster file formats (GEOTIFF and Mr. SID).
  - Option 2: 24 bit (3 bands x 8 bits/band) and infrared digital camera collections will include collection of multi-spectral imagery. The true color imagery will be required in two raster file formats (GEOTIFF and Mr. SID).
- c. Light Detection and Ranging (LiDAR)
  - Option 3: LiDAR imaging which complies with USGS Quality Level 1 (QL1) for Priority Areas only (Green outline in Figure 1). This area covers approximately 42.4 mi<sup>2</sup>/109.9 km<sup>2</sup>.
  - Option 4: LiDAR imaging which complies with USGS Quality Level 1 (QL1) above for both Priority and Extended Areas (Combined Green and Yellow outline in Figure 1). This area covers approximately 53.7mi<sup>2</sup>/139.8km<sup>2</sup>.
- d. As solely determined by the OCWD Project Manager, images must be free of significant defects or inconsistencies in tone, contrast or color within an individual tile and/or between adjacent image tiles; color and contrast shall be natural – no bias towards a single shade or color; samples from the same sensor proposed for this project shall be provided; image shall be free of striping, banding, washouts, and hot spots. Some allowance for high reflection over water will be made. Feature extraction should be possible in lightly shaded areas.
- e. Cloud free RGB & Infrared imagery is required. The imagery shall not be captured when the ground is obscured by other factors such as flooding, excessive haze, smoke, extreme heat, or other obscuring atmospheric conditions. Aerial photography shall be conducted between 10:00 AM and 2:00 PM to provide required sun angle to optimize radiometry of imagery (minimum 45 degrees) in order to minimize shadowing.
- f. The spatial resolution will be three-inch resolution.
- g. The projection required will be California State Plane Coordinate System, Zone (5 and 6) US feet, Datum NAD83.

## Scope of Work

NAD\_1983\_StatePlane\_California\_VI\_FIPS\_0406\_Feet  
WKID: 2230 Authority: EPSG

Projection: Lambert\_Conformal\_Conic  
False\_Easting: 6561666.666666666  
False\_Northing: 1640416.666666667  
Central\_Meridian: -116.25  
Standard\_Parallel\_1: 32.78333333333333  
Standard\_Parallel\_2: 33.88333333333333  
Latitude\_Of\_Origin: 32.16666666666666  
Linear Unit: Foot\_US (0.3048006096012192)

Geographic Coordinate System: GCS\_North\_American\_1983  
Angular Unit: Degree (0.0174532925199433)  
Prime Meridian: Greenwich (0.0)  
Datum: D\_North\_American\_1983  
Spheroid: GRS\_1980  
Semimajor Axis: 6378137.0  
Semiminor Axis: 6356752.314140356  
Inverse Flattening: 298.257222101

- h. The OCWD Project Team will require an initial flight of the area shown in Figure 2: Quality Control Flight to serve as a pilot survey to perform quality control (QC) regarding the: a) seamlessness, b) accuracy, and c) true color and color balance across image tiles and to provide feedback to the vendor.

## Scope of Work

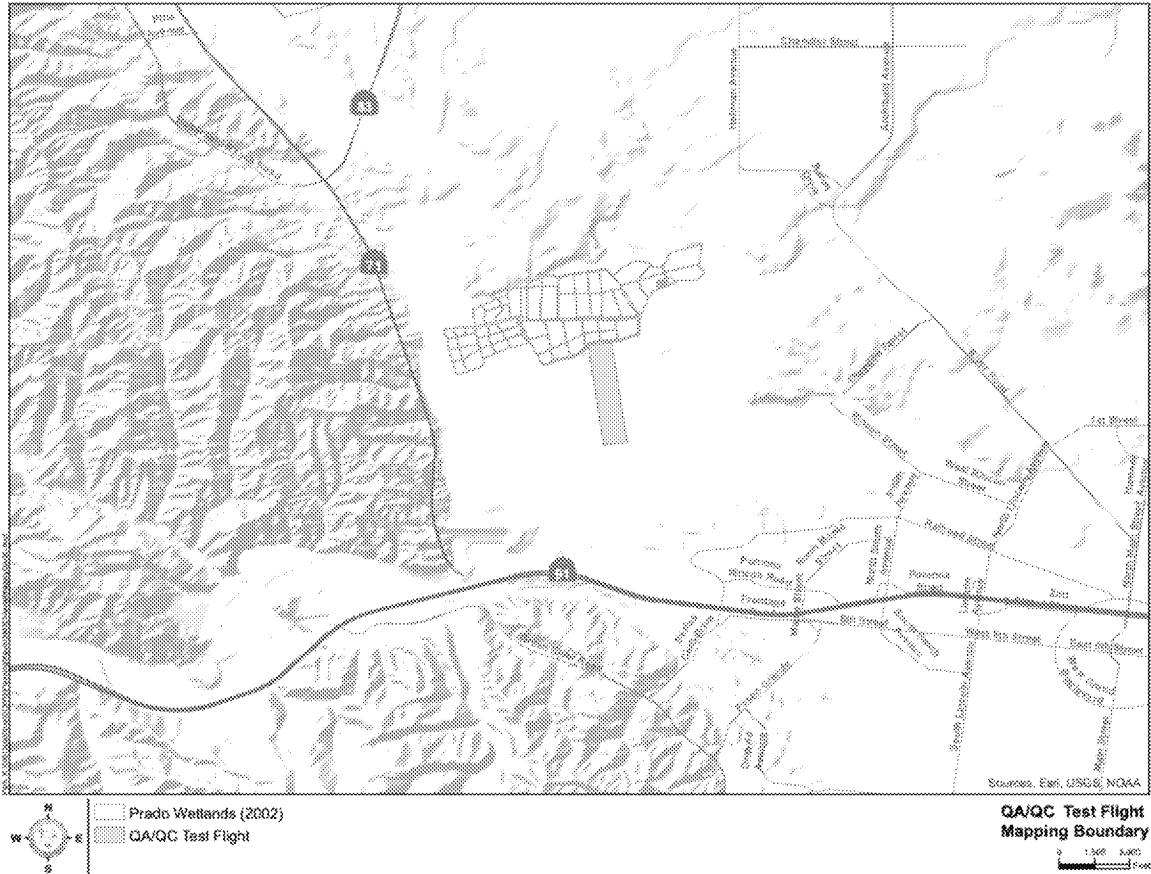


Figure 2: Quality Control Flight

The successful firm shall provide pilot samples of the captured following award of the agreement and prior to the aerial photography of Figure 1: Mapping Boundary in July. Based on these pilot samples the consultant will receive quality control feedback from OCWD. In the case that OCWD determines that the aerial imagery does not comply with the agreed specifications, the vendor will take the necessary steps to comply with required changes. The successful firm will develop and deliver, together with the aerial imagery, metadata that follows the FGDC metadata standards and describes the: flight date, time, line, area name or grid number, weather conditions, resolution, geographic projection, horizontal and vertical datum accuracy, and photographic equipment that was used for capturing the imagery.

## 6 GENERAL SCOPE OF WORK

### Task 1: Project Management

The consultant shall assemble a team and provide one lead individual, the Project Manager (PM), who shall bear overall responsibility for all services as outlined in this RFP and who shall report directly to the District's Project Manager.

A project kickoff meeting shall be held at OCWD's Fountain Valley office discuss the proposed work plan, data collection requests, schedule, and project communications.

## Scope of Work

For the duration of the project, the consultant shall provide project management services to satisfy the schedule requirements and efficiently manage the work.

### Task 2: Initial Flight for Quality Control (Option 1 & 2 – 3 band and infrared imagery)

Conduct aerial photography flight of area shown in Figure 2: Quality Control Flight

Provide data to OCWD Project Manager for review and approval.

### Task 3: Initial Flight for Quality Control (Option 3 & 4 LiDAR imagery)

Conduct aerial LiDAR imagery flight of area shown in Figure 2: Quality Control Flight

Provide data to OCWD Project Manager for review and approval.

### Task 4: Data Collection and Reporting (Option 1 – 3 band)

The consultant shall collect the aerial imagery data required to complete the project and process the imagery data.

Submit all required data in electronic format to OCWD. No printed copies will be needed.

### Task 5: Data Collection and Reporting (Option 2 – 3 band and infrared imagery)

The consultant shall collect the aerial imagery data required to complete the project and process the imagery data.

Submit all required data in electronic format to OCWD. No printed copies will be needed.

### Task 6: Data Collection and Reporting (Option 3 – LiDAR of only Priority Sites)

The consultant shall collect the aerial imagery data required to complete the project and process the imagery data.

Submit all required data in electronic format to OCWD. No printed copies will be needed.

### Task 7: Data Collection and Reporting (Option 4 – LiDAR of Priority and Extended Sites)

The consultant shall collect the aerial imagery data required to complete the project and process the imagery data.

Submit all required data in electronic format to OCWD. No printed copies will be needed.

At OCWD's sole discretion, OCWD will determine if Option 1 (3 band) or Option 2 (3 band and infrared) imagery will be collected. Additionally, OCWD will determine if Option 3 (LiDAR Priority Sites) or Option 4 (LiDAR at Priority and Extended Sites) imagery will be collected. OCWD will inform the consultant if Task 4 or Task 5 will be implemented. It is anticipated that either Task 4 or Task 5 will be implemented, not both Task 4 and Task 5. Further, OCWD will inform the consultant if Task 6 or Task 7 will be implemented it is anticipated that either Task 6 or Task 7 will be implemented, not both Task 6 and Task 7.

## Scope of Work

### 7 PROJECT SCHEDULE

The District anticipates that the process for selecting a consultant, awarding the agreement, and execution of the work would be according to the following tentative schedule:

Issue RFP	April 28, 2020
Proposal Due Date – 5:00 P.M.	May 6, 2020
Agreement Award	May 23, 2020
Agreement Execution	May 30, 2020
Kick-Off Meeting	June 5, 2020
Quality Control data submittal	June 17, 2020
Aerial Photography flight	week of July 1
Submission of data to OCWD	August 9, 2020

### 8 ELEMENTS OF PROPOSAL

Please include the following in your proposal:

1. Cover letter.
2. The proposal shall be limited to ten (10) one-sided pages with type no smaller than 11-point font. The ten-page limit excludes cover letter, tabs, dividers, table of contents, executive summary and resumes.
3. Scope of Work, a discussion of the consultant's understanding and approach to the project and a breakdown and explanation of project tasks.
4. Project team description (with resumes of key personnel), briefly emphasizing experience and capabilities of key project members as related to the outlined scope of work. Include the home office and location of each project team member.
5. Representative project experience, including a brief description of the work performed the period in which the work was performed, the contract value, and client contact information, including name, address, and telephone number.
6. A statement that the Consultant has read and can comply with the following insurance requirements: \$2Million for Commercial General Liability insurance, \$1Million for Automobile Liability insurance (including Additional Insured endorsements for both General Liability and Automobile Liability insurance), \$1Million for Workers' Compensation insurance (including Waiver of Subrogation endorsement for Workers' Compensation) and \$1Million for Professional Liability insurance.
7. **Fee proposal - submitted in a separate, sealed envelope.** Provide a matrix table of the lump sum cost for each project task. The fee proposal shall be based on services provided on a lump sum basis for each task with a total not-to-exceed fee. The not-to-exceed fee should be presented as the total (aggregate) for Task 1, 2, 4 and 6 and the not to exceed fee should also be shown separately as the total (aggregate) for Tasks 1, 2, 4 and 7. Additionally, the not-to-exceed fee should be presented as the total (aggregate) for Task 1, 3, 5 and 6 and the not to exceed fee should also be



## Scope of Work

shown separately as the total (aggregate) for Tasks 1, 3, 5 and 7 as shown in Table 1 below.

**Table 1**  
**Format of Fee Proposal**

Task Number	Proposed Fee
1	
2	
3	
4	
5	
6	
7	
<b>Not-to Exceed Total for Task 1, 2, 4 and 6</b>	
<b>Not-to Exceed Total for Task 1, 2, 4 and 7</b>	
<b>Not-to Exceed Total for Task 1, 3, 5 and 6</b>	
<b>Not-to Exceed Total for Task 1, 3, 5 and 7</b>	

### 9 SELECTION PROCESS

Selection of the consultant will be based upon the proposal contents, understanding and approach to the work, prior experience of the firm, specific experience and capabilities of the project team members, and fee proposal. The team members should be competent in all areas outlined under the scope of work above. The District may hold interviews and include interview scoring as a portion of selection. Based upon this information, OCWD staff will recommend a firm to OCWD's Board of Directors for award of an agreement. The selected firm must be able to begin work immediately upon execution of Agreement and must be able to maintain the required level of effort throughout the entirety of the project. The evaluation criteria listed in the OCWD Proposal Evaluation Form (Exhibit A) will be used to evaluate each consultant. Interviews may or may not be a part of the selection process.

### 10 PRE-SUBMITTAL ACTIVITIES

#### 1. Questions Concerning Request for Proposals

All questions regarding the RFQ should be presented in writing to: Orange County Water District  
Attn: Kevin O'Toole  
18700 Ward Street  
Fountain Valley, CA 92708  
Phone: (714) 378-8248  
kotoole@ocwd.com

#### 2. Pre-Proposal Meeting

There will be no pre-proposal meeting for this scope of work.

#### 3. Revision to the Request for Proposals

## Scope of Work

The District reserves the right to revise the RFQ prior to the date the proposals are due. The District reserves the right to extend the date by which the Proposals are due.

### 4. Proposal Due Date

Sealed proposals will be accepted at the office of the Orange County Water District, 18700 Ward Street, Fountain Valley, California 92708, until **5:00 PM local time on Wednesday, May 6, 2020**. The proposal shall include one (1) digital PDF of the proposal document and price quote. The proposals should be submitted by email to Kevin O'Toole at [kotoole@ocwd.com](mailto:kotoole@ocwd.com)

Proposals will be reviewed by OCWD staff and recommendations for issuance of a Professional Services Agreement to the successful proposer are anticipated to be made to the OCWD Board of Directors on May 20, 2020. Failure to submit information in accordance with these requirements and procedures may result in disqualification.

**EXHIBIT A**  
**OCWD PROPOSAL EVALUATION FORM**

# ORANGE COUNTY WATER DISTRICT PROPOSAL EVALUATION FORM

**Project:** Aerial Imagery

**Proposing Firm:** \_

**Reviewer:** \_

Criteria	Weighting (%)	Score (100)	Weighted Score	Comments
1 Approach and Understanding of the Work	25			
2 Work Plan and Schedule	25			
3 Project Experience & Record of Success on Similar Projects	25			
4 Project Team	25			
<b>Total</b>	100			

Scoring:  
 100 = Excellent  
 85 = Above Average  
 75 = Average  
 65 = Below Average  
 50 = Poor

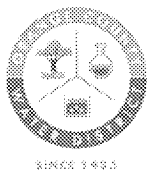
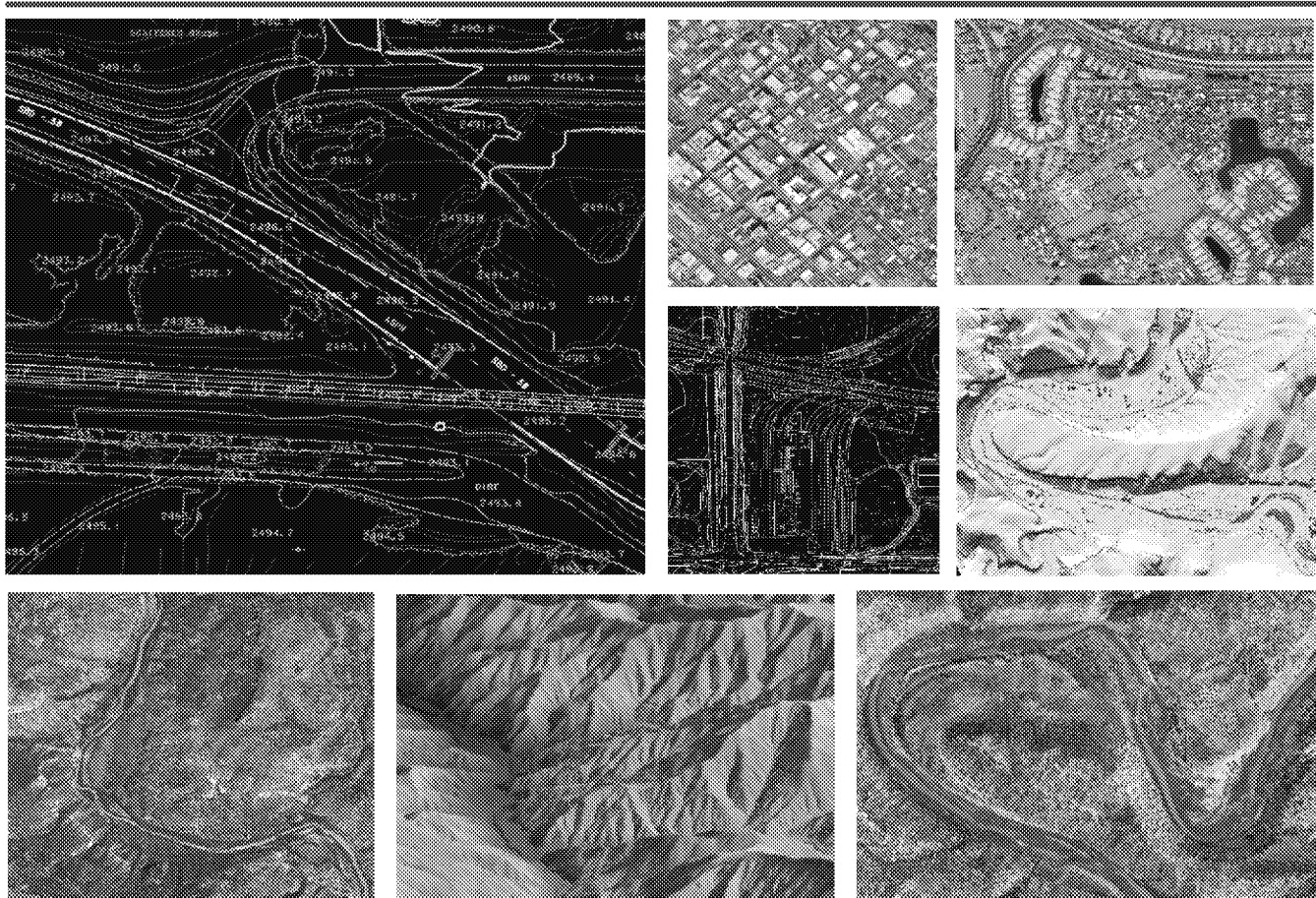
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# DIGITAL MAPPING, INC. – PROPOSAL FOR

## ORANGE COUNTY WATER DISTRICT

### 2020 PRADO BASIN AND UPPER SANTA ANA WATERSHED AERIAL IMAGERY

RFP Due Date: May 6, 2020 5:00pm



**Prepared for:**  
Kevin O'Toole  
*Senior Planner*  
**Orange County Water District (OCWD)**  
18700 Ward Street  
Fountain Valley, CA 92708  
Phone: (714) 378-8248  
[kotoole@ocwd.com](mailto:kotoole@ocwd.com)



**Prepared by:**  
Gencaga (Gen)Aliyazicioglu  
*CFO & Sr Project Manager*  
**Digital Mapping, Inc. (DMI)**  
21062 Brookhurst St, Suite 101  
Huntington Beach, CA 92646  
(714) 968-5459  
[gen@admap.com](mailto:gen@admap.com)

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May 6, 2020

Kevin O'Toole  
Senior Planner  
**Orange County Water District (OCWD)**  
18700 Ward Street  
Fountain Valley, CA 92708

RE: RFP – 2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery

Dear Mr. O'Toole,

Digital Mapping, Inc. (DMI) is delighted to submit our quote and technical approach in response to your request for proposal for "2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery" project. We have no doubt that our firm is exceptionally capable of satisfying all of Orange County Water District's (OCWD) requirements.

DMI has been a trusted provider of digital mapping, geospatial data, and photogrammetric solutions for over past 32 years. DMI has extensive experience in providing high accuracy imagery and LiDAR data sets throughout the United States with projects similar in size and scope to what is described in this RFP. Most recently in 2019 we have completed 1,272 square miles of 3" orthophotography project for Orange County Fire Authority, 2,000 square miles of orthophotography and building footprint project (3" and 6") for Mesa County, CO, and 2,500 square miles of QL1 LiDAR data collection and processing for County of Tuolumne CA.

DMI has extensive experience around the project area. We have completed different projects covering the project area with various project deliverables.

- ***In 2019 DMI successfully completed "2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery" for OCWD.***
- *In 2015, for its client Orange County Public Works DMI successfully completed aerial imagery and LiDAR project covering Prado Basin area. DMI's final deliverables for this project were 2" color digital orthophoto, Lidar derived DEM (Digital Elevation Model), DTM (Digital Terrain Model) with breaklines and 1' interval contours data.*

DMI understands that the main purpose of this project is to obtain 3" resolution digital orthophotography and QL1 LiDAR products covering OCWD's area of interest (AOI). Our anticipated scope of service is in conjunction with the OCWD's requirements upon the industry's leading turnkey airborne digital mapping camera DMC IIe 230 and Optech ALTM Galaxy T1000 LiDAR sensor.

We will deploy our aircrafts equipped with our DMC IIe 230 sensor (equipped with ABGPS/IMU system) based in **Chino Airport** while working two daily shifts to ensure a timely and successful delivery. *In addition to our expertise in 4 band orthophotography services and LiDAR acquisition and processing, we believe that our proximity to project area and extensive knowledge of local flight conditions (and restrictions) will enable us to deliver high quality product within desired delivery time.*



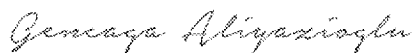
Following briefly summarizes DMI's exceptional geospatial services throughout the 32 years of being in business; our overall approach integrates three (3) important elements and strengths:

1. **Methodology** – Our methodology is straightforward, although it follows a traditional photogrammetric approach, we integrate high value digital processing techniques, which we explain further in the Scope of Work section of this submittal.
2. **Experience** – We employ top-qualified professionals (photogrammetrist, pilots, land surveyors, analysts and data technicians) to ensure the effectiveness and efficiency of our production by delivering a product that is unblemished and absolute. Our professional will streamline our post-processing and compilation procedures allowing us to meet the timeframe set out by OCWD.
3. **Value** – We have been a trustworthy aerial mapping provider to numerous private entities, federal, state, and local government agencies such as USFS, USGS, USDA, NGA, NOAA, USACE, Counties, Cities and local engineers. Since 1987, we have a history of providing effective GIS database development and resourceful spatial analysis to both domestic and international clients. With the support of our experienced team and significant resources, DMI has undertaken both small to large projects throughout the United States.

Our project manager Mr. Gencaga Aliyazicioglu (Gen), has over 40+ years of photogrammetric and geospatial experience and still manages to make DMI a household name throughout the industry, by offering quality aerial mapping services and products. Mr. Aliyazicioglu will be responsible for ensuring that the delivered service items meet the correctness and completeness set forth by OCWD.

*DMI has read and can comply with insurance requirements set forth in the RFQ. We will be available to start work immediately. We believe that you will find the contents of our proposal not only informative but also precisely targeted to meet the OCWD's requirements.*

Sincerely,



Gencaga (Gen) Aliyazicioglu  
Certified Photogrammetrist | CFO | Sr. Project Manager  
**Digital Mapping, Inc. (DMI)**  
21062 Brookhurst St, Suite 101  
Huntington Beach, CA 92646  
(714) 968-5459

### A.) EXECUTIVE SUMMARY

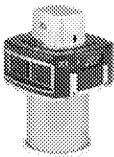
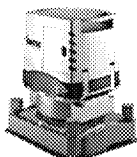
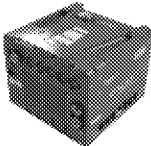
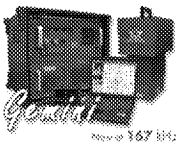

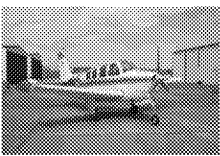
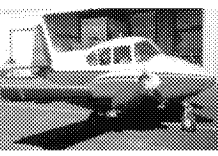
DMI understands that the main purpose of this project is to obtain 3” resolution digital orthophotography and QL1 LiDAR products covering OCWD’s area of interest (AOI). For the important project DMI will deploy its FAA compliant aircrafts equipped with DMI-Ile Digital Mapping Camera and OPTECH ALTM Galaxy T1000 LiDAR sensor for imagery and LiDAR data acquisition. DMI is very close to and familiar with the project area. In 2019 DMI successfully completed “2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery” for OCWD.

#### A.1.) Company Profile

Digital Mapping, Inc. (DMI) is a California Corporation and a woman owned business WBE, MBE, SBE certified by the State of California, Office of Small and Minority Business in the County of Los Angeles and San Bernardino, and a variety of other municipalities and districts. DMI has more than 32 years of experience in aerial photography, digital photogrammetry, LiDAR capture and processing, digital orthophotography, topographic and planimetric mapping, and related services. DMI has carried out a large portion of work throughout out the United States.

<p><b>Firm Name:</b> Digital Mapping, Inc. (DMI)</p> <p><b>Office Locations:</b> 21062 Brookhurst Street, Suite 101 Huntington Beach, CA 92646</p> <p><b>Flight Operations Hangar Location:</b> 7000 Merrill Avenue, Hangar 60 (PO Box 84) Chino, CA 91710</p> <p><b>Telephone/Fax:</b> (P) 714-968-5459 (F) 714-968-2429</p> <p><b>Type of Ownership:</b> C Corporation</p> <p><b>Year Establish:</b> 1987</p> <p><b>President, CEO:</b> Lillian Aliyazicioglu</p> <p><b>VP, PLS:</b> Dennis Dillman</p> <p><b>CFO. Sr. Project Manager:</b> Gencaga (Gen) Aliyazicioglu</p>	<p><b>Our Services:</b></p> <ul style="list-style-type: none"> <li>• Topographic / Planimetric Map Production</li> <li>• GIS Database Development</li> <li>• Orthophoto and Oblique Map Production</li> <li>• Map Graphics Production</li> <li>• Aerial Triangulation / Digital Terrain Model / Digital Elevation Model</li> <li>• Geographic Information Systems</li> <li>• Digital Imagery Acquisition and Processing</li> <li>• LiDAR Acquisition and Processing</li> <li>• Imagery Derived Products (Land Use / Land Cover)</li> <li>• Airborne GPS / Remote Sensing</li> <li>• Land Surveying</li> </ul>
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#### A.2.) Airborne Capabilities

			
<b>DMI Ile230</b> Digital Mapping Camera	<b>DMI I</b> Digital Mapping Camera	<b>Optech ALTM Galaxy T1000</b> LiDAR Sensor	<b>Optech Gemini</b> LiDAR Sensor
			
<b>Chieftain Navajo</b>	<b>Beechcraft Bonanza</b>	<b>Geranimo</b>	

## B.) SCOPE OF WORK

### B.1.) Project Understanding and Overview

DMI understands that the main purpose of this project is to obtain 3” resolution digital orthophotography and QL1 LiDAR products covering OCWD’s area of interest (AOI). For the important project DMI will deploy its FAA compliant aircrafts equipped with DMI-Ile Digital Mapping Camera and OPTECH ALTM Galaxy T1000 LiDAR sensor for imagery and LiDAR data acquisition.

DMI has completed numerous orthophotography and LiDAR processing projects enabling us to achieve an efficient workflow to deliver high quality products within desired delivery schedule. This section of the proposal will provide in-depth technical descriptions on DMI’s process methodology on collecting, processing, and delivering the required data for this project. DMI has created a functional and operational project plan that is quality controlled to ensure a successful project completion.

**Table 1. Product Specifications and Deliverables**

General Specs	
Products	3” color digital orthophoto, QL1 LiDAR data and derived products
Accuracy:	Orthophotography: 6 inch RMSE (2 pixels per ASPRS Class 1) LiDAR Vertical Accuracy: 10 cm vertical class per ASPRS standards
Tiling Index	provided by the OCWD
Acquisition Window	Summer 2020 (First week of July 2020)
Deliverables	
Aerial Data Acquisition	<ul style="list-style-type: none"> <li>Exposure Points / Flight Lines (gdb)</li> <li>Flight Reports</li> </ul>
Ground Surveying	<ul style="list-style-type: none"> <li>Ground Control Point Locations and Survey Report</li> </ul>
Aerial Triangulation	<ul style="list-style-type: none"> <li>Aerial Triangulation Report (pdf)</li> </ul>
Orthophotography	<ul style="list-style-type: none"> <li>Uncompressed 3-Band (or 4 band) Imagery in GeoTIFF format</li> <li>Camera Calibration Report (pdf)</li> <li>FGDC compliant Metadata</li> </ul>
LiDAR Data	<ul style="list-style-type: none"> <li>Classified (standard) LiDAR point cloud in .las format (LAS 1.4 Point Data)</li> <li>Bare earth raster surface at 1-m resolution or better</li> <li>Highest hit (first return) raster surface with the same resolution and extent as the bare earth raster surface</li> <li>Intensity image</li> <li>Project and Accuracy Report</li> </ul>
<b>All deliverables will meet specification set forth in the Scope of Work</b>	

### B.2.) Project Schedule

DMI’s proximity and familiarity with the project area will enable us capture imagery as soon as all the conditions are met and work two daily shifts to deliver final products until August 9, 2020. Project schedule dependent on weather conditions.

### B.3.) Technical Approach

#### B.3.a.) Task 1 – Project Management

A project kickoff meeting will be held at OCWD's Fountain Valley office to discuss the proposed work plan, data collection requests, schedule, and project communications. Being in Huntington Beach, will enable DMI to visit OCWD upon any request. DMI project status reporting is an important task in communicating status updates for the project. OCWD will have an opportunity to express the exact needs of status reports and all communication needed. This includes the type of information required, the frequency of reporting, and the format of the reports. DMI will ensure all needs are properly met accordingly

- **Weekly Updates:** DMI will communicate weekly with the OCWD project manager to provide updates including task that were completed, issues that may have occurred and the expected completion of current task.
- **Weather Issues:** DMI has a thorough understanding of the project and weather. DMI has experience in conducting aerial missions for the throughout the Western United States. DMI's abundance of aircraft and sensors will allow us to base our aircraft in Chino airport until data capture is completed without interruption.

#### B.3.b.) Task 2 and 3 – Initial Flight for Quality Control (Option 1&2 and/or Option 3&4)

DMI's DMC-Ile230 has the capability to capture R, G, B and IR bands in a single flight. Upon OCWD approval DMI will fly the test area which is right next to Chino Airport where our flight operations are based. DMI will then process the imagery and LiDAR data based on OCWD's request. DMI's location will enable cost and time effective acquisition of the test area.

#### B.3.c.) Task 4, 5, 6 and 7 – Data Collection and Reporting

##### B.3.c.i.) Flight Mission Planning

DMI utilizes the newly designed mission planning software Leica Mission Planning and Optech AMM to implement and manage the aerial mission. This program is a comprehensive reporting, mission planning, and post-processing tool that provides DMI innovative solutions for our aerial processes. The utilization of these flight planning software allows us to view the project coverage area and the published flight lines in their appropriate coordinate system.

DMI will provide OCWD with a proposed flight map to be used for the project during the kick off meeting. DMI will then make any adjustments that OCWD's request. DMI's project manager will then finalize the flight plan in SHP or KMZ format during the pre-planning stages of the project. Prior to receiving our notice to proceed, DMI will provide the final flight plans to the OCWD project manager for a final evaluation and approval.

##### B.3.c.ii.) Ground Surveying

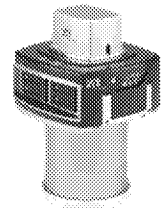
DMI will place **49 ground control points** (as shown in the following map) and will also use existing control points in project area. **In 2019 DMI used 44 ground control points for the Prado Aerial Imagery project which will be utilized to maximum extend.** DMI has completed numerous projects within and around the project area has placed many ground controls in the past. Use of ground control points will increase the accuracy of the final product. DMI will also utilize ABGPS-IMU technology for better positioning of the images thus increasing the accuracy of the final orthophotos.

##### B.3.c.iii.) Aerial Acquisition Planning

Our acquisition crew will be mobilized from Chino Airport. Final flight plan will have an approved buffer zone around the OCWD's project limit and our flight crew will collect the imagery to the full range of the buffer zone. Data and products in the buffer will be tested for any quality control requirement. Prior to any acquisition, our crew will verify that the DMC and LiDAR sensors settings are set to acquire dataset. Also, our flight crew will operate the DMC sensors during optimal atmospheric condition with prime PDOP condition (less than 3) and satellite network configuration greater than 6 active satellites. DMI will not proceed with any acquisition until consent is received from OCWD's project manager and all requirements prior to acquisition have been met.

**B.3.c.iv.) Proposed Imagery Sensor: Digital Mapping Camera (DMC IIe 230) Specs**

DMI recognizes that one of the most critical phases of this project is the timely acquisition of the aerial imagery. Timely, consistent, and quality collection of aerial imagery is the cornerstone for generating accurate and quality orthophotography. Our process is to deploy our digital camera sensors DMC IIe 230a enabling simultaneous acquisition of color imagery and near infrared imagery. Our Leica, DMC IIe 230, is a high-performance digital camera system. It has a high frame rate to maintain fast-air speed for high-forward overlap and high-resolution. The PAN or color ratio of 1:2.6 provides high-radiometric quality images for RGB and Color-Infrared (CIR). The long focal length and small pixel size delivers high-resolution image data. The nadir-looking monolithic PAN camera offers unmatched radiometric and geometric quality.



DMC IIe230

Digital Mapping Camera (DMC IIe 230) Specifications	
• PAN pixel across track: 15552	• B/H: 0.34
• PAN pixel along track: 14144	• Number of camera heads: 5
• PAN FoV across track: 50.7°	• PAN: Color Resolution: 1:2.6
• PAN FoV along track: 46.6°	• Frame rate: 1.8 sec
• PAN focal length: 92 mm	• Color channels: R,G,B, NIR
• PAN pixel size: 5.6 μm	• Resolution per pixel: 14 bit
• MS pixel across track: 6096	• FMC: yes2
• MS pixel along track: 6400	• CCD dynamic range: 72 dB3
• MS FoV across track: 52,0°	• Onboard storage: 4.8 TB
• MS FoV along track: 54.2°	• Storage capacity: 6900 images4
• MS focal length: 45 mm	• Weight: 65 kg5
• MS pixel size : 7.2 μm	• Power consumption: 280 W
• PAN GSD@500m: 3.0 cm	• Altitude non pressurized: 8000 m
• MS GSD@500m: 8.0 cm	• Operating temperature: -20 °C to 40 °C6

**B.3.c.v.) Proposed LiDAR Sensors: Optech ALTM Galaxy T-1000**

ALTM Galaxy is the ultimate wide-area sensor, with best-of-class density performance and collection efficiency. Galaxy is quite simply the smallest sensor on the market with the greatest performance capability, representing a giant leap ahead of its competitors in every way. Galaxy offers incredible collection efficiency and configuration flexibility with the highest data precision and accuracy possible.



- PulseTRAK technology enables a continuous operating envelope that can accommodate high-relief terrain with no data gaps or loss of density across multipulse transition zones.
- SwathTRAK technology maintains constant width flightlines for consistent data density in variable terrain and fewer flight lines.

It also features a 1MHz effective pulse rate, providing on-the-ground point density and efficiency formerly reserved for dual-beam sensors. Up to 8 returns per pulse are possible for increased vertical resolution of complex targets without the need for full waveform recording and processing. Industry-leading data precision and accuracy (< 0.03-0.20 m RMSE from 150-4700 m AGL) results in the highest-quality datasets possible.

Optech ALTM GALAXY T1000 Technical Specifications	
Laser Wavelength-	1064 nm near-infrared
Horizontal Accuracy-	1/10'000 x altitude (M AGL) : 1 sd
Elevation Accuracy-	<0.03-0.20 m RMSE from 150-4,700 m AGL
Laser Repetition Rate	Programmable, 50-1000 kHz
Position and Orientation Rate	POS AV AP60 (OEM), 220-Channel Dual Frequency GPS/GNSS/Galileo
Scan Width (FOV)-	10-60°
Scan Frequency-	0-120 Hz
Sensor Scan Product-	2000 maximum

Beam Divergence	Dual Divergence: 0.25 Mrad (1/e)
Toll Compensation-	+ 5° minimum
Range Capture-	Up to 8 range measurements, including last
Intensity Capture-	Up to 8 intensity measurements, including last (12 bit)

**B.3.c.i.) Aerial Acquisition Specs**

Imagery Acquisition Specs			
Imagery GSD	3"		
Altitude AGL (feet):	4,000'		
Camera System	Leica Z/I Digital Mapping Camera (DMC IIe 230)		
Focal Length:	96 mm		
Imagery Bands and Bit rate:	3 Band (R,G,B), 8-bits per band		
Forward Overlap:	60%		
Side Overlap:	30%		
Solar Angle:	45° or greater (10:00 am – 2:00 pm)		
LiDAR Acquisition Specs			
Sensor	OPTECH ALTM Galaxy T1000 LiDAR sensor		
Flight Height	4,000' AGL		
Laser PRF (kHz)	400	Planned Density (ppm <sup>2</sup> )	12
Scan Pattern	Seesaw	Min Density (ppm <sup>2</sup> )	8
Field of View (Degree):	36 (18° scan angle)	Laser Swath Width	750 m
Frequency (Hz):	82	Overlap	55%
Average Cross and Along Track point spacing (ppm <sup>2</sup> )	0.4 / 0.4 (single line)	Lase Power	High

Figure 1. Preliminary Flight Plan and Control Layout (North Section)

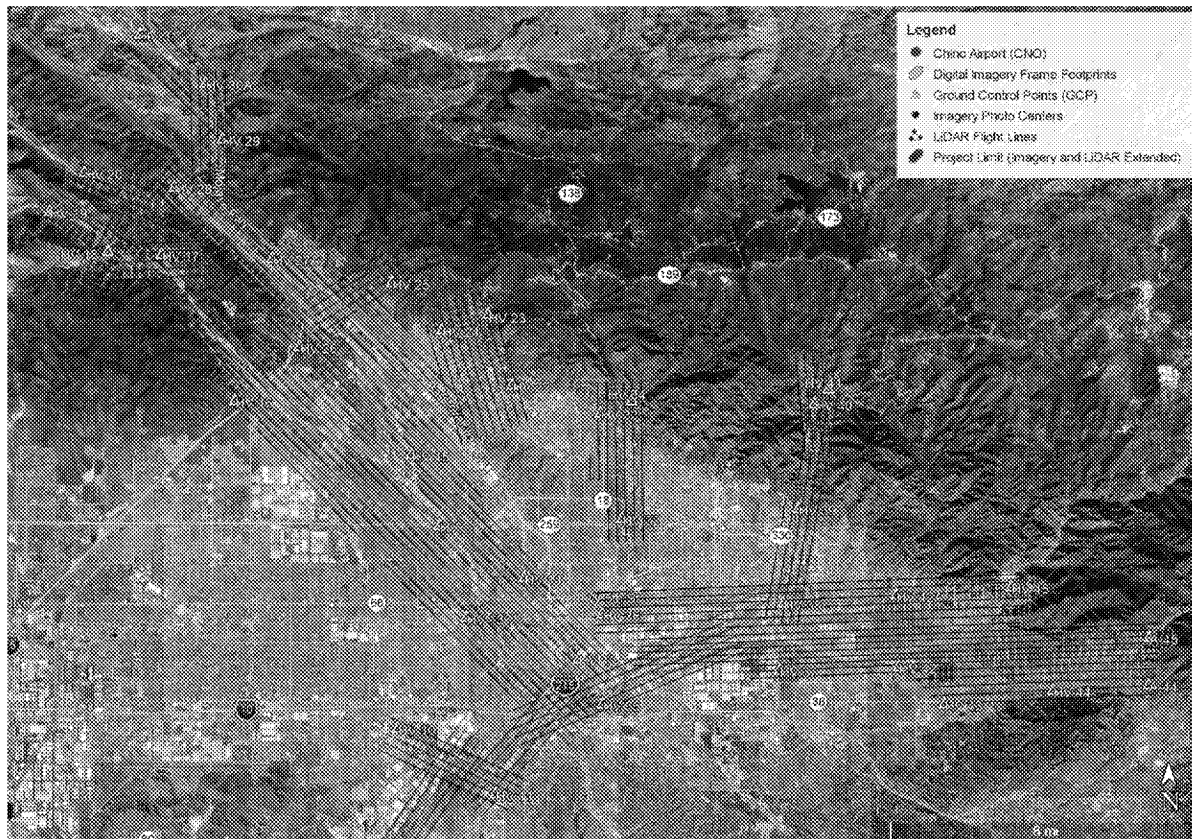


Figure 2. Preliminary Flight Plan and Control Layout (North Section)



### B.3.c.ii.) Dataset Post-Processing

#### ABGPS/IMU Post-Processing

Our technicians process the GPS data using our post-processing program, Applanix's POSpac, in order to calculate the high-accuracy kinematic solution trajectory of our aircrafts. The trajectory is combined with the IMU data for a position as a whole and location solution. Using geodetic algorithms, the finished solution is then combined to the location and orientation to develop the end result X, Y, Z position for each pulse return measured by the GPS receiver. We also use Applanix's SmartBase technology, which in turn joins a filter approach to combine the GPS receiver's raw data with IMU data. SmartBase allows us to process the raw observables from a minimum of six to a maximum of fifty unremittingly operational GPS reference stations, contiguous to the trajectory. SmartBase's quality control tool accomplishes a network modification on all the baselines and reference stations, we also run quality checks for single reference stations.

#### Image Post-Processing

DMI's Z/I post-processing units designed in conjunction with the flight management system, are utilized to convert from raw sensor patterns into finished R,G,B, IR images, which have been specifically intended to extract high detail with few image artifacts and aliasing patterns. The first step is taking the raw images and downloading the data using our Z/I post-processing program to our servers. Then the imagery is tested to see if the data has any inconsistency such as misfires, clouds, or ground conditions. Our technicians will create two back-ups of all the raw imagery data and we analyze the PAN, RGB, and IR bands to assure the quality of the post processed raw images. If any errors are found, it will be flagged and either re-processed or re-flown. The completed raw processed images will be reviewed to ensure the matching quality and color balance throughout the project.

**B.3.c.iii.) Aerial Triangulation (AT)**

Once our technicians have completed post-processing the raw images and ABGS and IMU data, DMI will complete a Fully Assisted/Automated Aerial Triangulation (FAAAT). DMI has developed and refined procedures to be followed by our team to ensure product quality, accuracy, and timely production. DMI is aware of the OCWD's project accuracy requirements, thus, the FAAAT solution will form the ideal basis for the accuracy of all products to be derived. DMI will apply the latest digital photogrammetric methodology using our ISAT Intergraph Image Station for a complete a FAAAT to meet or exceed ASPRS and NSSDA accuracy standards. Our program, ImageStation, by Intergraph is the most comprehensive photogrammetric production software on the market, providing a complete workflow for capturing geospatial data to produce maps, digital terrain models (DTM), orthophotos, and data for exploitation applications. A FAAAT is an improvement of conventional aerial triangulation whereas airborne GPS and IMU data are used or the direct measurement of the position and orientation of every exposure in the photogrammetric block.

**B.3.c.iv.) Digital Orthophotography****Ortho-Rectification**

Orthorectification process involves utilizing automated DEM (or **newly** collected LiDAR), triangulated exterior orientations, aerial imagery data, calibrated camera model parameters, and controls. The utilization of ABGPS and IMU data will offer support for image orientation and positioning; minimizing the required number of ground control points and enabling the creation of an orthophoto. This process will assist in removing horizontal displacement produced by terrain height disparity, camera-based distortions, and the earth's curvature.

Imagery will be orthorectified using ImageStation's OrthoPro, which provides a 3D photogrammetric space. The rectified imagery will be color, contrast, and tone balanced; the imagery will also be edge-matched to adjacent images using manual image processing techniques. By choosing optimal positions of the rectified images, our technicians will combine images seamlessly with no apparent edges or breaks in feature geometry. To minimize tonal differences between combined areas, localized modification of the brightness values will be achieved as needed. The referenced orthophoto shall visually have better contrast and will be used for adjustment purposes.

Localized brightness values of the adjacent orthophoto will be fine-tuned to the reference orthophoto. The adjusted area will be restricted by tonal radiometric modification, which will not compromise the clarity, accuracy, and resolution of the orthophoto if possible. DMI will develop a digital orthophoto pilot area prior to commencement of the entire project.

**Mosaicing**

Using ImageStation, OrthoPro, and Geomedia allows us to create complete mosaic by processing image blocks using two separate tonal corresponding functions. Each image is processed to remove any hotspots in the middle of the frame. DMI's technicians will then review each frame thoroughly and perform a histogram comparison process so that there is seamless tone throughout the mosaic images.

After radiometric balancing, we will generate manual and automatic seam lines between source frames. In order to generate seamless orthophoto data that is fixed across the project area, seam lines need to be adjusted in order to deliver a successful transition from one image to another for the desired project tiling scheme. This can be accomplished by utilizing a combined method of manual and automated practice for high-quality imagery. This method has proven to be cost effective while delivering excellent results. DMI will utilize automatic seamline creation for rural areas, which is ideal for producing mosaics. Our technicians analyze and manually alter seam lines that have features showing continuity, usually executing manual seam line placement in urban areas to deliver precision of high quality imagery. Tonal matching is accomplished by comparing pixel values in all the images areas, which contain the overlap. Our software reviews and modifies each image so that we are able to achieve an overall unison tone throughout the project. The image mosaics will be produced in such a manner so that adjacent mosaics can be viewed together simultaneously, and with no overlap areas, obscuring any portion of the adjacent mosaics. The following mosaics shall be produced:





points and noise points. DMI's technicians also perform manual filtering to make sure important terrain data has not been filtered out. After tiles have been reviewed through our quality control process, we will complete one classification process to ensure the data is acceptable. Our LiDAR technicians use Geocue's TerraModeler, Terrascan, and ArcGIS.

### B.3.c.ix.) Control Verification

DMI's technicians will verify (QC) LiDAR data to ensure the data set meets the OCWD project requirements. This process involves utilizing the independently collected check points to verify the accuracy of the data set through each collected check points.

### B.3.d.) Quality Control Plan (QCP)

#### Aerial Acquisition QA/QC

- Weather monitoring to conclude which time is best to collect the data
- Confirming that all GPS, ground controls and check points (NVA, VVA and Ortho Check Points) are set up prior to Imagery/LiDAR Acquisition and Monitoring GNSS satellite arrangement and PDOP
- Coverage gaps or other defects in the imagery are noted and may be cause for re-flight if the threshold for acceptance is not attained.
- Check flight logs to ensure that photography was acquired during time of day when sun angle requirements are adhered to.
- Analysis of the post-processing allows DMI's technician to view actual acquisition allowing an early decision for re-flight requirements

#### Aerial Triangulation QA/QC

- Assign unique point to individual frames to regulate incorrect replication of control points inside blocks
- Check residuals and aerial triangulation result for errors, both systematic and anomalies
- Check on accuracy achieved on the final product including measures of spot heights, control points (including blind control points established for QC purposes)
- The average of all points will not surpass  $1 / 20,000$  of the flight height.
- The root mean square error of the concluding block modification will not surpass  $1/10,000$  of the flight height.
- The maximum permissible error of any point will not surpass  $\pm 1 / 5,000$  of the flight height.

#### Orthophotography QA/QC

- Check overall impression for color balance and histogram for full use of contrast range
- Seam lines (between tiles and mosaic lines within tiles) are well hidden-minimized tonal variations. If automated seamline-generating fails to place seam(s) in optimized location, our orthophoto lab technicians will perform a manual seamline editing and review the mosaic for enhanced output.
- Check for erroneous ortho artifacts (smears, warped roads and bridges, DEM spikes)
- Final RMSE check on image positional accuracy

#### LiDAR DEM QA/QC

- Manually review bare-earth DEMs in ArcMap with hillshades to check for issues
- Verify DEMs to be seamless across tile boundaries
- Verify all properties of the tiled DEMs, including coordinate reference system information, cell size, cell extents, and compression has not been applied per project specification
- All qualitative issues present in the DEMs as a result of LiDAR processing and editing issues will be marked for corrections in the LiDAR data. These DEMs will need to be recreated after the LiDAR has been corrected
- Load all tiled DEMs into Global Mapper to verify complete coverage to the (buffered) project boundary

## C.) PROJECT TEAM

### C.1.) Project Team

We have assembled an outstanding project team for this significant project. Led by our project manager, Gencaga (Gen) Aliyazicioglu (Certified Photogrammetrist. DMI's mission is to provide the best possible service and products to OCWD. This can only be accomplished by recruiting and training staff with the best possible combination of experience, education, training, technical resourcefulness, management, and communication skills.

Digital Mapping, Inc. Staff					
Certified Photogrammetrist:	2	Mechanical Engineer:	1	Pilots:	3
Compilers:	3	CAD Operators:	2	Camera Operators:	3
Land Surveyors:	2	GIS:	2		
Digital Orthophoto Technicians:	2	LiDAR Technicians:	5		

DMI's team has more than 32 years of experience in all facets of the industry such as proven project management skills, expertise in many technologies, database systems, and GIS platforms. DMI employs more than 25 professionals who have been in the mapping industry for more than 25 years. Our team includes Pilots, Professional Land Surveyors (PLS), Certified Photogrammetrists (CP), GIS Professionals (GISP), Ortho and LiDAR technicians, computer programmers, and mechanical engineers. DMI's staff exhibits the necessary skill set and comprehension of the requirements. Our team will ensure the successful preparation, delivery, and high-quality assurance standards for obtaining the best possible high-resolution imagery, mapping and LiDAR data.

### C.2.) Key Personnel Resumes

#### Gencaga Aliyazicioglu-CFO, Certified Photogrammetrist, Sr. Project Manager

Mr. Gencaga Aliyazicioglu (Gen), our Senior Project Manager, will be the single point of contact for this project. Mr. Aliyazicioglu will oversee the entire project and team. Mr. Aliyazicioglu is a Certified Photogrammetrist (ASPRS Registration #R969) with over 40+ years of profound experience and technical understanding of geospatial and photogrammetric services. He has an MBA in Mechanical Engineering (1976) and a BS in Photogrammetric Engineering (1972) from Ohio State. Mr. Aliyazicioglu has extensive experience with all aspects of digital aerial mapping starting with the project management, flight planning, ground control frameworks, data compilation, post processing, aerial triangulation, ortho-production, LiDAR data collection and processing, GIS, and quality assurance of all project deliverables. Gen's role with DMI is supervising and overseeing the creation of Photogrammetry, LiDAR and Ortho projects. He is also in charge of staff and equipment allocation and his hands-on approach allows for the project to stay on schedule. He interacts with all project managers to ensure that all client requirements are met. Should any client concerns arise during the project he makes it his priority to address them in a timely-manner. Gen has completed a myriad of private, state, local and federal projects over four decades.

#### **2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery (2019)**

For our client, Orange County Water District (OCWD), DMI provided 3" pixel resolution 4 band digital orthophoto imagery of Prado Basin and Upper Santa Ana Watershed area. DMI flown approximately 84 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC11e230) consist of 49 flight lines and 1248 exposures. Prior to flight DMI survey team established 44 ground control points to rectify imagery. DMI's staff completed the project within schedule. DMI provided uncompressed 4 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area. Mr Aliyazicioglu served as the project manager for this effort.

#### **Color Digital Orthophotography of Orange County CA (2019)**

For our client, Orange County Fire Authority (OCFA), DMI provided 3" pixel resolution digital orthophoto imagery of entire Orange County. DMI captured imagery for an area of approximately 1200 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC11e230). Prior to flight DMI survey team established ground control points to be utilized in aerial triangulation of the imagery. DMI provided uncompressed 3 band imagery in

GeoTIFF format together with compressed MrSID file covering entire project area at various resolutions. Mr Aliyazicioglu served as the project manager for this effort.

***Multiple Aerial Imagery, LiDAR and Photogrammetry Projects Throughout Nevada. (2006 - Current)***

Mr. Aliyazicioglu has been serving as the project manager for SNWA projects since 2006. He oversees the project with constant communication with SNWA's project manager for milestone updates and successful deliverables. Over the years, these projects involved stereo-pair and LiDAR data acquisition, ground controls, post-processing of data, aerial-triangulation, ortho-rectification, LiDAR data sets and QA/QC of deliverables. Over the past 10 years, DMI has acquired over 10,000 square miles of aerial mapping, orthophoto and LiDAR data for SNWA.

***Holy Fire Burn Area Impact Mapping – Digital Aerial Photography and Lidar DEM (2018-current)***

For our client, Riverside County Flood Control and Water Conservation District, DMI has provided four aerial mission to acquire aerial imagery, Lidar data collection and deliver DEM data. DMI has flown the project area utilizing our state-of-the-art large format Digital Mapping Camera (DMC11e230) and Optech Gemini LiDAR sensor. DMI delivered color imagery at 6" pixel resolution. Utilizing Lidar data (8 points per square meter) DMI also delivered QL1 accuracy level Digital Elevation Model (DEM). Final products were delivered in State Plane Coordinate (NAD 83). Mr Aliyazicioglu serves as the project manager for this effort.

***Multiple Aerial Photography, LiDAR and Photogrammetry Projects throughout SoCal for SoCal & San Diego Gas (Southern CA) (2013 - 2016)***

DMI has been contracted by Jacobs, PSOMAS & PSEP (since 2013) to provide aerial imagery, LiDAR and Photogrammetric Surveying of natural gas transmission pipelines throughout Southern California. Mr. Aliyazicioglu is responsible for the acquisition and creation of photogrammetry mapping of more than 1500 linear miles. Also, Mr. Aliyazicioglu is in charge of overseeing the creation and delivery of mapping projects at a scale of 1"=20', 1"=40', 1' Contours, 0.5' Contours, LiDAR Data, LiDAR DEM, 2" and 3" Color Digital Orthophoto. DMI utilized (2) two aircrafts, (2) two large format digital mapping cameras (DMC I, 11e 230) and an Optech LiDAR sensor, all equipped with ABGPS/IMU.

***The City of Temecula - Digital Ortho Imagery and Lidar Photogrammetry Project (2018)***

For our client, the City of Temecula, DMI has provided digital orthophotography and Lidar processing services for entire City of Temecula. DMI has flown the entire city approximately utilizing our state of the art large format Digital Mapping Camera (DMC11e230) and Optech Gemini LiDAR sensor. DMI prepared digital orthophotos at 1" and 3" resolution. Utilizing Lidar data and aerial imagery DMI also delivered Digital Elevation Model (DEM), Digital Terrain Model (DTM), 1' interval topographic contours, building footprints, edge of pavement outlines and existing sidewalks. Final products were delivered in California State Plane Coordinate, Zone 6 (NAD 83) with FGDC compliant metadata. Mr Aliyazicioglu served as the project manager for this effort.

***Multiple Aerial Photography, LiDAR and Photogrammetry Projects for Resource Strategies, Inc. (Various Locations Through Southern California) (2005 - Current)***

Since 2005, DMI has delivered to RSI over 50 projects that include aerial imagery, LiDAR and photogrammetry. Gen worked with staff on delivering multiple RSI orthophoto, LiDAR datasets and mapping projects conducted throughout California. Mr. Aliyazicioglu and RSI continue to grow their 11-year relationship. DMI has flown and processed 50,000+ square miles of Imagery, LiDAR and Planimetric/topographic data for RSI.

***High Resolution LiDAR data acquisitions for Association of Monterey Bay Area Governments (AMBAG) (Monterey, San Benito and Santa Cruz Counties) (2010-2011)***

Mr. Aliyazicioglu served as project manager under this contract with AMBAG. He was responsible for providing Optech LiDAR data acquisitions for 1,723 square miles throughout Monterey, San Benito and Santa Cruz Counties. Mr. Aliyazicioglu managed the entire project while working with LiDAR and QA/QC managers to deliver metadata, raw point, classified point, and bare earth surface (DEM) to AMBAG. Also, Mr. Aliyazicioglu was responsible for client communication, milestone and delivery updates.

***Topographic LiDAR Mapping & Digital Orthophotography (Fort Irwin, CA) (USACE St. Louis District) (2014)***

As a subcontractor to Magnolia River Geospatial (MRG), Mr. Aliyazicioglu duties was working with Mr. Dillman (PLS) and MRG's Project Manager on the strategic placement of ground controls and LiDAR QA/QC Points. He also worked with Mr. Labitt (Chief Pilot) on flight planning in regards to the aerial imagery and LiDAR data acquisition. This project consisted of 1,473 square miles located in the Mojave Desert in Northern San Bernardino County, California. Mr. Aliyazicioglu also oversaw the asset allocation of our DMC and Optech LiDAR Sensor.

**Other Orthophoto, Mapping & LiDAR Projects**

- 2017 Socal & San Diego Gas Orthophoto
- 2017 Muddy & Virgin Rivers 4-Band Orthophoto
- 2016 Muddy & Virgin Rivers 4-Band Orthophoto
- 2016 USDA 1' Color Digital Orthophoto for Cibola National Forest
- 2016 Spring Valley Digital Orthophoto Imagery
- 2016 City of Modesto Aerial Imagery, 2D building foot print & 3D Layer project
- 2015-Mesa County, CO. 6" & 9" Color Digital Orthophoto
- 2015-Channel Islands Regional Geographic Information Systems, Inc. (CIRGIS) 3", 6" & 1' Orthophoto Project
- 2015 Garnet Valley 4-Band Orthophoto
- 2015 USDA 1' Color Digital Orthophoto for the Cibola National Grasslands
- 2015 Coachella Valley Association of governments 3" Color Digital Orthophoto

**Dennis Dillman -California PLS # 5424**

Dennis Dillman, DMI's lead-surveyor, is a Licensed Professional Land Surveyor in California with 40+ years of professional experience in land-surveying. He has been with DMI for 31 years and during this period, Mr. Dillman has completed several projects related to every area of his discipline. With his field experience and education at San Bernardino Valley College in land surveying, Mr. Dillman is considered an expert in boundary and retracement surveys. He has completed his certifications (PLS# 5424) In the construction field area of surveying and successfully completed jobs with several million yards of earthwork. Mr. Dillman has worked on multi-million dollar public works projects and thousands of subdivision lots throughout California, Arizona, and Nevada.

***2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery (2019)***

For our client, Orange County Water District (OCWD), DMI provided 3" pixel resolution 4 band digital orthophoto imagery of Prado Basin and Upper Santa Ana Watershed area. DMI flown approximately 84 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC11e230) consist of 49 flight lines and 1248 exposures. Prior to flight DMI survey team established 44 ground control points to rectify imagery. DMI's staff completed the project within schedule. DMI provided uncompressed 4 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area.

***Color Digital Orthophotography of Orange County CA (2019)***

For our client, Orange County Fire Authority (OCFA), DMI provided 3" pixel resolution digital orthophoto imagery of entire Orange County. DMI captured imagery for an area of approximately 1200 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC11e230). Prior to flight DMI survey team established ground control points to be utilized in aerial triangulation of the imagery. DMI provided uncompressed 3 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area at various resolutions.

***USGS QL1 LiDAR Acquisition (QL-1) for the USDA (Happy Camp, CA) (2013-2014)***

DMI was contracted in 2013-2014 by the USGS to conduct high point density aerial LiDAR acquisition of 500 square miles throughout Happy Camp, CA. DMI's Lead Surveyor, Dennis Dillman was responsible for the monitoring the capture of 250 ground controls and LiDAR NVA/VVA points throughout Happy Camp, CA. The LiDAR QA/QC (NVA/VVA) points Mr. Dillman captured were used as quality control to ensure the LiDAR data meet the project accuracies. **(Contract Amount: \$223,250.00)**

***Digital Orthophotography & 2D Building Foot Print in Mesa County, CO (2015)***

DMI was contracted in 2015 to conduct an aerial orthophoto acquisition of 3,366 square miles throughout Mesa County, CO. Mr. Dillman was responsible for occupying thirty-one ground controls and utilizing existing monuments for the project. These ground controls were established within or near the AOI of the project. Mr. Dillman made every effort to keep these ground controls off private land and place them on public land. Also, Mr. Dillman placed the ground controls with sixty penny spike on dirt and a concrete nail and ten were set on pavement.

***Topographic LiDAR Mapping & Digital Ortho in Yakima Training Center, WA(USACE St. Louis) (2015)***

Mr. Dillman worked with military personal and MRI project manager on acquiring security clearance to place the aerial targets and LiDAR QA/QC check points for this project. He was in constant communication with Range Operations while on the military base placing the targets. Mr. Dillman was tasked with placing eighty-three aerial targets and eighty-three NVA/VVA LiDAR Check points throughout 1,126 sq. miles in Yakima, WA.

***Boundary Survey for Smiling Construction in Perris, CA (2015)***

DMI was contracted by Smiling Construction to conduct a boundary survey in Perris, California. Upon completion of the research to perform the boundary, Mr. Dillman located existing monuments in the field so that he could establish the boundary corners of the property. When all field work was completed, Mr. Dillman set the corners requested by the client and per the deeds recorded in Riverside County, CA. When all monuments were set Mr. Dillman recorded them in a record of survey recorded with the County.

**Duncan Crowl – Orthophotography and GIS Manager**

Duncan Crowl has over 32 years of professional experience (12 years with DMI) (ASPRS Member '86) and knowledgeable specifically with the photogrammetry and GIS industry. Mr. Crowl received his BS in Geography and Advanced GeoTechnical Mapping and Geomatics from California State University Fullerton. He has operated with a wide array of softcopy photogrammetry software and hardware systems. Most notably ImageStation, SoCET Set, ER Mapper, and Leica Photogrammetry Suite of products and solutions. His responsibilities include overall project administration, layout of photography and control, photogrammetry, DTM collection, GIS, CAD, digital and quality control quality assurance, technical development of new technologies. Also, Mr. Crowl is responsible for ensuring all requirements are met with highest quality and timely delivery.

***2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery (2019)***

For our client, Orange County Water District (OCWD), DMI provided 3" pixel resolution 4 band digital orthophoto imagery of Prado Basin and Upper Santa Ana Watershed area. DMI flown approximately 84 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMCIIe230) consist of 49 flight lines and 1248 exposures. Prior to flight DMI survey team established 44 ground control points to rectify imagery. DMI's staff completed the project within schedule. DMI provided uncompressed 4 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area. Mr Aliyazicioglu served as the project manager for this effort.

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For our client, Orange County Fire Authority (OCFA), DMI provided 3" pixel resolution digital orthophoto imagery of entire Orange County. DMI captured imagery for an area of approximately 1200 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMCIIe230). Prior to flight DMI survey team established ground control points to be utilized in aerial triangulation of the imagery. DMI provided uncompressed 3 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area at various resolutions. Mr Aliyazicioglu served as the project manager for this effort.

***Multiple Aerial Imagery, LiDAR and Photogrammetry Projects Throughout Nevada. (2006 - Current)***

Mr. Aliyazicioglu has been serving as the project manager for SNWA projects since 2006. He oversees the project with constant communication with SNWA's project manager for milestone updates and successful deliverables. Over the years, these projects involved stereo-pair and LiDAR data acquisition, ground controls, post-processing of data, aerial-triangulation, ortho-rectification, LiDAR data sets and QA/QC of deliverables. Over the past 10 years, DMI has acquired over 10,000 square miles of aerial mapping, orthophoto and LiDAR data for SNWA.

***Holy Fire Burn Area Impact Mapping – Digital Aerial Photography and Lidar DEM (2018-current)***

For our client, Riverside County Flood Control and Water Conservation District, DMI has provided four aerial mission to acquire aerial imagery, Lidar data collection and deliver DEM data. DMI has flown the project area utilizing our state-of-the-art large format Digital Mapping Camera (DMC11e230) and Optech Gemini LiDAR sensor. DMI delivered color imagery at 6" pixel resolution. Utilizing Lidar data (8 points per square meter) DMI also delivered QL1 accuracy level Digital Elevation Model (DEM). Final products were delivered in State Plane Coordinate (NAD 83). Mr. Aliyazicioglu serves as the project manager for this effort.

***CALTRANS Photogrammetric Services for California Department of Transportation (Statewide) (1988 - Current)***

DMI has delivered over 100 photogrammetry mapping projects to CalTrans. Mr. Crowl is responsible for the CAD and GIS services provided to Caltrans. DMI provides Caltrans with 3D-DGN Topographic data at a scale of 1"=20' with .5-foot contour intervals, and DTM quality check were conducted for each project requested by Caltrans. DMI utilized Caltrans's SEED file and cell library to create topographic data with MicroStation.

***National Trails Highway LiDAR/Photogrammetry project in San Bernardino County(San Bernardino County & Caltrans District 8) (2015)***

As a subcontractor to Biggs Cardosa Associates, Mr. Crowl (DMI) was responsible with working with LiDAR, Ortho and Photogrammetry technicians and supervisors to deliver Digital Topomap (1"=50' with 1' Contours) for 235 liner miles of roadway. Mr. Crowl ensured clear communication & detailed updates on the completed milestones for this project.

***Color Digital Orthophoto of SoCal and San Diego Gas Transmission lines Throughout Southern California (Southern California) (2011- Current)***

DMI was contracted by SoCal Gas & San Diego Gas (2011) to complete 1-foot color digital orthophoto of transmission lines encompassing 2,200 square miles throughout Southern California. Mr. Crowl was responsible for working with ortho-technicians, managing the data processing, orthophoto creation, quality control and quality assurance of the delivered data imagery. In 2016, DMI utilized our new (DMC 11e230) for data acquisition allowing for higher accuracy.

***Multiple Aerial Photography, LiDAR, Photogrammetry and GIS projects for the Port of Long Beach (Long Beach, California)(1995 - Current)***

Mr. Crowl is responsible for the GIS services provided to Port of Long Beach. DMI has performed photogrammetric services for 80% of the LA Harbor and Port of Long Beach. The aerial photography was flown at a photo scale of 1"=280'. He worked with DMI's staff to deliver digital topographic mapping data on MicroStation at a scale of 1" = 40', 1-foot contour intervals and digital orthophoto at 0.2' pixel sizes.

***Hungry Valley SVRA Aerial Photo, LiDAR/Photogrammetry Project for the California State Parks (Gorman, CA) (2012)***

DMI provided aerial imagery, LiDAR and LiDAR/Photogrammetry Services for the California State Parks. Mr. Crowl worked with Ortho, LiDAR, CAD & QA/QC technicians/managers to ensure a timely delivery of the LiDAR Data set (LAS Format), Digital Topomap (1"=40' & 1' CI), 3" CDOP GeoTIFF.

**Gary Labbitt – Chief Pilot**

Mr. Labbitt has over 36 years of experience in aviation management and as DMI's chief pilot, both in California and throughout the United States. He has been serving as chief pilot for DMI since 2001. Mr. Labbitt has gained extensive experience flying digital imagery and LiDAR acquisition missions. Mr. Labbitt brings over 18,000 hours of total pilot time, and a verifiable perfect safety record. He is competent and knowledgeable in flight operations management, with specific expertise in medium and large aircraft with digital and integrated avionics. Mr. Labbitt is responsible for evaluating all flight priorities and directing the firm's flight crews to ensure completion of all aerial photography, LiDAR hyperspectral, sensor services, flight planning, weather checks, aircraft staging, and coordination of aerial missions. Mr. Labitt also has extensive experience in performing aerial surveys within military controlled airspace.

***2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery (2019)***

For our client, Orange County Water District (OCWD), DMI provided 3" pixel resolution 4 band digital orthophoto imagery of Prado Basin and Upper Santa Ana Watershed area. DMI flown approximately 84 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMCIIe230) consist of 49 flight lines and 1248 exposures. Prior to flight DMI survey team established 44 ground control points to rectify imagery. DMI's staff completed the project within schedule. DMI provided uncompressed 4 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area.

***Color Digital Orthophotography of Orange County CA (2019)***

For our client, Orange County Fire Authority (OCFA), DMI provided 3" pixel resolution digital orthophoto imagery of entire Orange County. DMI captured imagery for an area of approximately 1200 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMCIIe230). Prior to flight DMI survey team established ground control points to be utilized in aerial triangulation of the imagery. DMI provided uncompressed 3 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area at various resolutions.

***Holy Fire Burn Area Impact Mapping – Digital Aerial Photography and Lidar DEM (2018-current)***

For our client, Riverside County Flood Control and Water Conservation District, DMI has provided four aerial mission to acquire aerial imagery, Lidar data collection and deliver DEM data. DMI has flown the project area utilizing our state-of-the-art large format Digital Mapping Camera (DMCIIe230) and Optech Gemini LiDAR sensor. DMI delivered color imagery at 6" pixel resolution. Utilizing Lidar data (8 points per square meter) DMI also delivered QL1 accuracy level Digital Elevation Model (DEM). Final products were delivered in State Plane Coordinate (NAD 83).

***3" Color Digital Orthophoto for the Coachella Valley Association of Governments (CVAG) (Central and Eastern Riverside County) (2015)***

Mr. Labbit was in charge of acquiring approximately 1,200 square miles of aerial imagery with our DMC I. Aerial images were collected an altitude of 2400' AGL, to generate the orthophotography at a 3" resolution. Mr. Labbit utilized Intergraph Flight Management system to prepare flight plan and grouped flight lines ensuring complete stereo imagery cover. Mr. Labbit worked with DMI's aircrew on getting the necessary flight approvals to acquire the data. This project comprised of a variety of terrain from flat land to high mountains.

***Mesa County Color Digital Orthophoto & Building Foot Print Project (Mesa County, CO) (2015)***

DMI was contracted by Mesa County to conduct an Orthophoto project throughout Mesa County, CO. Mr. Labbitt worked with DMI's air crew on mobilizing our DMC I and DMC IIe230. He was tasked with acquiring 6" leaf off imagery in march and 9" summer imagery flight in July. Also, he was responsible for working on getting the necessary air space approvals and monitored the weather, sun angel and ground conditions daily.

***Topographic LiDAR Mapping & Digital Orthophotography in Yakima Training Center, WA (USACE St. Louis District) (2015)***

As a subcontractor to Magnolia River Geospatial (MRI), Mr. Labitt was responsible for working with Gen (DMI) and MRI's project manager, military personal on necessary airspace permits and flight plans for the aerial imagery and LiDAR Data acquisition. This project consisted of 1,126 square miles located in Yakima Washington. Mr. Labitt oversaw the asset allocation of our aircrew, Chieftain Piper Navajo, Digital Mapping Camera and Optech LiDAR Sensor for data acquisitions.

***Multiple Aerial Imagery and LiDAR Projects for The Riverside County Flood Control and Water Conservation District (Riverside County, CA) (2007- Current)***

DMI has been providing aerial imagery and LiDAR services since 2007. Mr. Labitt is responsible for coordinating flights with aircrews and mobilizing multiple sensors and aircrafts at a time. Mr. Labitt is also responsible with communicates with RCFC surveyors pre/post flight.

***Multiple Aerial Photography, LiDAR & Photogrammetry Projects Throughout Nevada (2006 - Current)***

Over the past 10 years, Mr. Labbit has flown and managed multiple flight crews over 10,000 square miles, to deliver digital orthophoto and LiDAR data to SNWA. Mr. Labbitt was responsible for acquire the aerial imagery and LiDAR data on time and within the current project specifications (i.e. sun angel, clear ground cover, cloud free). Also,



managing multiple aircraft and flight crews. Mr. Labitt also worked on getting the necessary permit approvals to fly over down town Las Vegas, McCarran International Airport and surround military airspace.

#### **Ahmet Aliyazicioglu - LiDAR Manager**

Mr. Aliyazicioglu, DMI's LiDAR Manager, is responsible for LiDAR production, production scheduling, quality training of personnel. He manages projects from post-calibration through delivery using LP 360, AutoCAD, Geocue, TerraScan, TerraModeler, and MicroStation software. He has 21 years of experience (21 years with DMI), which include quality control and accuracy assessment of LiDAR data and the development of terrain products for GIS integration. He has received his BS. Mr. Aliyazicioglu has successfully lead LiDAR and GIS projects for a range of government agencies at the County, State level, and for Federal Agencies.

#### ***Aerial Imagery, LiDAR and Mapping Project for the-LADWP Owens Valley Solar Ranch (2013)***

DMI was contract by Worley Parsons & LADWP in 2013 to conduct an aerial imagery, LiDAR and photogrammetry mapping project in Inyo County, CA. The project consisted of 16 square miles. Mr. Aliyazicioglu was responsible for working with compiler and LiDAR technicians on creating this multiple delivery project. Mr. Aliyazicioglu team completed the digital surface model (DSM) and digital terrain model (DTM) displaying 1' contours. Also, Mr. Aliyazicioglu ensured the successful delivery of the Digital Topo map and DTM (break line top/toe and 5' LiDAR grid) at mapping scale of 1"=40', 1' Cl. In DGN, DWG & DTM-XML format.

#### ***LiDAR acquisition(QL-1) for the USDA Forest Service Region 5 (Happy Camp, CA)(2013-2014)***

In 2013, DMI was contracted by the USDA to conduct a QL1 aerial LiDAR survey throughout 500 square miles in Happy Camp, CA. Mr. Aliyazicioglu was responsible for the processing and delivering of high point density LiDAR set. Mr. Aliyazicioglu managed the delivery of: All return point cloud, classified LiDAR data, SBET, LiDAR report, Bare-earth filter point cloud, DEM, first returns, LiDAR intensity image, meta data and vector data in shp/dgn file format.

#### ***USGS LiDAR (QL-1) Telemetry Project for NAVFAC (Ventura, Seal Beach, Fresno, CA)-(2015)***

As a subcontractor to Cirtigen and NAVFAC, DMI was contracted to acquire USGS Quality Level One LiDAR data over 4 military properties. Mr. Aliyazicioglu worked with LiDAR technicians on the LiDAR data processing, data extraction, classification of the high point density data set. Mr. Aliyazicioglu utilize Geocue, Terrasolid, MicroStation to process and deliver the data. DMI delivered Metadata, raw point cloud, Breaklines, hydro flattening, bare-earth and classified point cloud.

#### ***USGS LiDAR (QL-1) LiDAR Acquisition for the State of Utah (2016)***

In 2016, DMI was contracted by the State of Utah to conduct a QL1 aerial LiDAR survey throughout 718 square miles in Richfield Utah. Mr. Aliyazicioglu is responsible for managing the processing and delivery of the high points density dataset.

#### ***LiDAR data acquisitions for Association of Monterey Bay Area Governments (AMBAG) 2010-2011)***

In 2010, DMI was contracted by the AMBAG to conduct an aerial LiDAR survey throughout 1,723 square miles in Monterey, CA and surrounding areas. Mr. Aliyazicioglu managed the LiDAR team and delivered to AMBAG: QL 2 LiDAR data, DEM, unclassified raw LiDAR data, Classification, TIN, Metadata, survey report. Hydro flattening, breaklines and LiDAR intensity imagery.

#### ***Aerial Imagery, LiDAR & Mapping Project for the West Valley Connector Project (Ontario, CA)(2016)***

As a subcontract to David Evans & Associates Inc. DMI was contracted to collect aerial imagery, LiDAR data and LiDAR/Photogrammetry. Mr. Aliyazicioglu was responsible for the creating a Digital Topo map at a scale of 1"=40' with 1' Cl on Caltrans CAD Library and DTM in MicroStation and InRoads Format.

### **Zeki Aliyazicioglu - QA/QC Manager**

DMI's QA/QC Manager, Zeki Aliyazicioglu, brings over 21 years of professional experience, all with DMI, in the field of electrical engineering, digital orthophoto production with a strong background in computer programming skills in the following programming languages: C++, MS Visual C++, and Visual BASIC. He received his PhD in Electrical Engineering (1995), M.S. Electrical Engineering (1991) from Southern Methodist University. Dr. Aliyazicioglu is experienced in digital orthophoto production, photogrammetry, CAD and GIS mapping. His responsibilities include overall project quality control, quality work plans, deliverables, program support and new technologies. Mr. Aliyazicioglu is responsible for ensuring that all requirements are met with highest quality for a timely delivery to our clients; he brings experience in designing and implementing of geospatial information systems.

#### ***Multiple Color Digital Orthophoto Projects (CIR, RGB & 4-Band Imagery) for the Mojave Water Agency (Mojave, CA) (2008 - Current)***

For this client, Mojave Water Agency, DMI has been providing RGB, CIR and 4-band aerial imagery for 3,500 square miles in Mojave, CA. Mr. Aliyazicioglu's responsibilities were the DMC project set-up, this includes management, verification of software, and QA/QC steps with staff. Mr. Aliyazicioglu also provided QA/QC assistance with staff to ensure seamless timely delivery of the 4-band imagery.

#### ***High Resolution Color Orthophoto, Planimetry and Contour's Project (Mountain View, Sunnyvale, Cupertino and Morgan Hill, CA) (2011)***

DMI provided the professional services surrounding all Aerial Photogrammetry, Digital Topographic and Planimetric Mapping (1"=40' & 1'CI), Orthophotography, and Light Detection And Ranging (LiDAR) for multiple city limits and a landfill. Mr. Aliyazicioglu was responsible for ensuring that all planimetric data, text annotation, and adhering to the existing city agencies symbology tables and cell libraries. Provided QA and QC of the 3" CDOP

#### ***Color Digital Orthophoto, LiDAR and Mapping for The SGSRP Alignment (SB and Riverside County, CA) (2014-2015)***

DMI was contracted by PSOMAS & SPEC services to conduct aerial mapping for 16 miles. Mr. Aliyazicioglu QA/QC the imagery and digital topographic map and delivered the final project at a mapping scale of 1"=40' and 1' Contours in MicroStation format. Reviewed DTM data to ensure breaklines and mass points extended 2-3 points outside of the boundary.

#### ***High Resolution Aerial Photography, LiDAR and Mapping Project (Ventura, CA) (2015)***

As a subcontractor to SPEC services and California Resource Production Corporation, DMI provided 3" Color Digital Orthophoto, and LiDAR DEM with 1' Contours for an area encompassing 100 square miles. Mr. Aliyazicioglu was responsible for providing with the quality assurance and quality control of the 3" Ortho and LiDAR deliverables. Mr. Aliyazicioglu reviewed the imagery to ensure there was no image distortion, correct overall color, no seam lines distortion, correct ortho-rectification and review the final RMSE check on image positional accuracy. He also QA/QC the LiDAR check points with the DEM to ensure the data was rectified to the ground per the required accuracy. Reviewed 1' contours to ensure they were fitting correctly with spot elevation.

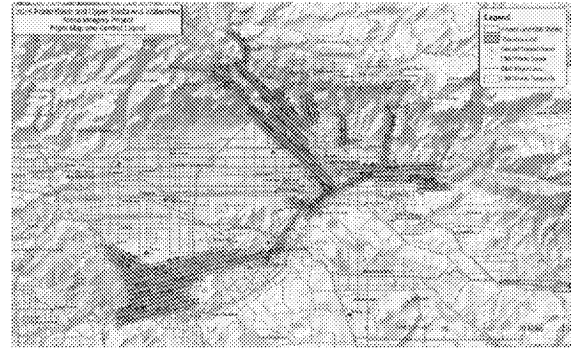
#### ***On Call Imagery, LiDAR & Mapping Project for the Orange County Public Works (2014 - Current)***

DMI was contracted by OCPW to conduct an aerial imagery, LiDAR and photogrammetry survey. Mr. Aliyazicioglu was responsible for QA/QC of the 3" Color Digital Orthophoto, LiDAR DEM, LiDAR Classified points, breaklines and Digital Topomap (1"=40' & 1'CI). Programs used to QA/QC: Geoque, Image Station Geomedia, VrOne CAD Map.

**D.) REPRESENTATIVE PROJECT EXPERIENCE**

**Project # 1: 2019 Prado Basin and Upper Santa Ana Watershed Aerial Imagery (2019)**

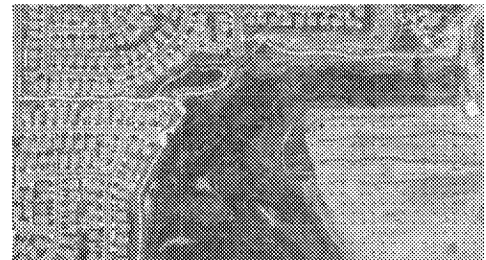
For our client, Orange County Water District (OCWD), DMI provided 3" pixel resolution **4 band** digital orthophoto imagery of Prado Basin and Upper Santa Ana Watershed area. DMI flown approximately 84 square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC11e230) consist of 49 flight lines and 1248 exposures. Prior to flight DMI survey team established 44 ground control points to rectify imagery. DMI's staff completed the project within schedule. DMI provided uncompressed 4 band imagery in GeoTIFF format together with compressed MrSID file covering entire project area.



Contact Name and Title	Marsha Westropp <i>Senior Planner</i>	Address	18700 Ward Street, Fountain Valley, CA 92708
Phone	(714) 378-8248	Project Term	2019
Email	mwestropp@ocwd.com	Project Amount	\$55,375
Company Name	Orange County Water District	Project Area	84 sq miles

**Project # 2: On-Call Aerial Imagery, LiDAR and Photogrammetry Services for The OCPW (1987 – On Going) and Prado Basin Project**

For 28 years, (since 1991), DMI has been contracted by Orange County Public Works (OCPW) to provide on-call aerial surveying and LiDAR collection services throughout Orange County, CA. DMI has completed small to large scale mapping projects with our state of the art Z/I DMC I and Optech LiDAR sensor equipped with Airborne GPS/IMU. These projects includes a map scales ranging from 1"= 20' with 0.5' CI, 1"=40' with 1' CI, 1"= 50' with 1/2' CI, and 1"= 100' with 2' CI. DMI has also provides delivery of digital terrain models, digital elevation models, LiDAR raw point cloud, LiDAR classified point cloud, contours, breaklines, & hydro-flattening.



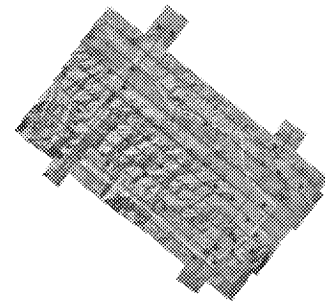
In 2015, DMI was contracted by OCPW to conduct an aerial survey of **Prado Basin** located in Chino, CA. DMI was tasked to collect aerial imagery and LiDAR data for an area of thirty-five square miles. DMI's project manager and certified photogrammetrist worked closely with the OCPW Land Surveying crew to establish the location of the aerial targets and LiDAR blind controls for the project. Once the aerial targets were set, DMI's aircrew created the imagery and LiDAR flight plan and did a final QA/QC prior to data acquisition. Once notice to proceed was given, DMI began acquiring the imagery and terrain data with our Digital Mapping Camera (DMC 11e 230) and Optech Gemini LiDAR sensor. These sensors were equipped with ABGPS/IMU. DMI delivered 3: CDOP, Digital 1' Contours with OCPW-CAD Library Microstation format at a scale of 1" =40', DTM files in MicroStation binary format, LiDAR LAS 1.2, LiDAR Classification LAS 1.2, Breaklines in Mircostation and Mylar Plot.

Contact Name and Title	Kevin Stephens   PLS	Address	300 N. Flower St, Rm 221 Santa Ana, CA 92703
Phone	(714) 967-0806	Project Term	2014-ongoing
Email	Kevin.Stephens@ocpw.ocgov.com	Project Amount	\$600,000.00
Company Name	Orange County Public Works	Project Area	35 Square Miles

**Project # 3: Holy Fire Burn Area Impact Mapping – Digital Aerial Photography and Lidar DEM (2018-2019)**

For our client, Riverside County Flood Control and Water Conservation District, DMI has provided four aerial mission to acquire aerial imagery, Lidar data collection and deliver DEM data. DMI has flown the project area utilizing our state-of-the-art large format Digital Mapping Camera (DMCIIe230) and Optech Gemini LiDAR sensor.

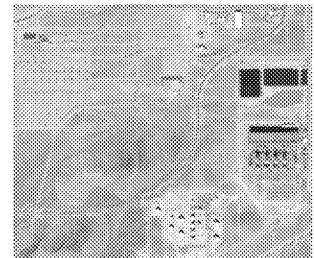
DMI delivered color imagery at 6" pixel resolution. Utilizing Lidar data (8 points per square meter) DMI also delivered QL1 accuracy level Digital Elevation Model (DEM). Final products were delivered in State Plane Coordinate (NAD 83).



Contact Name and Title	Jim McNeil <i>Chief of Surveying and Mapping</i>	Address	1995 Market Street Riverside, CA 92501
Phone	(951)-955-1200	Project Term	2018
Email	jmcneill@rivco.org	Project Amount	\$57,750
Company Name	Riverside County Flood Control and Water Conservation District	Project Area	57

**Project # 4: Multiple Aerial Mapping, Orthophoto & LIDAR Projects (2006 - On-Going)**

For our client, Southern Nevada Water Authority (SNWA), DMI has been providing photogrammetry, digital orthophoto imagery and LiDAR throughout regions of the Las Vegas Valley Spring Valley, Muddy and Virgin River. DMI has flown approximately 10,000+ square miles utilizing our state-of-the-art large format Digital Mapping Camera's (DMC I & DMCIIe230) and Optech Gemini LiDAR sensor since 2006. DMI has collected data over multiple resolutions ranging from 3" to 6" and has been delivering 4-band imagery to SNWA. DMI's most recent success for SNWA, was the aerial imagery acquisitions for Muddy and Virgin River in 2019. DMI mobilized our Beechcraft Bonanza equipped with our new state of the art Z/I Digital Mapping Camera (DMC IIe230) for data acquisitions. DMI's staff completed the project ahead of schedule. DMI provided 6-inch (4-Band Imagery, 8-Bit) uncompressed GeoTIFF, AT report, Meta Data.



Contact Name and Title	Craig Hale, <i>Supervisor, Data Resources Division</i>	Address	100 City Parkway, Suite 700 Las Vegas, Nevada 89106
Phone	(702)-862-3730	Project Term	2006-On Going
Email	craig.hale@snwa.com	Project Amount	\$5,130,000.00
Company Name	Southern Nevada Water Authority	Project Area	10,000+ square miles

**Project # 5: Multiple Aerial Mapping, Orthophoto & LIDAR Projects (2005 – On Going)**

Since 2005, DMI has performed multiple mapping, orthophoto and LiDAR projects for Resource Strategies, Inc. (RSI); DMI has delivered Color Digital orthophotos in RGB or CIR with a resolution of 3", 4", 6", 1' & 2' GSD covering more than 50,000+ square miles using our state of the art DMC cameras and Optech LiDAR sensors integrated with ABGPS/IMU. One of many DMI's recent success with Resource Strategies came in 2015 (March 2015-September 2015) when DMI was contracted by the Coachella Valley Association of Governments (CVAG) and RSI to provide 3-inch color digital orthophotos encompassing an area of 1,226 square miles located in Riverside County.



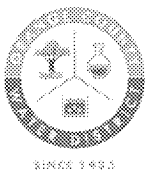
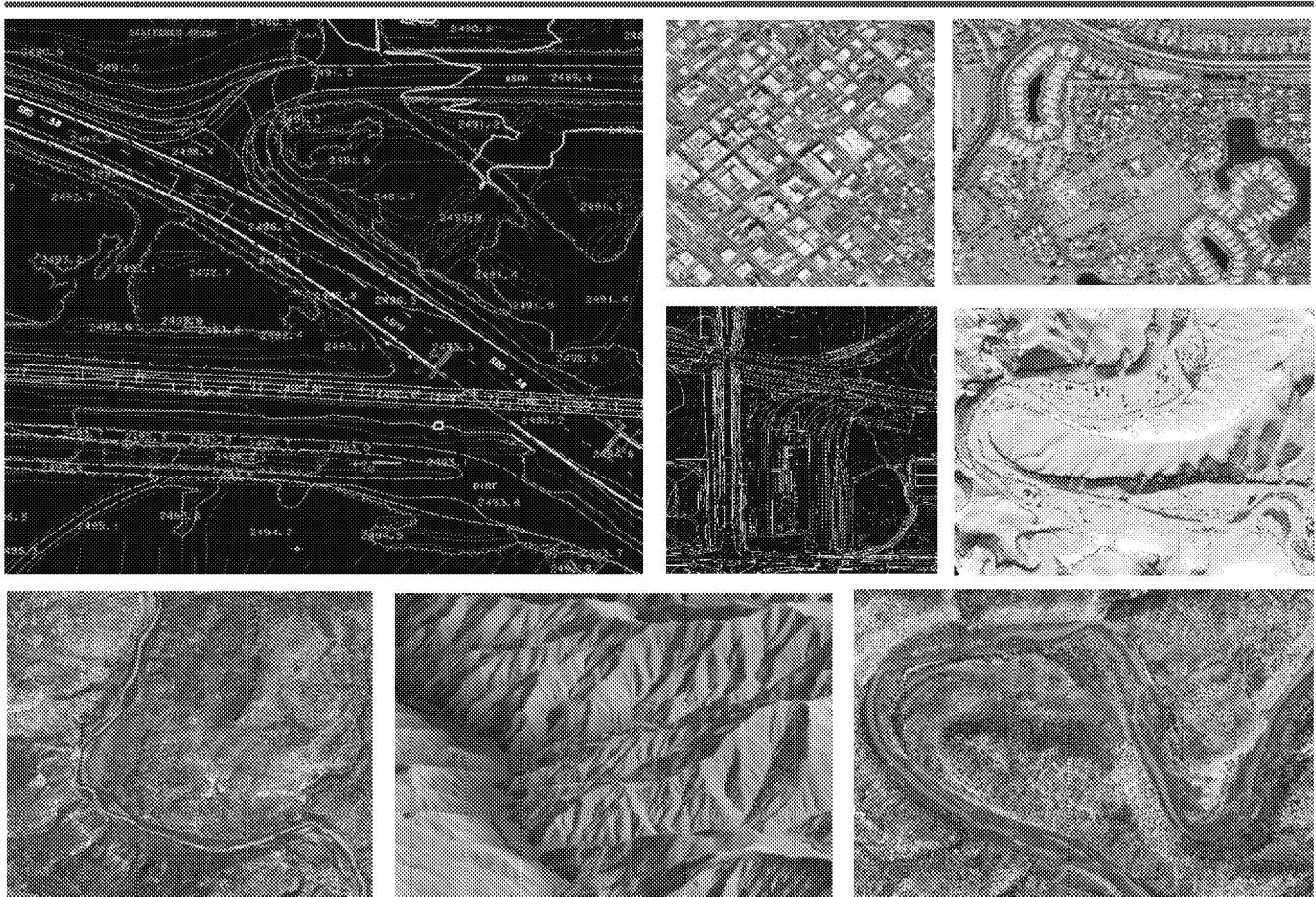
Contact Name and Title	Richard Schulman	Address	3952 Claremont Mesa Blvd, Suite D San Diego, CA 92117
Phone	(858) 735-7424	Project Term	2005-On Going
Email	resourcestrategies@usa.net	Project Amount	\$4,000,000.00
Company Name	Resource Strategies, Inc.	Project Area	50,000 Sq Miles +

# DIGITAL MAPPING, INC. – FEE PROPOSAL FOR

## ORANGE COUNTY WATER DISTRICT

### 2020 PRADO BASIN AND UPPER SANTA ANA WATERSHED AERIAL IMAGERY

RFP Due Date: May 6, 2020 5:00pm



**Prepared for:**  
Kevin O'Toole  
*Senior Planner*  
**Orange County Water District (OCWD)**  
18700 Ward Street  
Fountain Valley, CA 92708  
Phone: (714) 378-8248  
[kotoole@ocwd.com](mailto:kotoole@ocwd.com)



**Prepared by:**  
Gencaga (Gen)Aliyazicioglu  
*CFO & Sr Project Manager*  
**Digital Mapping, Inc. (DMI)**  
21062 Brookhurst St, Suite 101  
Huntington Beach, CA 92646  
(714) 968-5459  
[gen@admap.com](mailto:gen@admap.com)

May 6, 2020

Kevin O’Toole  
 Senior Planner  
**Orange County Water District (OCWD)**  
 18700 Ward Street  
 Fountain Valley, CA 92708

**RE:** Fee Proposal for RFP – “2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery”

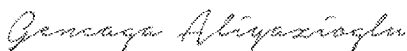
Dear Mr. O’Toole,

Digital Mapping, Inc. (DMI) is delighted to submit its “fee proposal” as follows in response to request for proposal for “2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery” project.

Task Number	Description	Proposed Fee
1	Project Management	\$2,750.00
2	Initial Flight for Quality Control (Option 1 & 2 – 3 band and infrared imagery)	\$3,875.00
3	Initial Flight for Quality Control (Option 3 & 4 LiDAR imagery)	\$4,750.00
4	Data Collection and Reporting (Option 1 – 3 band)	\$35,125.00
5	Data Collection and Reporting (Option 2 – 3 band and infrared imagery)	\$41,750.00
6	Data Collection and Reporting (Option 3 – LiDAR of only Priority Sites)	\$35,750.00
7	Data Collection and Reporting (Option 4 – LiDAR of Priority and Extended Sites)	\$38,750.00
	<b>Not-To-Exceed total for tasks 1, 2, 4 and 6</b>	<b>\$77,500.00</b>
	<b>Not-To-Exceed total for tasks 1, 2, 4 and 7</b>	<b>\$80,500.00</b>
	<b>Not-To-Exceed total for tasks 1, 3, 5 and 6</b>	<b>\$85,000.00</b>
	<b>Not-To-Exceed total for tasks 1, 3, 5 and 7</b>	<b>\$88,000.00</b>

Thank you for the opportunity to submit this proposal.

Sincerely,



Gencaga (Gen) Aliyazicioglu  
 Certified Photogrammetrist | CFO | Sr. Project Manager  
**Digital Mapping, Inc. (DMI)**  
 21062 Brookhurst St, Suite 101  
 Huntington Beach, CA 92646  
 (714) 968-5459

May 20, 2019

Mike Markus  
Orange County Water District  
P.O. Box 8300  
Fountain Valley, CA 92728-8300

Peter Kavounas  
Chino Basin Watermaster  
9641 San Bernardino Road  
Rancho Cucamonga, CA 91730

Shivaji Deshmukh  
Inland Empire Utilities Agency  
6075 Kimball Avenue  
Chino, CA 91708

Heather Dyer  
San Bernardino Valley Municipal Water District  
380 E. Vanderbilt Way  
San Bernardino, CA 92408

**Re: Cost Sharing Letter Agreement: 2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery and Light Detection Ranging (LiDAR) Data Collection.**

This Cost Sharing Letter Agreement (Agreement) sets forth the understanding between the undersigned parties regarding the sharing of costs for the 2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery and Light Detection Ranging (LiDAR) data collection. Orange County Water District (OCWD) has entered into a contract with Digital Mapping Inc. to complete this project. The Study Scope of Services with Digital Mapping Inc., which is the subject of this Agreement is set forth in Exhibit A (Scope).

OCWD and the undersigned parties (collectively referred to as Parties and individually as Party) hereby agree to contribute to the cost of the consultant contract pursuant to the provisions set forth below.

**1. Scope of Services**

Digital Mapping Inc. will perform services as detailed in Digital Mapping Inc. Response to Orange County Water District Request for Quotation for 2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery dated May 6, 2020. The Project Scope is described in **Exhibit A** attached hereto and incorporated herein by reference.

## 2. Cost Sharing

### (a) Cost of Services

OCWD has entered into, or intends to enter into, a contract with Digital Mapping Inc. for performance of the Scope with a **not-to-exceed cost of \$91,875.00** (Compensation). OCWD and the undersigned parties agree to split the cost of visible and infrared spectrum imagery (commonly referred to as 4-band imaging) in the following percentages based on area: 15% OCWD, 15% Chino Basin Watermaster/Inland Empire Utilities Agency and 70% San Bernardino Valley Municipal Water District. LiDAR data collection was added at the request of San Bernardino Valley Municipal Water District and they agreed to pay 100% of the cost. Further, the undersigned parties agree to split the project management cost of \$2,750 in half to fairly assign the cost of image collection. One half the management cost was assigned to the 4-band imaging and will follow the same 15, 15, and 70 percentage distributions as the image collection. The other half of the management cost, which are attributed to LiDAR, will be paid 100% by SBVMWD. These cost assignments are summarized in Table 1.

### (b) Cost Sharing Between the Undersigned Parties

The Parties hereto each agree to be responsible for reimbursement of the payments made under the Contract with Digital Mapping Inc. based on Table 1 as follows:

**Table 1: Cost Share Distribution for Contract**

<b>Agency</b>	<b>Cost Share (\$)</b>	<b>Cost Share<sup>1</sup> (%)</b>
Orange County Water District (Aerial Imagery)	\$7,050	15%
Chino Basin Watermaster and Inland Empire Utilities Agency (Aerial Imagery)	\$7,050	15%
San Bernardino Valley Municipal Water District (Aerial Imagery)	\$32,900	70%
San Bernardino Valley Municipal Water District (LiDAR)	\$44,875	100%
<b>Total</b>	<b>\$91,875</b>	<b>100%</b>

<sup>1</sup> To the extent the actual cost of the project is greater or less than \$91,875, the Parties agree that costs will be allocated in accordance with the percentages listed for each Party in Table 1.



(i) Upon receipt by OCWD of each written statement from Digital Mapping Inc. regarding the amount due and owing for the applicable time period (Progress Payment), OCWD shall be responsible for payment to Consultant for the amount due and owing.

(ii) The Parties shall be responsible for payment of their share of the amount due and owing under each Progress Payment to be billed by OCWD to each Party, quarterly. None of the Parties shall be responsible for payment of any amounts in excess of its percentage share as set forth herein, without the prior written consent of the Party being requested to pay such additional amount. If project costs are lower than expected, each Party will only be responsible for contributing its proportional share of the total project costs as shown in Table 1.

(iii) OCWD shall provide a copy of the Progress Payment to each Party along with a cover letter setting forth the calculation of the share due and owing by each Party. Within thirty (30) days of the date of said cover letter (Invoice), each Party shall submit payment to OCWD for its share as set forth in this Agreement.

### 3. Effective Date and Term

This Agreement shall be effective on the date of full execution of this Agreement by all of the Parties (Effective Date). The term of this Agreement shall be from the Effective Date to the date of completion of performance of the Scope under the Digital Mapping Inc. Contract pursuant to the schedule and deadlines set forth in Exhibit A and other schedules and deadlines as may be determined by the Parties and Digital Mapping Inc. The Parties may elect to extend the term in writing.

### 4. General Provisions

#### (a) Indemnification

Each Party (Indemnitors) hereby agrees to defend, indemnify and hold free and harmless the other Parties (Indemnitees) from and against any and all liability, expense, including defense costs and legal fees, and claims for damages arising from or connected with Indemnitors' negligent or otherwise wrongful activities undertaken per this Agreement.

#### (b) Notices

Correspondence to be given to any Party may be sent by first-class mail, addressed and delivered as set forth below in the signature blocks for each Party.

#### (c) Representation of Authority

Each Party represents to the other that it has the authority to enter into this Agreement and that the individual signing this Agreement on behalf of their

respective Party has the authority to execute this Agreement and to bind their respective Party to the terms and conditions of this Agreement.

(d) Counterparts

This Agreement may be executed in several counterparts, all or any of which shall be regarded for all purposes as one original and shall constitute and be but one and the same instrument.

(e) Governing Law

This Agreement shall be governed by and construed in accordance with the laws of the State of California.

(f) Cooperation. The Parties acknowledge that they are entering into an arrangement in which the cooperation of all of the Parties will be required, including the execution of necessary further documents. The Parties agree to cooperate in good faith with each other and review and submit timely documents for the benefit of the Project.

BY SIGNING BELOW, THE PARTIES AGREE TO BE BOUND BY THE PROVISIONS OF THIS AGREEMENT

ORANGE COUNTY WATER DISTRICT

By:   
Vicente Sarmiento, Board President

By:   
Michael Markus, General Manager

Dated: 5-20-20

APPROVED AS TO FORM  
By:   
General Counsel for  
Orange County Water District

CHINO BASIN WATER MASTER

By: \_\_\_\_\_  
Peter Kavounas, General Manager

Dated: \_\_\_\_\_

INLAND EMPIRE UTILITIES AGENCY

By: \_\_\_\_\_  
Shivaji Deshmukh, General Manager

Dated: \_\_\_\_\_

SAN BERNARDINO VALLEY MUNICIPAL WATER DISTRICT

By: \_\_\_\_\_  
Heather Dyer, General Manager

Dated: \_\_\_\_\_

**Exhibit A**

**Digital Mapping Inc.  
Scope of Work  
2020 Prado Basin and Upper Santa Ana Watershed Aerial Imagery and Light  
Detection Ranging (LiDAR)**



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**DATE:** June 4, 2020

**TO:** Board of Directors' Workshop - Resources

**FROM:** Chris Jones, Project Manager II, Biological Resources

**SUBJECT:** Consider Entering into an Agreement with Riverside County Parks and Open Space District to Fund Three Full-Time Equivalent Positions for Patrol and Maintenance of our Tributaries Restoration Sites.

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### **Background**

Staff is requesting the Board consider an agreement with the Riverside County Parks and Open Space District (Parks District) to fund three full-time equivalent (FTE) positions (2 Rangers, 1 Maintenance Operator). These positions are an integral component of Valley District's strategy, along with our HCP Partner Agencies, to proactively manage numerous project areas vital to the success of the Upper Santa Ana River Habitat Conservation Plan (HCP) conservation activities which includes the Tributaries Restoration Projects and the Hidden Valley Wetlands mitigation project, which is a permit requirement for the Valley District Cactus and Waterman Basins water recharge projects.

The three positions include two uniformed Park Ranger positions and one operator position that will carry out patrol and maintenance of our Tributaries Restoration sites. They will also conduct pre-construction site preparation (brush clearing, etc.) before the Hidden Valley Creek and Wetlands restoration projects begin construction in late 2020/2021. All three of these positions are expected to provide multiple benefits to Valley District and HCP related projects. Rangers would conduct regular (i.e. daily) patrols of project areas of value to the HCP and Valley District. These primarily include six different tributaries to the Santa Ana River that form one of the cornerstones of the conservation strategy for the Santa Ana sucker, the Hidden Valley wetlands, and education and outreach facilities at the Louis Robidoux Parkland (formerly known as the Louis Robidoux Nature Center) and the nature center at the Hidden Valley Wildlife Area. Regular patrols, in marked vehicles with uniformed officers, are intended to mitigate the potential for establishment of large unauthorized

homeless encampments that could limit the ability of the sites to provide the habitat benefits needed to meet the goals and objectives of the HCP and relevant biological opinions. Data has shown that the regular presence of marked vehicles, with uniformed rangers limit the abundance of large, impactful camps that become established in the River wilderness areas (see attached map).

Prior to construction, the goal of these patrols will be to eliminate homeless encampments within the Hidden Valley restoration areas before we start our restoration activities. Before construction, unauthorized camps will be removed by the Parks District crew, although it will require coordination amongst several entities, including the City of Riverside and Riverside County Flood Control District at certain locations. During and after construction, the regular patrols are intended to discourage camps from reforming due to the daily presence of officers. The patrols are also planned to provide an element of safety for potential trail patrons, biological monitors, and our Valley District/HCP staff during and following the construction of the tributary restoration projects.

Another component of our strategy to reduce homeless camp establishment is the presence of responsible public after the restoration occurs. Each of the tributary restoration projects and the wetland mitigation project has a trail system designed into the project or within very close proximity to the restoration areas. Similar reserves and open space areas have had success with keeping out unauthorized camps due to regular use by hikers, joggers, or folks that want to take a leisurely stroll with their families. The goal here is to “shine a bright light” on areas that were once out of site and out of mind. A huge added benefit to utilizing the Parks District Rangers is that they are savvy ecologists and biologists and can act as regular eyes and ears for Valley District’s Biological Resources Staff to utilize for valuable information needed to make management decisions for our restoration and mitigation sites.

The operator position is proposed to help with site clearing and maintenance. One of the first tasks for the tributary restoration and wetland mitigation projects will be clearing and grubbing of existing vegetation. For both tributary restoration and wetland mitigation projects, clearing will be selective. The knowledge of the native plants plus the relationships and communication systems already present between the Parks District rangers and operators will help reduce the risk of accidental clearing of plants that were intended to remain in place. Operators can also work with rangers to manage invasive, exotic plant species on the fringes of our restoration and mitigation project sites to reduce the risk of spread into our sites and help remove debris and trash from unauthorized camps. Following construction, Parks District operators can help with maintenance of restoration and mitigation sites. Working with the rangers and operators now will enable the Valley District staff set a foundation for working together in the future that will be important to the management of mitigation and HCP related sites that are either owned or maintained by the Parks District.

Valley District staff has worked with Parks District Staff to understand potential costs associated with funding the 3 FTE positions and ensuring they have the appropriate means

to complete the work they are expected to accomplish. A total annual cost of \$268,000 will provide funding for two senior Ranger positions and one Operator, and also provide funding to aid in the management of unauthorized camps for one year. A more detailed cost estimate is provided below. The initial agreement would be for one year in order to assess the effectiveness of our approach and refine the needs for a long-term agreement.

Table 1. Itemized cost description for 3 needed FTE positions and necessary related costs for one year.

Position	Fully Burdened Cost	# of Positions/Units	Total
Ranger	\$89,000.00	2	\$178,000.00
Operator	\$60,000.00	1	\$60,000.00
Homeless Clean Up-Roll Offs	\$8,000.00	1	\$8,000.00
PPE	\$2,000.00	1	\$2,000.00
Vehicle	\$20,000.00	1	\$20,000.00
<b>Totals</b>			<b>\$268,000.00</b>

The costs associated with the restoration and mitigation projects that these Ranger and Operator positions are intended to protect and maintain represent a significant investment of over \$16,000,000 by Valley District and all HCP partners on environmental restoration and mitigation.

Table 2 \*SARCCUP Tributary Restoration Projects include the restoration of Hidden Valley Creek, Lower Hole Creek, Anza Creek, and Old Ranch Creek for which we received approximately \$4 million in Prop 84 funding. \*\* The Hidden Valley Wetlands Mitigation Project provides mitigation for spreading activities at Waterman and Cactus Basins.

Restoration/Mitigation Projects Within Patrol Area	Cost Estimate
SARCCUP Tributary Restoration Projects *	\$10,000,000.00
Sunnylope Creek Restoration (Louis Robidoux Nature Center)	\$3,000,000.00
Evans Creek Restoration	\$2,000,000.00
Hidden Valley Wetlands Mitigation Project **	\$1,500,000.00
<b>Totals</b>	<b>\$16,500,000.00</b>

Funding Ranger and Operator positions is a proactive approach to protecting and maintaining our investments in our mitigation projects. In comparison, a cleanup last summer that removed a large compound of homeless encampments from the Upper Hole Creek area cost the City of Riverside over \$250,000 for a one-time removal. We believe that it is much more cost-effective to fund Ranger positions to continuously patrol our areas of interest in order to limit establishment rather than continually be cleaning up and repairing damage at our restoration sites.

The annual cost of these positions has been accounted for in the HCP's Implementation budget model as a "contract staff" cost which is necessary for successful implementation of

the HCP. In future years, the HCP Implementation Entity (proposed to be a Joint Powers Authority) will hold a multi-year agreement with Riverside County Parks District. However, in advance of our restoration activities, for FY 2020/2021, Valley District would hold the agreement on behalf of the HCP Partners. Our HCP partners would reimburse Valley District approximately 60% of this cost based on Implementation Agreement and the Funding Agreement, which will be considered for approval by each HCP Partner agency later this summer.

If the concept is approved by the Board today, staff will work with Valley District legal counsel to prepare an agreement for your consideration at a future Board of Directors regular meeting.

### **Fiscal Impact**

The cost estimate to fund 3 the three FTE positions is \$268,000. The HCP partners would reimburse 60% of the cost of this to Valley District or \$160,800. Therefore, the fiscal impact to Valley District would be \$107,200. If approved, Staff will include a line item in the 2020/2021 Budget for this item.

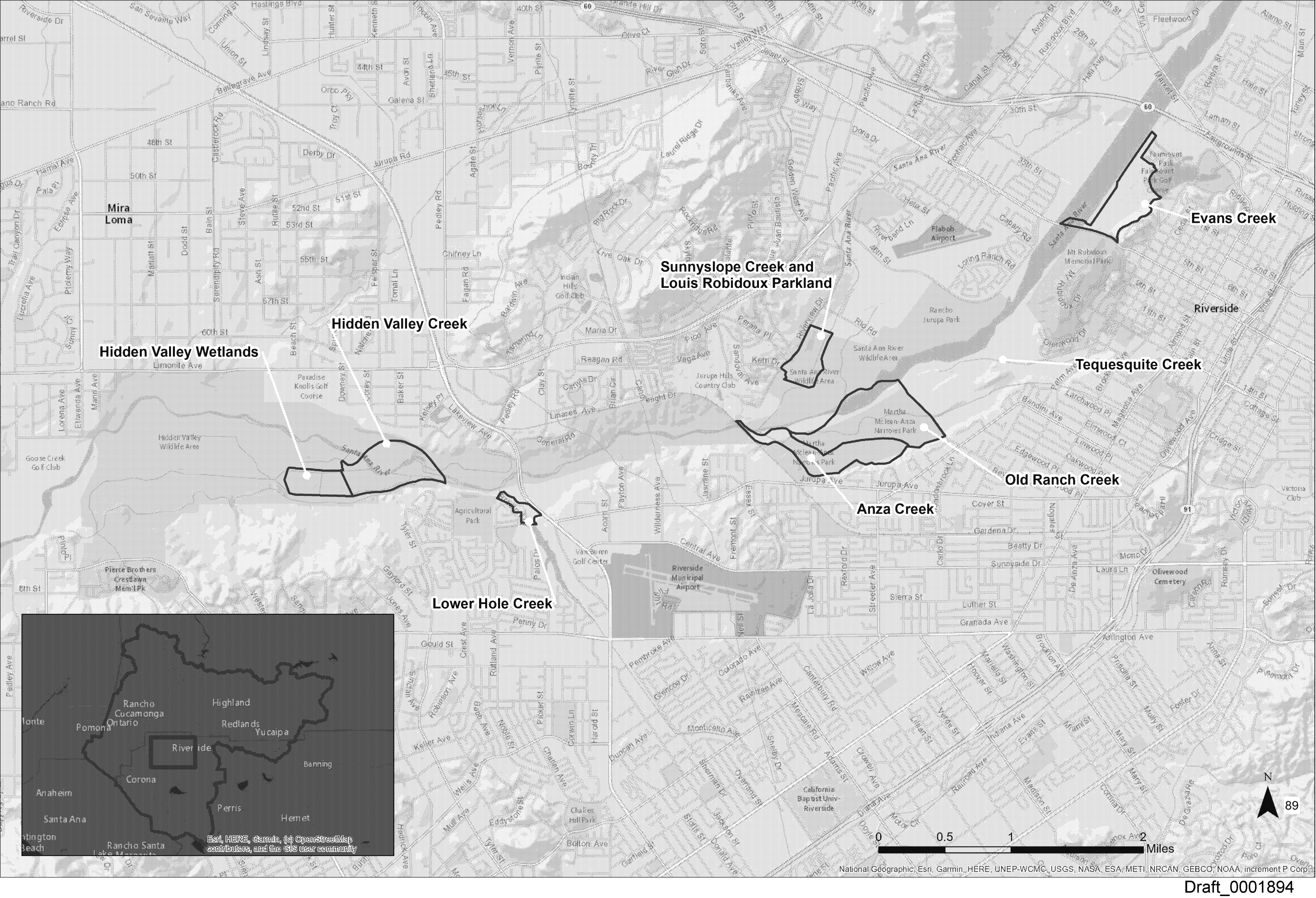
### **Staff Recommendation**

Staff recommends the Board request a funding agreement with Riverside County Parks and Open Space District, in the amount of \$268,000, be placed on a future Board of Directors' regular meeting agenda for consideration.

### **Attachment**

- 1) Map of Restoration and Mitigation Projects
- 2) Map of Unauthorized Camps
- 3) Photographs of Unauthorized Camps





Mira Loma

Hidden Valley Creek

Sunnyslope Creek and Louis Robidoux Parkland

Evans Creek

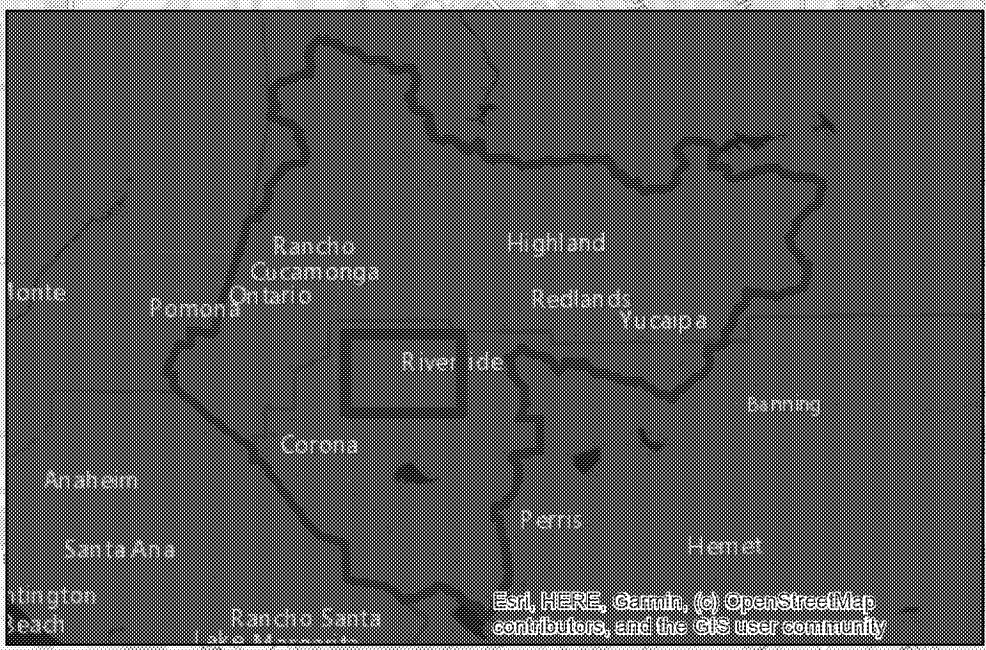
Hidden Valley Wetlands

Tequesquite Creek

Old Ranch Creek

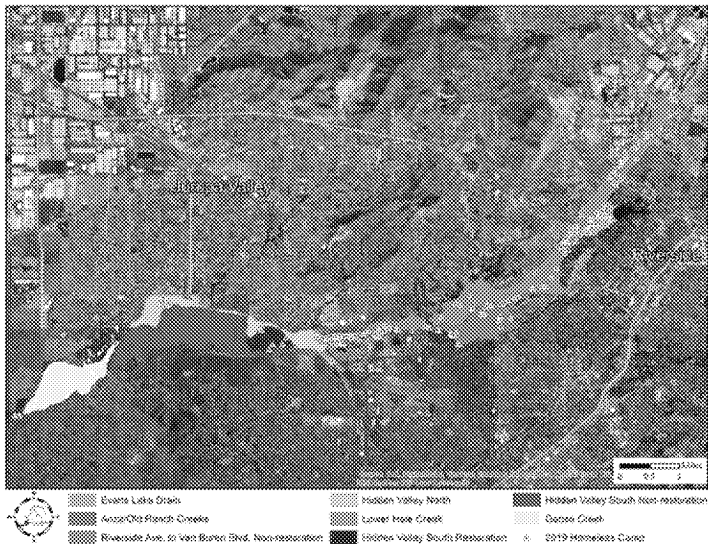
Anza Creek

Lower Hole Creek



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community





Photographs of Unauthorized Camps







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**DATE:** June 4, 2020  
**TO:** Board of Directors' Workshop - Resources  
**FROM:** Heather Dyer, General Manager  
**SUBJECT:** Director Requests for Consideration

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On April 21, 2020, the Board approved a standardized process for consideration of individual Director requests. The process to submit requests is intended to promote discussion and consensus by the Board regarding activities that are appropriate uses of staff time and other District resources.

The attached forms have been submitted by one or more Directors requesting activities or discussion topics that require either dedicated staff time or District resources in order to carry out. These activities will be considered by the Board and further direction will be provided to staff.

### **Fiscal Impact**

There is no immediate fiscal impact related to consideration of these items.

### **Staff Recommendation**

Staff recommends that the Board consider the following requests and provide direction to staff on each item.



DATE: 5/27/20

Reset Form

TO: Board of Directors

FROM: June Hayes

SUBJECT: Director's Request for Consideration by Board

**I. Director's Requested Activity to be Considered by the Board:**

I would like to see our emergency manual be updated to reflect pandemic as a consideration. Important in this is any other emergency that would require us to use teleconferencing. I would also like to see the role of the board included in the manual.

**II. Discussion of Activity's Value to Valley District and/or the Board:**

We have done an excellent job, thanks to Melissa and other staff, in responding to the COVID crisis, but the purpose of the manual is to assure we have a plan for any imaginable emergency. We now have a new procedure to add--meetings and ops, etc when we are confined for whatever reason. Also the manual (as far as I have read) does not discuss the role of board members in emergencies. The board really should have a role.

**III. Estimated Staff Time Required (to be completed by Staff):**

Approximately 10 - 12 hours of staff time to consider potential emergency issues, bring issues to a workshop for discussion by BOD, and update the manual accordingly.

**IV. Estimated Cost or Use of District Resources (to be completed by Staff):**

Approximately 10-12 hours of staff time and incidental costs to add new printed pages to each manual.

**V. Possible Modification or Suggested Alternative:**

TO BE COMPLETED BY STAFF OR POTENTIALLY MODIFIED DURING WORKSHOP  
BASED ON DIRECTOR INPUT



DATE: 5/27/20

Reset Form

TO: Board of Directors

FROM: June Hayes

SUBJECT: Director's Request for Consideration by Board

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I. **Director's Requested Activity to be Considered by the Board:**

I would like to see an annual routine review of director's compensation at the time of the wages and benefits. This is not to imply that compensation would be changed, just reviewed.

II. **Discussion of Activity's Value to Valley District and/or the Board:**

Review of the compensation packet would make sure we and the public have an awareness of our package.

III. **Estimated Staff Time Required (to be completed by Staff):**

Approximately 2 hours of Cindy Saks' time to complete a review of Directors' compensation and prepare a staff memo for a BOD workshop.

IV. **Estimated Cost or Use of District Resources (to be completed by Staff):**

Approximately 2 hours staff time.

V. **Possible Modification or Suggested Alternative:**

TO BE COMPLETED BY STAFF OR POTENTIALLY MODIFIED DURING WORKSHOP  
BASED ON DIRECTOR INPUT



DATE: 5/27/20

Reset Form

TO: Board of Directors

FROM: June Hayes

SUBJECT: Director's Request for Consideration by Board

**I. Director's Requested Activity to be Considered by the Board:**

Consider training 1-2 Board members and 1-2 staff members participate in a cultural intelligence training, which would lead to 1-2 of these District representatives being able to train others in cultural intelligence

**II. Discussion of Activity's Value to Valley District and/or the Board:**

We do not have a highly diverse staff and board--one that reflects the diversity of the population we serve. We can compensate for that by hiring to obtain that diversity but that does not guarantee the best person for the job is selected. Training staff and board in cultural diversity would compensate for our lack of diversity and provide for our ability to be culturally aware and sensitive. Cost per person would be about \$2500 for the basic training and the same amount for the trainer program. Once we have 1-2 people trained as trainers, those people could train the rest of the staff and maybe train interested retailers, etc.

**III. Estimated Staff Time Required (to be completed by Staff):**

This is a two-day training that occurs online. Estimated staff time to participate is 16 hours x 2 employees.

**IV. Estimated Cost or Use of District Resources (to be completed by Staff):**

Cost is \$2,695/person.

**V. Possible Modification or Suggested Alternative:**

TO BE COMPLETED BY STAFF OR POTENTIALLY MODIFIED DURING WORKSHOP  
BASED ON DIRECTOR INPUT





DATE: 5/27/20

Reset Form

TO: Board of Directors

FROM: June Hayes

SUBJECT: Director's Request for Consideration by Board

**I. Director's Requested Activity to be Considered by the Board:**

I would propose that the firm that trains in parliamentary procedure via the program Jurassic Parliament present a seminar for our board and interested retailers (at a minimal fee to them)

**II. Discussion of Activity's Value to Valley District and/or the Board:**

Good parliamentary procedures help meetings move along and help board members resolve differences and concerns as objectively as possible. While I believe that we do a very good job in our meetings, we can always improve. This training would hone our skills, and, if we invite retailers, our costs would be lower and we could provide the opportunity for the retailers to hone their skills as well.

**III. Estimated Staff Time Required (to be completed by Staff):**

Approximately 3-5 hours to support coordination of the workshop, especially if outside participants engage in the workshop.

**IV. Estimated Cost or Use of District Resources (to be completed by Staff):**

There are webinar and live workshop (in-person) options. Staff has reached out to Jurassic Parliament to obtain a cost estimate for a workshop.

**V. Possible Modification or Suggested Alternative:**

TO BE COMPLETED BY STAFF OR POTENTIALLY MODIFIED DURING WORKSHOP  
BASED ON DIRECTOR INPUT



DATE: 6/4/20

Reset Form

TO: Board of Directors

FROM: June Hayes

SUBJECT: Director's Request for Consideration by Board

**I. Director's Requested Activity to be Considered by the Board:**

I am distressed that WVWD would see fit to evaluate our agency's Public Relations, grade us, and place this information in a public document. I would like the Board to consider a letter addressing the unprofessionalism of this type of behavior on their part.

**II. Discussion of Activity's Value to Valley District and/or the Board:**

Not only did WVWD evaluate Valley district but they evaluated 9 other agencies. They did not take into consideration the different goals of the various agencies and clearly don't understand the role of a water wholesaler.

**III. Estimated Staff Time Required (to be completed by Staff):**

Approximately 1-hour administrative time by Kristeen Farlow and Heather Dyer to prepare and review letter.

**IV. Estimated Cost or Use of District Resources (to be completed by Staff):**

None other than staff time.

**V. Possible Modification or Suggested Alternative:**

None

**File Provided Natively**

**File Provided Natively**

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**From:** Tom Stokely [tgstoked@gmail.com]  
**Sent:** 4/30/2020 11:42:08 AM  
**To:** Alicia Forsythe [aforsythe@sitesproject.org]  
**Subject:** Re: Sites - Revise and Recirculating EIR

Ali,

Thanks for checking back with me. Sorry for the delay in responding to your e-mail.

I am glad to hear that you're doing a revised DEIR. It'll be interesting to see what happens at the federal level.

I do hope that you can address the concerns from our coalition letter from a year ago. I know that the recirculation is not due to our letter, but it'll be a good road map for you to address significant concerns we expressed.

My surgery went well and I am cancer-free so far, so I'm grateful.

Please keep me posted.

Best,

Tom

Phone 530-524-0315

On Wed, Apr 22, 2020 at 4:34 PM Alicia Forsythe <[aforsythe@sitesproject.org](mailto:aforsythe@sitesproject.org)> wrote:

Hi Tom – It's been a while since we've checked in. I couldn't find your phone number so thought I'd send you an email instead.

I wanted to let you know that the Sites Authority Board approved the Value Planning Report at their meeting today. The purpose of the Value Planning Report was to right-size the project for our current membership and to provide water for environmental benefits. In light of the results of the Value Planning Report and the inclusion of new project alternatives that we are currently developing from a CEQA perspective, the Board also voted today to revise and recirculate our Draft EIR. We will be working with Reclamation on the path forward for the EIS with the goal of continuing to have a joint document. We expect to release a revised document next summer (summer 2021).

We are just getting going on things. With everything COVID going on right now, we plan to take a close look at your comments on 2017 Draft EIR/EIS along with your suggestion for us to review your testimony on the WaterFix Project to better understand your concerns. We will circle back with you in the coming month or so and would like to work with you to continue discussing your concerns with the project.

I hope you're doing well! I know you were planning on being out for a while and I hope everything is going well.

Ali

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Alicia Forsythe | Environmental Planning and Permitting Manager | Sites Reservoir Project | 916.880.0676 |  
[aforsythe@sitesproject.org](mailto:aforsythe@sitesproject.org) | [www.SitesProject.org](http://www.SitesProject.org)

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