Bighorn-Desert View Water Agency

Board of Directors
Michael McBride, President
Judy Corl-Lorono, Vice President
David Larson, Secretary
Terry Burkhart, Director
J. Dennis Staley, Director

Marina D West, PG, General Manager

A Public Agency

Agency Office
622 S. Jemez Trail
Yucca Valley, CA 92284-1440

760/364-2315 Phone
760/364-3412 Fax

www.bdvwa.org

BOARD OF DIRECTORS' REGULAR MEETING AGENDA

BOARD MEETING OFFICE
1720 N. Cherokee Trail, Landers, CA 92285
Tuesday, July 24, 2012 - 6:00 p.m.

1. **CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

4. **APPROVAL OF AGENDA**

DISCUSSION AND ACTION ITEMS - The Board of Directors and Staff will discuss the following items, and the Board will consider taking action, if so inclined.

The Public is invited to comment on any item on the agenda during discussion of that item.

When giving your public comment, please have your information prepared, if you wish to be identified for the record then please state your name. Due to time constraints, each member of the public will be allotted three-minutes to provide their public comment.

5. **PUBLIC HEARING: RESOLUTION 12R-XX – A RESOLUTION CONFIRMING REPORTS OF DELINQUENT ACCOUNTS FOR BASIC SERVICE CHARGES, WATER CHARGES, REVENUE BOND SURCHARGES, DELINQUENT FEES AND PROCESSING FEES AND AUTHORIZING PLACEMENT OF PROPERTY LIENS ON THE SECURED TAX ROLLS OF SAN BERNARDINO COUNTY FOR COLLECTION OF DELINQUENCIES WITHIN BIGHORN DESERT VIEW WATER AGENCY**
   Board considers taking the following action(s):
   1. Review staff report, and note any letters received; and
   2. Receive questions from the Board of Directors; and
   3. Open public hearing; and
   4. Receive public comments; and
   5. Close public hearing; and

6. Board discussion of public comments received; and
7. Board to consider adopting Resolution No. 12R-XX – Confirming reports of delinquent accounts for basic service charges, water charges, revenue bond surcharges, delinquent fees and processing fees AND authorizing the placement of property liens on the secured tax rolls of San Bernardino County for collection of delinquencies within Bighorn-Desert View Water Agency.

6. COST AND SCOPE OF SERVICES PROVIDED BY CHIEF ENGINEER TO PREPARE CONTRACT DOCUMENTS AND PROJECT MANAGEMENT/CONSTURCTION INSPECTION SERVICES FOR RECOATING AND REPAINTING OF TWO RESERVOIRS AT A COST ESTIMATE OF $85,900

Board considers taking the following action(s):

1. Authorize General Manager to execute Work Order No. 4A with Krieger and Stewart, Inc. for Project Management/Construction Inspection Services for recoating and repainting of (up to) two reservoirs in conjunction with Scope of Services dated June 15, 2012 at a cost estimate of $85,900; and
2. Authorize filing of Categorical Exemption for the proposed project in accordance with California Environmental Quality Act (CEQA); and
3. Authorize publication of Notice Inviting Bids for recoating and repainting of (up to) two reservoirs (Reservoir Nos. B3 and B4); and
4. Authorize transfer of funds from the "unencumbered cash" fund to "Replacement and Refurbishment" fund.

7. CONSIDER CREATION OF AN AD HOC COMMITTEE TO PARTICIPATE IN OUTREACH REGARDING THE SPHERE OF INFLUENCE EXPANSION OVER COUNTY SPECIAL DISTRICTS ZONE W-1/LANDERS (W-1)

Board considers taking the following action(s):

1. Create an Ad Hoc Committee to explore the processes of reorganization with County Special Districts Zone W-1/Landers and coordinate community outreach.

8. CHANGE IN SCHEDULE FOR THE MOJAVE WAER AGENCY LEGAL, LEGISLATIVE AND PUBLIC INFORMATION COMMITTEE AND ITS CONFILCT WITH REGULARLY SCHEDULED PLANNING/LEGISLATIVE/ENGINEERING /GRANT/SECURITY STANDING COMMITTEE

Board considers taking the following action(s):

1. Provide direction to the Planning/Legislative/Engineering/Grant/Security Standing Committee on the impact of the change in regular meeting date of the Mojave Water Agency Legal, Legislative and Public Information Committee; and
2. If necessary, direct staff to revised Policy Statement No 08P-03 and bring back to the Board for formal adoption at a regularly scheduled Board of Directors meeting.

9. DISBURSEMENTS JUNE 2012

Recommended Action:
Ratify Check Register (payment of bills) for June 2012.

10. **CONSENT ITEMS** - The following items are expected to be routine and non-controversial and will be acted on by the Board at one time without discussion, unless a member of the Public or member of the Board requests that an item be held for discussion or further action.

    a. Financial Statements June 2012
        1. Balance Sheet
        2. Statement of Revenue and Expense
        3. General Account (Union Bank)
        4. Disbursements
        5. Local Agency Investment Fund Balance Timeline
    b. Consumption & Billing Comparison Report, June 2012
    c. Service Order Report, June 2012
    d. Production Report, June 2012
    e. Special Board Meeting Minutes, June 19, 2012
    f. Receive and File Reche Spreading Grounds Recharge Feasibility Study Completed February 2011
    g. Consider Authorizing Attendance to the 6th Annual San Bernardino County Water Conference August 10, 2012 at a Maximum Estimated Cost of $300 Per Director

    Recommended Action:
    Approve as presented (Items a - g):

11. **MATTERS REMOVED FROM CONSENT ITEMS**

12. **PUBLIC COMMENT PERIOD**

    Any person may address the Board on any matter within the Agency's jurisdiction on items not appearing on this agenda.

    When giving your public comment, please have your information prepared, if you wish to be identified for the record then please state your name. Due to time constraints, each member of the public will be allotted three-minutes to provide their public comment. State Law prohibits the Board of Directors from discussing or taking action on items not included on the agenda.

13. **VERBAL REPORTS** - Including Reports on Courses/Conferences/Meetings.

    a. GENERAL MANAGER'S REPORT
    b. DIRECTORS' REPORT
    c. PRESIDENT'S REPORT

14. **FUTURE AGENDA ITEMS**

15. **ADJOURNMENT**

In accordance with the requirements of California Government Code Section 54954.2, this agenda has been posted in the main lobby of the Bighorn-Desert View Water Agency, 622 S. Jemez Trail, Yucca Valley, CA not less than 72 hours if prior to a Regular meeting, date and time above; or in accordance with California Government Code Section 54956 this agenda has been posted not less than 24 hours if prior to a Special meeting, date and time above.

As a general rule, agenda reports or other written documentation has been prepared or organized with respect to each item of business listed on the agenda.

Copies of these materials and other discloseable public records in connection with an open session agenda item, are also on file with and available for inspection at the Office of the Agency Secretary, 622 S. Jemez Trail, Yucca Valley, California, during regular business hours, 8:00 A.M. to 4:30 P.M., Monday through Friday. If such writings are distributed to members of the Board of Directors on the day of a Board meeting, the writings will be available at the entrance to the Board of Directors meeting room at the Bighorn-Desert View Water Agency.

Internet: Once uploaded, agenda materials can also be viewed at www.bdvwa.org.

Public Comments: You may wish to submit your comments in writing to assure that you are able to express yourself adequately.

Per Government Code Section 54954.2, any person with a disability who requires a modification or accommodation, including auxiliary aids or services, in order to participate in the meeting, should contact the Board's Secretary at 760-364-2315 during Agency business hours.

BIGHORN-DESERT VIEW WATER AGENCY
AGENDA ITEM SUBMITTAL

Meeting Date: July 24, 2012

To: Board of Directors

Budgeted: N/A
Budgeted Amount: N/A
Cost: $37,253.61
Funding Source: Secured Property Liens

From: Marina D. West

General Counsel Approval: N/A
CEQA Compliance: N/A

Subject: Public Hearing: Resolution No 12R-XX: A Resolution Confirming Reports of Delinquent Accounts for Basic Service Charges, Water Charges, Revenue Bond Surcharges, Delinquent Fees and Processing Fees AND Authorizing Placement of Property Liens on the Secured Tax Rolls of San Bernardino County for Collection of Delinquencies within Bighorn Desert View Water Agency

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SUMMARY

Each May/June the Agency summarizes the report of Bad Debt expenses owed for the prior year period and prepares for the submission of a collections report to the County of San Bernardino for inclusion on the secured tax rolls. Currently, this year the total amount to be forwarded to the County of San Bernardino for collections is $37,253.61.

On June 19, 2012 each delinquent property owner, with an outstanding balance exceeding $125, was sent a final notice of delinquency. This letter served to inform each owner of the pending property tax lien and the amount owed to the Agency to avoid the lien. As required, the letter was mailed both certified and regular first class. A required public notice was also placed on file with the Hi Desert Star newspaper for publishing on July 11, 2012 and July 18, 2012.

RECOMMENDATION

That the Board considers taking the following action(s):

1. Review staff report, and note any letters received;
2. Receive questions from the Board of Directors;
3. Open public hearing;
4. Receive public comments;
5. Close public hearing;
6. Board discussion of public comments received;
    a. Board to consider approving Resolution No. 12R-XX - Confirming reports of delinquent accounts for Basic Service Charges, water charges, revenue bond surcharges, delinquent fees and processing fees AND authorizing the placement of property liens on the secured tax rolls of San Bernardino County for collection of delinquencies within Bighorn-Desert View Water Agency.

BACKGOUND/ANALYSIS

In June 2012, one-hundred nine (109) properties were identified as being excessively delinquent. On June 19, 2012 these property owners were mailed, via regular and certified mailings, a letter warning of the pending hearing for placement of the debt as a property tax lien. Of the original one-hundred nine (109) delinquent properties, thirteen (13) paid their debt in the amount of $ 2,570.42 thus reducing the total outstanding debt to $37,253.61.

As part of the notification requirement, the remaining ninety-six (96) delinquent property owners names along with the assessor parcel number and total debt was published in the Hi Desert Star on July 11, 2012 and July 18, 2012 in a final effort to locate the responsible parties. August 10, 2011 is the deadline for submitting the Special Assessment to the 2012/13 Tax Rolls. September 1, 2012 is the deadline for all corrections.

PRIOR RELEVANT BOARD ACTION(S)

6/28/2011 Motion No. 11-030 Resolution No. 11R-06 - A Resolution of the Board of Directors of Bighorn-Desert View Water Agency confirming reports of delinquent accounts for water charges, meter charges, and bonded indebtedness, and fees and authorizing the placement of property liens on the secured tax rolls of San Bernardino County for collection of delinquencies within Bighorn-Desert View Water Agency.

6/29/2010 Resolution No. 10R-05: Resolution of the Board of Directors of Bighorn-Desert View Agency confirming reports of delinquent accounts for water charges, meter charges, bonded indebtedness, and processing fees and authorizing the placement of property liens on the secured tax rolls of San Bernardino County for collection of delinquencies within Bighorn-Desert View Water Agency.

RESOLUTION NO. 12R-XX

A RESOLUTION OF THE BOARD OF DIRECTORS OF BIGHORN-DESERT VIEW WATER AGENCY CONFIRMING REPORTS OF DELINQUENT ACCOUNTS FOR BASIC SERVICE CHARGES, WATER CHARGES, REVENUE BOND SURCHARGES, DELINQUENT FEES, AND PROCESSING FEES

AND

AUTHORIZING THE PLACEMENT OF PROPERTY LIENS ON THE SECURED TAX ROLLS OF SAN BERNARDINO COUNTY FOR COLLECTION OF DELINQUENCIES WITHIN BIGHORN-DESERT VIEW WATER AGENCY

WHEREAS, the Board of Directors of the Bighorn-Desert View Water Agency resolves as follows:

SECTION 1:

The Board of Directors of the Bighorn-Desert View Water Agency finds and declares as follows:

A. On June 19, 2012, the General Manager did cause written notification to be mailed, by both certified and first class U.S. Mail, to such delinquent customers that public notices would be placed in the local newspaper on July 11, 2012 and July 18, 2012 and that a public hearing would be held on July 24, 2012; and

B. On July 09, 2012, public notices were placed in the local newspaper and published on July 11, 2012. Also on July 16, 2012, public notices were placed in the local newspaper and published on July 18, 2012.

SECTION 2:

The Board of Directors of the Bighorn-Desert View Water Agency resolves that the following delinquent accounts will be placed on the (2012/2013) Secured Property Tax Roll of the County of San Bernardino Tax Collector:

BCSI, INC	635-041-12	$436.00
SHREWSBURY, KURT MICHAEL	635-041-11	$436.00
BAUTISTA, ALICE R.	635-071-64	$436.00
FRITTS, THOMAS	635-601-01	$436.00
KUNZ, JAMES	635-031-27	$436.00
RIOS, GENY	635-031-01	$436.00
PAYNE, KENNETH D	635-021-17	$236.00
PLUMMER, SCOTT	635-061-55	$436.00
TUCKER, MARGARET	635-071-06	$268.04
MANUWAL, HAROLD NEIL	635-081-06	$557.90
RAUSCHENBERG, NEIL C	635-531-09	$316.00
OAKES, JEANETTE AND MATTHEW	635-511-46	$266.09
CRUZ, VICTOR HUGO	635-511-33	$249.19
PARRIOTT, LYLE	635-511-05	$436.00
CAPITAL AMERICANA INC	635-511-60	$436.00
BENGTSON, WILLIAM	629-405-01	$336.00
HEREDIA, JESUS	629-382-02	$436.00

WONG, GENE S	629-291-25	$441.80
WELLS FARGO BANK NA (TR)	629-281-34	$390.01
CAMPBELL, DONALD	629-271-30	$441.80
PODSADECKI, JOHN	629-271-87	$290.70
BAUGHMAN, NANCY	629-291-62	$201.80
MC MAKIN, ELIZABETH AND MICHAEL	629-261-29	$506.10
LAFLEUR, JAMES L	629-072-15	$372.50
TOUN, KROUT C/O NGAR, BUNL	629-231-04	$441.80
CRONCE, GENE-MARIE E	629-062-25	$441.80
TYZA INDUSTRIES LLC	629-103-03	$441.80
WESTERN SKY RANCHES, INC	629-231-55	$441.80
BRACAMONTE, ELIZABETH	629-092-01	$218.20
SAAVEDRA, ENCARNACION	629-232-43	$372.50
SAAVEDRA, ENCARNACION	629-232-42	$372.50
BANK OF NEW YORK MELLON	629-042-29	$341.29
BARRIENTOS, FELIX	629-421-05	$490.36
GABRIELES, CHARLES	629-051-11	$341.80
HAGA, JACK WES	629-062-10	$441.80
PARROTT, DOROTHY	629-051-37	$231.04
MASON, LAWRENCE	629-441-40	$456.10
ANTONIO, MANUEL	629-032-42	$355.69
MEZA, MARISELA	629-021-27	$286.77
CA CRAWFORD PROPERTIES LLC	629-021-29	$441.80
BRATZ, ELOUISE ME TR	629-021-29	$298.20
EZELL FAMILY TRUST	629-431-13	$441.80
TUCKER, MARGARET	635-071-06	$206.70

PASSED, APPROVED AND ADOPTED by the Board of Directors of Bighorn-Desert View Water Agency this 24th day of July 2012, by the following roll call vote:

AYES:

NAYES:

ABSTAIN:

ABSENT:

BY _____
Michael McBride, Board President

ATTEST:
By _____
David Larson, Board Secretary

Bighorn-Desert View Water Agency

Board of Directors
Michael McBride, President
Judy Corl-Lorono, Vice President
Terry Burkhart, Director
David Larson, Director
J. Dennis Staley, Director

Marina D West, P.G., General Manager

Agency Office
622 S. Jemez Trail
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A Public Agency

June 18, 2012

Account No.
Assessor's Parcel No:

Dear Customer,

This letter is to advise you that your account has been referred to my attention as excessively delinquent. Upon review, your account has an outstanding balance of . Several attempts have been made to contact you regarding this matter without response.

If payment is not received within 15 days of the date of this letter then the Agency will cause to be written a public notice in the local newspaper on July 11, 2012 and July 18, 2012 in a further attempt to notify you. The Agency intends to schedule a public hearing on the matter for July 24, 2012 at 6:00 pm. The Board of Directors will thereafter consider a Resolution confirming the report of delinquent accounts for basic service charges, water charges, revenue bond surcharges, delinquent fees and processing fees. If approved it would authorize the placement of the property liens on the tax rolls of San Bernardino County for collection of delinquencies within Bighorn-Desert View Water Agency.

The Agency's right to place a lien against your property is pursuant to Ordinance No. 11O-01; Rules and Regulations for Water Service Article 12.0; Water Code App. 112-5; Water Code App. 112-15; and other provisions.

Please remit immediately to avoid a lien against the property.

Sincerely,
Marina D. West
Marina D. West, PG
General Manager

ANNOUNCEMENT OF PUBLIC HEARING

JULY 24, 2012 AT 6 PM
BIGHORN-DESERT VIEW WATER AGENCY
BOARD MEETING OFFICE
1720 N. CHEROKEE TRAIL, LANDERS, CA 92285

NOTICE OF INTENT BY THE BOARD OF DIRECTORS
OF THE BIGHORN-DESERT VIEW WATER AGENCY
TO CONSIDER ADOPTING A RESOLUTION CONFIRMING THE REPORT OF DELINQUENT
ACCOUNTS FOR BASIC SERVICE CHARGES, WATER CHARGES, REVENUE BOND SURCHARGES, DELINQUENT FEES, AND PROCESSING FEES. IF APPROVED IT WOULD
AUTHORIZE THE PLACEMENT OF THE PROPERTY LIENS ON THE SECURED TAX ROLLS OF SAN BERNARDINO COUNTY FOR COLLECTION OF DELINQUENCIES WITHIN BIGHORN-DESERT VIEW WATER AGENCY.

RESOLUTION NO. 12R-XX

A RESOLUTION OF THE BOARD OF DIRECTORS OF BIGHORN-DESERT VIEW WATER AGENCY CONFIRMING REPORTS OF DELINQUENT ACCOUNTS FOR BASIC SERVICE CHARGES, WATER CHARGES, REVENUE BOND SURCHARGES, DELINQUENT FEES AND PROCESSING FEES AND AUTHORIZING THE PLACEMENT OF PROPERTY LIENS ON THE SECURED TAX ROLLS OF
SAN BERNARDINO COUNTY FOR COLLECTION OF DELINQUENCIES
WITHIN BIGHORN-DESERT VIEW WATER AGENCY

WHEREAS, the Board of Directors of the Bighorn-Desert View Water Agency resolves as follows:

SECTION 1:
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B. On July 09, 2012, public notices were placed in the local newspaper and published on July 11, 2012. Also on July 16, 2012, public notices were placed in the local newspaper and published on July 18, 2012.

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PAYNE, KENNETH D	635-021-17	$236.00
PLUMMER, SCOTT	635-061-55	$436.00
TUCKER, MARGARET	635-071-06	$268.04
MANUWAL, HAROLD NEIL	635-081-06	$557.90
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CRUZ, VICTOR HUGO	635-511-33	$249.19
PARRIOTT, LYLE	635-511-05	$436.00
CAPITAL AMERICANA INC	635-511-60	$436.00
BENGTSON, WILLIAM	629-405-01	$336.00
HEREDIA, JESUS	629-382-02	$436.00
ELLISON, RON	629-394-02	$436.00
HAMMAD, KHALED ALI	629-372-12	$791.00
TYZA INDUSTRIES LLC	629-372-07	$436.00
TYZA INDUSTRIES LLC	629-372-08	$436.00
TAYLOR, WALTER DAN	629-372-05	$316.00
KINDIG, CHARLES R	629-352-35	$436.00
LOVELL, STEVEN	629-352-36	$436.00
SEVERSON, HOWARD	629-342-43	$316.00
HAYDEN, BRAM C	629-342-17	$436.00
CROUCH, CLEMENCE H	629-342-51	$276.00
ATAYDE, LYDIA A	629-292-40	$436.00
DIGALIZA, LIZA	629-292-27	$848.25
172*DEER TR LANDERS CA TR	629-292-45	$241.68
LEITCH, JULIAN B	629-292-46	$436.00
JONES, MIKE D	629-301-38	$436.00
KOO, JAIKYUN	629-301-21	$196.31
NARANJO, JUAN	629-301-11	$436.00
RAUSCHENBERG, NEIL C	629-312-53	$316.00
WILLIAMS, RUFUS	629-312-48	$374.08
COLTER, DENNIS	629-312-50	$253.25
HARVEY, WILLIAM A	629-311-18	$436.00
GUZMAN, REFUGIO O	629-302-29	$256.00
PARKER, JAMES F II	629-311-23	$436.00
PODSADECKI, JOHN	629-322-50	$496.00
WINCHESTER, JAMES	630-021-23	$436.00
RICE, BRADLEY CURTIS LV TR	630-011-02	$376.00
GROSS, DUAINE	631-061-47	$436.00
WILSON, SHERRY K	631-061-39	$510.01
LOPEZ, RICKY JOE	630-011-19	$399.60
ROWAN, LYNELLEN	630-032-34	$436.00
BROWN, SHIRLEY I	630-032-46	$436.00
KOMJAK, KANEDA	630-032-09	$202.00
SCARDINA, MELANIE A	630-031-13	$256.00
DERRY FAM TR	630-041-11	$316.00
DESERT VIEW HOMES	630-051-23	$388.97
SAMSON, PATRICIA A INTERVIVOS	630-082-36	$336.00
DUNN, KEVIN	630-051-37	$436.00
OTTERBINE, CHRISTOPHER	630-081-25	$336.00

RISING PHOENIX GROUP LLC	630-051-62	$436.00
POWELL, JAMES L	630-051-10	$436.00
SPAETH, STANLEY C TR	630-071-50	$256.45
HERNANDEZ, PEDRO	630-071-03	$436.00
RANDALL, TEDDIE J	630-062-34	$316.00
MACK, BARRY ETAL	630-061-27	$436.00
DUKE, GARRET A	630-071-58	$381.00
LU, KEN QUOC	629-282-08	$364.33
VAN-ANTWERP-OCHOA	629-271-21	$426.18
PODSADECKI, JOHN	629-271-22	$318.20
KEMPER, WALTER RON	629-282-03	$475.40
HARMON, JACK D	629-291-60	$440.99
PARIMORE, RAYMOND L	629-281-33	$382.50
VENOBLE, DEBORAH J	629-282-10	$441.80
HOLT, JANIE L	629-282-02	$195.93
WONG, GENE S	629-291-25	$441.80
WELLS FARGO BANK NA (TR)	629-281-34	$390.01
CAMPBELL, DONALD	629-271-30	$441.80
PODSADECKI, JOHN	629-271-87	$290.70
BAUGHMAN, NANCY	629-291-62	$201.80
MC MAKIN, ELIZABETH AND MICHAEL	629-261-29	$506.10
LAFLEUR, JAMES L	629-072-15	$372.50
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BRATZ, ELOUISE ME TR	629-021-29	$298.20
EZELL FAMILY TRUST	629-431-13	$441.80
TUCKER, MARGARET	635-071-06	$206.70

PASSED, APPROVED AND ADOPTED by the Board of Directors of Bighorn-Desert View Water Agency this 24th day of July 2012, by the following roll call vote:

AYES:
NAYES:
ABSTAIN:
ABSENT:
BY _____
Michael McBride, Board President
ATTEST:
By _____
David Larson, Board Secretary

(PUB: S. 7/11/12, 7/18/12)

BIGHORN DESERT VIEW WATER AGENCY
AGENDA ITEM SUBMITTAL

Meeting Date: July 24, 2012

To: Board of Directors

Budgeted: Replacement/Refurbishment
Budgeted Amount:
Engineering Services: $85,900
Construction Est.: To Be Determined prior to bidding

From: Marina D. West

General Counsel Approval: Required prior to advertisement for bids
CEQA Compliance: Filing of Categorical Exemption identified in attached Scope of Services

Subject: Costs and Scope of Services Provided by Chief Engineer to Prepare Contract Documents and Project Management/Construction Inspection Services for Recoating and Repainting of Two Reservoirs at a Cost Estimate of $85,900

SUMMARY

At the February 2012 goal setting workshop, one of the identified Capital Improvement Projects for Fiscal Year 2012/13 was refurbishment of up to two reservoirs serving the "B-Zone". At staff's request, Chief Engineer Krieger has prepared cost and scope of services for preparation of bid specifications, project management and on-site inspection services. The cost estimate to provide these engineering services is $85,900.

The Planning/Legislative/Engineering/Grant/Security Committee reviewed this proposal on June 21st and recommended it be brought before the full Board for further consideration and possibly adoption. Chief Engineer Krieger will participate via teleconference during the meeting to review the proposal and answer any questions from the Board.

RECOMMENDATION

That the Board consider taking the following action(s):

1. Authorize General Manager to execute Work Order No. 4A with Krieger and Stewart, Inc. for Project Management/Construction Inspection Services for recoating and repainting of (up to) two reservoirs in conjunction with Scope of Services dated June 15, 2012 at a cost estimate of $85,900; and
2. Authorize filing of Categorical Exemption for the proposed project in accordance with California Environmental Quality Act (CEQA);and
3. Authorize publication of Notice Inviting Bids for recoating and repainting of (up to) two reservoirs (Reservoir Nos. B3 and B4);and
4. Authorize transfer of funds from the "unencumbered cash" fund to the "Replacement and Refurbishment" fund.

BACKGROUND/ANALYSIS

The attached proposal explains in detail the scope of services to be performed by Krieger & Stewart for both preparation of Plans and Specifications, project management and field construction related inspection services.

The proposal reflects the level of engineering services necessary to recoat and repaint up to two reservoirs but will have an "opt out" provision to reduce the final scope of work to one reservoir depending on total cost proposed. It is anticipated that total cost will be proportionately lower under this plan.

Once project bids are received, staff will bring the project back to the Board of Directors for review and consideration of award based on the engineers analysis of the bids and a review of Agency finances.

The internal coatings on Reservoirs B3 and B4 are severely degraded and staff has placed a high priority on refurbishing these reservoirs in Fiscal Year 2012/13 now that the Agency has accumulated enough cash reserves to completely fund the project.

PRIOR RELEVANT BOARD ACTION(S)

6/21/2012 Planning/Legislative/Engineering/Grant/Security Committee review of cost and scope of services for preparation of bid specifications, project management and on-site inspection services. The cost estimate to provide these engineering services is $85,900

2/10/2012 Board Goal Setting Workshop: Identifying Reservoirs B3 and B4 as priority tanks for recoating.

WORK ORDER

Bighorn-Desert View Water Agency
622 South Jemez Trail
Yucca Valley, CA 92284
(760) 364-2315

K&S Project (Billable) No. 997-4
K&S File No. 997-4.2 A
Consultant Work Order No. 4A

Consultant's Name: Krieger & Stewart, Incorporated
Address: 3602 University Avenue
City, State, Zip: Riverside, CA 92501
Office Phone: (951) 684-6900
Fax: (951) 684-6986

Not to Exceed Fee: $85,900
Completion Date: Spring 2013
Liaison's Name: Charles A. Krieger
Liaison's Phone: (951) 684-6900

Project Name: Recoating and Repainting Two Reservoirs

Description: (See Work Order No. 4A, Exhibit A - Scope of Services and Exhibit B - Estimated Fees, attached)

The Work(s) to be performed, time of performance, and not to exceed compensation shall be as described in Exhibits A and B attached hereto and made a part hereof and shall be performed in accordance with the "Master Professional Services Agreement" dated July 28, 2010 with services billed in accordance with Krieger & Stewart's 2012 Fee Schedule. Consultant certifies that as of the date of execution of this Work Order all insurance is as stated in the "Master Professional Services Agreement" and will be maintained in good standing for the term of this Work Order.

BIGHORN-DESERT VIEW WATER AGENCY

By: _____
Name: Marina West
Title: General Manager
Date: _____

KRIEGER & STEWART, INCORPORATED

By: Charles A. Krieger
Name: Charles A. Krieger
Title: President
Date: 15 June 2012

WORK ORDER NO. 4A, EXHIBIT A
BIGHORN-DESERT VIEW WATER AGENCY
RECOATING AND REPAINTING TWO RESERVOIRS
SCOPE OF SERVICES

We have organized our scope of services for the Recoating and Localized Repainting of the Two Existing Reservoirs as follows:

1. Review Reports by Others
2. Site Visit/Evaluation of Scope of Work
3. CEQA Documents
4. Preparation of Draft Contract Documents
5. Review Meeting with Agency Staff
6. Preparation of Final Contract Documents
7. Bid Phase Services
8. Construction Engineering Services

Each component is discussed in detail in the following paragraphs:

1. Review Reports by Others

As a first item of work, we will review the available reservoir inspection reports prepared by others related to the Agency's reservoirs as a means of double checking our field evaluation (see No. 2 below).

2. Site Visit/Evaluation of Scope of Work

We will meet with Agency staff to discuss the project in detail prior to beginning services. At this meeting, we will also review our Basic Welded Steel Water Storage Reservoir Coating and Painting Specifications and our schedule. We will also confirm with Agency staff which two reservoirs will be selected for recoating and localized repainting. At the conclusion of the meeting, we will field review the selected reservoir sites to assess the condition of the existing interior and exterior coating systems, and to determine if there are any structural or safety deficiencies. We will determine the modifications required to maintain the safety, security, sanitary, and structural compliance with AWWA, CAL-OSHA, Federal OSHA, Section 29 of the Code of Federal Regulations, Office of Homeland Security Resolution No. 3448 (Bioterrorism Risk). California Department of Public Health, National Sanitation Foundation Rule 61 (NSF 61).

It is our understanding the existing reservoirs will be drained and that we will have the opportunity to inspect the reservoir interior as well as the exterior.

WORK ORDER NO. 4A, EXHIBIT A
BIGHORN-DESERT VIEW WATER AGENCY
RECOATING AND REPAINTING TWO RESERVOIRS
SCOPE OF SERVICES

3. CEQA Documents

Activities involving the operation, repair and maintenance of existing facilities are categorically exempt from CEQA (Class 1 Categorical Exemption) if the activity does not result in a significant, cumulative, adverse effect on the environment, or in a significant adverse effect on the environment due to unusual circumstances; we anticipate the proposed project will require only an exemption. We will prepare a Preliminary Exemption Assessment (PEA) and a Notice of Exemption (NOE) for the Project and file them with the County Clerk prior to field construction activities.

4. Preparation of Draft Contract Documents

The Contract Documents will be based on Krieger & Stewart's standard specifications. We will prepare the notice inviting bids, bid sheets, special requirements, and technical specifications. Special requirements will address the mandatory pre-bid meeting, reservoir details (capacity, height, diameter, structural components, history of coating and painting, and required remedial work), working hours, permits, site access, data to be submitted by the contractor, construction water and power, restoration of the work site, disposal of waste materials, payment requests, safety, and disposal of sandblast sand.

The technical specifications will include Krieger & Stewart's Basic Welded Steel Water Storage Reservoir Coating and Painting Specifications, which address submittals, sequence of work, inspection, surface preparation, materials, application, detailed requirements for the painting and coating systems, disinfection, and clean-up. Additional technical specifications and/or special requirement for all structural and safety modifications that are identified.

5. Review Meeting with Agency Staff

We will arrange a review meeting with Agency staff to review the draft contract documents; one week prior to said meeting, we will provide Agency staff with three copies of the draft contract documents, as well as an Engineer's Cost Estimate for the project. The purpose of the meeting will be to review the draft contract documents in detail and obtain the Agency's comments or approval regarding same.

6. Preparation of Final Contract Documents

Based on comments received from Agency staff during the review meeting, we will revise the Contract Documents as required and submit to the Agency for final approval.

WORK ORDER NO. 4A, EXHIBIT A
BIGHORN-DESERT VIEW WATER AGENCY
RECOATING AND REPAINTING TWO RESERVOIRS
SCOPE OF SERVICES

7. Bid Phase Services

a. Pre-Bid Procedures

During the bid period, we will arrange and conduct the mandatory pre-bid meeting, during which prospective bidders will be afforded the opportunity to visit each site and become familiar with the project's requirements. We will also answer questions from contractors and material suppliers regarding the project. If any questions or concerns are not clearly addressed in the contract documents, we will prepare an addendum regarding same. Prior to preparing the addendum, we will review the questions or concerns with Agency staff. Once the addendum is prepared, we will call all prospective bidders to alert them of the addendum, and will then fax the addendum to each bidder with proof of same provided to Agency staff.

Krieger & Stewart will provide the legal advertisement for the project and make the contract documents available to contractors and material suppliers.

b. Bid Opening and Post-Bid Procedures

We will attend the bid opening and assist Agency staff in opening bids. After the bid opening, we will review each bid to ensure that the bid amounts are correct. Thereafter, we will review the entire set of contract documents for the apparent low bidder and check each reference listed to determine the competence of the contractor. We will also verify that the apparent low bidder's license is current and valid, and that the various bonds are in full compliance with the requirements of the contract documents.

If any irregularities exist with the bids, we will review same with Agency staff and the Agency's legal counsel (if necessary); thereafter, we will prepare a Recommendation of Award Memorandum summarizing all bids received, identifying the apparent lowest responsive bid, identifying any bid irregularities, a summary of legal counsel's recommendations regarding bid irregularities (if any), and provide a recommendation of award.

8. Construction Engineering Services

a. Preconstruction Meeting

The preconstruction meeting will be attended by Agency staff, Krieger & Stewart's project manager, Krieger & Stewart's construction inspector, and the Contractor. Said meeting will be used to review the Contract Documents and the proposed work. After said meeting, we will prepare a memorandum of same to be distributed to the Agency and Contractor.

b. Submittal Review

Krieger & Stewart will review and approve all submittals. We expect submittals to be required for sandblasting materials, all coating and painting materials, and all structural or safety improvement materials.

c. Contract Administration

Throughout the course of construction, Krieger & Stewart's project manager will respond to inquiries regarding the Contract Documents (i.e. Requests for Information) to ensure that the project is constructed in compliance with same. Contract administration activities will include site visits, review of inspection reports, conferences with the construction inspector, progress reviews to ensure that the project is proceeding according to schedule, progress reviews with Agency staff, and related services.

Problems or questions during construction will be resolved by Krieger & Stewart's project manager and construction inspector. If a situation occurs requiring an Agency decision, Agency staff will be consulted. The project manager will review the project with Agency staff on a regular basis.

Each month, we will review the construction payment requests submitted by the Contractor. We will review the work completed and payment requests to ensure that the quantities and amounts requested reflect the actual work completed. After each request has been reviewed (and revised if necessary), we will approve it and send it to the Agency for payment.

Any extra work requests will be reviewed to determine if said requests are warranted. If extra work requests are not warranted, we will reject same in writing. Prior to sending letters to Contractor, we will review same with Agency staff. If extra work requests appear warranted, said requests will be reviewed with the construction inspector and compared to the field reports for confirmation of materials, equipment, and labor involved. Thereafter, we will review same with Agency staff prior to approving extra work and preparing change orders.

Through telephone conferences, meetings, and presentations, the project manager will keep Agency staff informed of project progress, difficulties during construction, and any changes in work. Whenever possible, the project manager will review any required changes with Agency staff prior to making same.

d. Construction Inspection

We will perform inspection on an as-needed basis in accordance with a schedule arranged between the Contractor and our project manager. We anticipate that inspections will be performed every other day during coating operations (depending on the Contractor's work schedule).

We will observe and document surface preparation, coating application, curing procedures, and reservoir disinfection in addition to all work related to structural or safety. We have developed guidelines and procedures that each of our inspectors follows throughout reservoir construction, modification, coating and painting projects.

Our construction inspector will prepare field reports which will document daily project activity, including location of the activity, number of workers present, inspector(s) present, weather conditions, construction progress, any defects noted, corrective actions ordered and/or taken, and test/acceptance activities and results. In addition to our daily field reports, we will provide photographic documentation of the progress of the project and record all dry film thickness measurements for reinspection and permanent documentation.

e. Project Acceptance

After all deficiencies are corrected, our project manager will prepare a letter to the Agency recommending acceptance of the project. We will also determine a substantial completion date (if different from actual completion date), prepare and final a Notice of Completion, and confirm that no stop notices have been filed prior to recommending final payment by Agency.

WORK ORDER NO. 4A, EXHIBIT B
BIGHORN-DESERT VIEW WATER AGENCY
RECOATING AND REPAINTING TWO RESERVOIRS
ESTIMATED FEES FOR ENGINEERING SERVICES

COMPONENT	PRINCIPAL-IN-CHARGE [1] HOURS	PRINCIPAL-IN-CHARGE [1] $	PROJECT MANAGER [2] HOURS	PROJECT MANAGER [2] $	CADD SERVICES [3] HOURS	CADD SERVICES [3] $	CLERICAL [4] HOURS	CLERICAL [4] $	CONSTRUCTION INSPECTOR [5] HOURS	CONSTRUCTION INSPECTOR [5] $	TOTAL
1. REVIEW REPORTS BY OTHERS	8	1,520	8	1,264							$2,784
2. SITE VISIT/EVALUATION OF SCOPE	12	2,280	12	1,896			2	166			$4,342
3. CEQA DOCUMENTS	FEE IS INCLUDED WITH PREPARATION OF DRAFT CONTRACT DOCUMENTS										
4. PREPARATION OF DRAFT CONTRACT DOCUMENTS	10	1,900	40	6,320	10	1,200	40	3,320			$12,740
5. REVIEW MEETING WITH DISTRICT STAFF	6	1,140	6	948			2	166			$2,254
6. PREPARATION OF FINAL CONTRACT DOCUMENTS	8	1,520	8	1,264	4	480	24	1,992			$5,256
7. BID PHASE SERVICES	5	950	20	3,160			16	1,328			$5,438
8. CONSTRUCTION ENGINEERING SERVICES [6]											
A. PRECONSTRUCTION MEETING	4	760	4	632			4	332	4	420	$2,144
B. SUBMITTAL REVIEW	2	380	16	2,528			4	332			$3,240
C. CONTRACT ADMINISTRATION [7]	24	4,560	60	9,480							$14,040
D. CONSTRUCTION INSPECTION [8]									252	26,460	$26,460
SUBTOTAL:	79	15,010	174	27,492	14	1,680	92	7,636	256	26,880	$78,698

REIMBURSABLES (ESTIMATED @ 3%, ROUNDED):	$2,400
INSPECTION MILEAGE COSTS[9]:	$4,838
CONSTRUCTION ADMINISTRATION AND INSPECTION SERVICES TOTAL:	$85,936
ESTIMATED FEE (ROUNDED):	**$85,900**

(1) PRINCIPAL ENGINEER @ $190 /Hr
(2) SENIOR ENGINEER @ $158 /Hr
(3) CADD OPERATOR @ $120 /Hr
(4) SECRETARY @ $83 /Hr
(5) CONSTRUCTION INSPECTOR @ $105 /Hr

(6) CONSTRUCTION ENGINEERING SERVICES IS BASED ON AN ESTIMATED 14 WEEK CONSTRUCTION PERIOD SUMMARIZED AS FOLLOWS:
   A) FOR EACH RESERVOIR, CONTRACTOR WILL REQUIRE 1 WEEK FOR REMEDIAL WORK (CONTINGENT UPON EXTENT OF STRUCTURAL/SAFETY REMEDIAL WORK), 2 WEEKS FOR SURFACE PREPARATION AND APPLICATION OF THE PRIME COAT, 1 WEEK TO APPLY THE SECOND AND THIRD COATS, 1 WEEK TO BLAST AND COAT THE FLOOR, 1 WEEK TO PAINT THE RESERVOIR EXTERIOR, AND 1 WEEK TO CLEAN AND DISINFECT THE RESERVOIR. THE TOTAL CONSTRUCTION TIME IS THEREFORE ESTIMATED TO BE 7 WEEKS FOR EACH RESERVOIR.

(7) TOGETHER THE PRINCIPAL-IN-CHARGE AND PROJECT MANAGER WILL SPEND AN AVERAGE OF 6 HOURS PER WEEK OVER THE 14 WEEK CONSTRUCTION PERIOD.

(8) THE CONSTRUCTION INSPECTOR WILL SPEND AN AVERAGE OF18 HOURS PER WEEK (3 DAYS PER WEEK AT 6 HOURS PER DAY) OVER THE ESTIMATED 14 WEEK CONSTRUCTION

(9) BASED ON 3 TRIPS PER WEEK, 160 MILES PER TRIP, AND $0.72 PER MILE.

BIGHORN DESERT VIEW WATER AGENCY STANDING COMMITTEE
AGENDA ITEM SUBMITTAL

Meeting Date: June 21, 2012

To: Board of Directors

Budgeted: No
Budgeted Amount: Unknown

From: Marina D. West

General Counsel Approval: N/A
CEQA Compliance: N/A

Subject: Consider Creation of an Ad Hoc Committee to Participate in the Outreach Regarding the Sphere of Influence Expansion over County Special Districts Zone W-1/Landers (W-1)

SUMMARY

Attached is the final Resolution from the Local Agency Formation Commission (LAFCO) which marks the conclusion of the Agency's first Municipal Sphere Review/Sphere of Influence process. The Resolution confirms LAFCO's decision to expand our Sphere of Influence over the County Special Districts Zone W-1/Landers (W-1).

The Planning/Legislative/Engineering/Grant/Security Committee (PLEGS) met on June 21st to discuss how to proceed with the LAFCO Resolution. The Committee felt an Ad Hoc Committee was the best approach for the Agency to explore how to proceed with the implied mandate to plan for service expansion into "Area 2".

RECOMMENDATION

That the Board considers taking the following action(s):

1. Create an Ad Hoc Committee to explore the processes of reorganization with County Special Districts Zone W-1/Landers and coordinate community outreach.

BACKGROUND/ANALYSIS

No further analysis provided.

PRIOR RELEVANT BOARD ACTION(S)

6/19/2012 Planning/Legislative/Engineering/Grant/Security Committee discussion of LAFCO's decision to expand our Sphere of Influence over the County Special Districts Zone W-1/Landers (W-1).
4/3/2012 Motion 12-026 Local Area Formation Commission Ad Hoc Committee Report and Resolution No. 12R-15 Supporting the Expansion of the BDVWA Sphere of Influence over "Area 2" and encouraging LAFCO to amend its Resolution No. 3155 for LAFCO No. 3148.
2/10/2012 Board Goal Setting Workshop: Identifying consolidation with Zone W-1 as a priority.

LOCAL AGENCY FORMATION COMMISSION
FOR SAN BERNARDINO COUNTY

215 North "D" Street, Suite 204, San Bernardino, CA 92415-0490
(909) 383-9900 • Fax (909) 383-9901
E-mail: lafco@lafco.sbcounty.gov
www.sbclafco.org

PROPOSAL NO.: LAFCO 3148

HEARING DATE: April 18, 2012

RESOLUTION NO. 3155

A RESOLUTION OF THE LOCAL AGENCY FORMATION COMMISSION OF THE COUNTY OF SAN BERNARDINO MAKING DETERMINATIONS ON LAFCO 3148 – A SERVICE REVIEW AND SPHERE OF INFLUENCE UPDATE FOR THE BIGHORN-DESERT VIEW WATER AGENCY (sphere of influence reduction by approximately 11,882 acres, expansion by a total of approximately 8,140 acres, and affirmation of the balance of its existing sphere of influence, as shown on the attached map).

On motion of Commissioner Bagley, duly seconded by Commissioner Coleman, and carried, the Local Agency Formation Commission adopts the following resolution:

WHEREAS, a service review mandated by Government Code 56430 and a sphere of influence update mandated by Government Code Section 56425 have been conducted by the Local Agency Formation Commission of the County of San Bernardino (hereinafter referred to as "the Commission") in accordance with the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Sections 56000 et seq.); and,

WHEREAS, at the times and in the form and manner provided by law, the Executive Officer has given notice of the public hearing by the Commission on this matter; and,

WHEREAS, the Executive Officer has reviewed available information and prepared a report including her recommendations thereon, the filings and report and related information having been presented to and considered by this Commission; and,

WHEREAS, a public hearing by this Commission was called for January 18, 2012 at the time and place specified in the notice of public hearing, adoption of the resolution was continued to the February 15, 2012 hearing at which time the Commission directed staff to conduct a community meeting and schedule further discussion for consideration at the April 18, 2012 hearing; and,

WHEREAS, at the hearing, this Commission heard and received all oral and written protests; the Commission considered all plans and proposed changes of organization, objections and evidence which were made, presented, or filed; it received evidence as to whether the territory is inhabited or uninhabited, improved or unimproved; and all persons present were given an opportunity to hear and be heard in respect to any matter relating to the application, in evidence presented at the hearing; and,

WHEREAS, at this hearing, this Commission certified that the sphere of influence update including sphere amendments is statutorily exempt from environmental review pursuant to the provisions of the California Environmental Quality Act (CEQA) and such exemption was adopted by this Commission on April 18, 2012. The Commission directed its Executive Officer to file a Notice of Exemption within five working days of its adoption; and,

WHEREAS, based on presently existing evidence, facts, and circumstances filed with the Local Agency Formation Commission and considered by this Commission, it is determined that the sphere of influence for the Bighorn-Desert View Water Agency (hereafter shown as the "BDVWA" or the "Agency") shall be amended as shown on the map attached as Exhibit "A" to this resolution, defined as follows:

(1) Reduce the Agency's existing sphere of influence to exclude Area 1 (containing approximately 11,882 acres);

(2) Expand the Agency's sphere of influence to include Area 2, as modified by the Commission (containing approximately 8,054 acres);

(3) Expand the Agency's sphere of influence to include Areas 3a, 3b, and 3c (containing a total of approximately 86 acres); and,

(4) Affirm the balance of the Agency's existing sphere of influence.

WHEREAS, the determinations required by Government Code Section 56430 and local Commission policy are included in the report prepared and submitted to the Commission dated January 9, 2012 and received and filed by the Commission on January 18, 2012, a complete copy of which is on file in the LAFCO office. The determinations of the Commission are:

1. Growth and population projections for the affected area:

The rural desert character of Homestead Valley is defined by its geographic location, the area's desert landscape and environment, and the predominance of very low-density residential development. Low-density residential development within the plan area is characterized by large lots, the varied placement of homes, and open spaces around the homes. The character of the community is further defined by the natural environment and by the limited commercial and industrial uses.

According to the *Homestead Valley Community Plan*, several issues set Homestead Valley apart from other desert communities, suggesting that different strategies for future growth may be appropriate. Among these are the preservation of community character, infrastructure, and commerce and services. As for preservation of community character, residents are concerned with the preservation of the natural environment and their community character amidst the pressures of growth in the plan area and surrounding desert communities. The preservation of the community's natural setting, small town atmosphere and rural character becomes important not only from an environmental perspective but from a cultural and economic point of view. The *Community Plan* further states that the Homestead Valley area will continue to experience growth as the desert region continues to develop. The rural nature and availability of vacant land will continue to attract development to the area. As the area develops it will be important to ensure that the rural features of the area are preserved and that adequate services and infrastructure are provided.

Land Ownership

Within the Agency's entire sphere, roughly 46% of the land is privately owned and the remainder, 54%, is public, which are devoted primarily to resource protection and recreational use.

Land Ownership Breakdown (in Acres)
Within Bighorn-Desert View Water Agency

Ownership Type	Boundary	Sphere (outside boundary)	Total Area
Private	17,943	5,384	**23,327**
Public Lands – Federal (BLM), State, & others	9,380	18,498	**27,878**
Total	27,323	23,882	**51,205**

Land Use

Within the study area, approximately 53 percent is designated RL (Rural Living, 2.5 acres minimum), RL-5, and RL-40, 45 percent is Resource Conservation, and the remainder of the land use designations comprises two percent (Special Development-Commercial, Neighborhood Commercial, Rural Commercial, General Commercial, Service Commercial, and Institutional). The commercial developments within the Agency are generally located along State Route 247 and Reche Road.

General Plan Land Use Districts (In Acres)
Within Bighorn-Desert View Water Agency

Land Use	Boundary	Sphere (outside boundary)	Total Area
Homestead Valley Community Plan			
Resource Conservation (HV/RC)	3,310	5,058	8,368
Rural Living (HV/RL)	20,480	1,985	22,465
HV/RL-5	2,025		2,025
HV/RL-40	320		320
Special Development (HV/SD-COM)	658		658
Neighborhood Commercial (HV/CN)	5		5
Rural Commercial (HV/CR)	222	38	260
General Commercial (HV/CG)	5		5
Service Commercial (HV/CS)	8		8
Institutional (HV/IN)	10		10
County General Plan			
Resource Conservation (RC)	280	14,806	15,086
Rural Living (RL)		1,450	1,450
RL-5		545	545
Total	**27,323**	**23,882**	**51,205**

Population Projections

In 2000, the population within the Agency's boundaries was 2,297. Based on the 2010 Census, the current population for the area is 3,018. This represented an average annual growth rate of approximately 2.8 percent within the given period.

The *Community* Plan population forecast is not used in this report for the Agency. Instead, the projected growth for the Agency's boundaries was calculated utilizing a combination of the growth rates identified in the Regional Council of the Southern California Association of Governments (SCAG) Draft 2012 Regional Transportation Plan (RTP) Integrated Growth Forecast, SCAG's 2008 RTP, and the use of average annual growth rate. By 2040, the population within the Agency's boundaries is estimated to reach 6,154. This represents a projected annual growth rate of approximately 2.4 percent between 2010 and 2040, which also represents a total population increase of 49 percent from 2010.

Population Projection 2010-2040
Within Bighorn-Desert View Water Agency

Census		Population Projection					
2000	2010	2015	2020	2025	2030	2035	2040
2,297[1]	3,018[2]	3,069[3]	3,700[4]	4,313	4,902	5,466	6,154[5]

[1] 2000 population was derived from the 2000 Census block data for the Agency's boundary
[2] 2010 population data was derived from the 2010 Census block data for the Agency's boundary.
[3] 2015 growth rate projection was adjusted to reflect the rate for the County's unincorporated area from SCAG's 2012 RTP Revised Draft Integrated Growth Forecast using local input and latest data from the 2010 Census, the California Employment Development Department , and the California Department of Finance - (published May 2011)
[4] 2020-2035 growth rate projections were calculated based on the growth rate identified by SCAG's 2008 RTP for each of the TAZ's (Traffic Analysis Zones) that corresponded to each of the Census Tracts within the Agency's boundary. The growth rates for each of the TAZ's were then used to derive the projection of the population for each of the corresponding Census Tract numbers.
[5] 2040 projection was calculated using Average Annual Growth Rate based on the compounded rate between 2010-2035 since SCAG's projections only went to 2035

Build-out

The table below provides the potential build-out within the Agency's boundaries. This build-out scenario takes into consideration the existing land use designations assigned for the area and the dwelling unit densities assigned for each residential land use (densities for all residential land uses were derived from the densities identified in the Homestead Valley Community Plan Potential Build-Out Table).

Land Use Maximum Build-Out
Within Bighorn-Desert View Water Agency

Land Use	Acreage	Density (D.U. Per Acre)	Maximum Build-out
Resource Conservation	3,590	0.025	90
Rural Living	20,480	0.2	4,096

RL-5	2,025	0.4	810
RL-40	320	0.025	8
Total Residential	**26,415**		**5,004**

The population projections identified earlier indicates that the population within the Agency's boundaries will be 6,154 by 2040. Based on the maximum residential build-out within the Agency's boundaries, the projected maximum population is anticipated to reach 11,759 (at @ 2.35 persons per household based on the ratio identified in the Homestead Valley Community Plan Potential Build-Out table). Likewise, based on the projected population for 2040, it is anticipated that the number of households within the Agency's boundaries will be 2,619 with a maximum potential build-out to reach approximately 5,005. These imply that the study area will reach 52 percent of its potential household and population capacity by 2040.

Population and Household Projection
Within Bighorn-Desert View Water Agency

	Projection 2040	Maximum Build-out	Ratio of 2040 Projection with Maximum Build-out
Population	6,154	11,759	0.52
Households	2,619	5,004	0.52

2. Present and planned capacity of public facilities and adequacy of public services, including infrastructure needs or deficiencies:

Regional Water

The Homestead community is located in the Colorado River Hydrologic Region, and is in the South Mojave Watershed as designated by the California Department of Water Resources (California Water Plan, Update 2009, Integrated Water Management, DWR, Bulletin 160-09, Vol. 3, Colorado River). The community is also within the boundaries of the Mojave Water Agency (MWA), a state water contractor.

State Water Project (SWP)

As LAFCO has stated on many occasions, water is the lifeblood for communities in the desert regions due to its limited nature. The availability of water will ultimately determine whether or not a community will prosper in the desert environs of San Bernardino County. Therefore, the most significant regional issue for the Homestead community is present and future water supply. The *2007 State Water Project Delivery Reliability Report* indicates that SWP deliveries will be impacted by two significant factors. First, it is projected that climate change is altering hydrologic conditions in the State. Second, a ruling by the Federal Court in December 2007 imposed interim rules to protect delta smelt which significantly affects the SWP. Further, the *Report* shows, "...a continued eroding of SWP delivery reliability under the current method of moving water through the Delta" and that "annual SWP deliveries would decrease virtually every year in the future..." The *Report* assumes no changes in conveyance of water through the Delta or in the interim rules to protect delta smelt.

The Department of Water Resources prepares biennial SWP water delivery reliability reports in order to provide the public with reliability estimates for both current and projected 20 year conditions. This is accomplished by modeling the effects of current hydrologic and SWP facility conditions and changes that are projected to occur. The table below summarizes the history of the current and future MWA contractual maximum annual amount from the SWP and the SWP reliability factors that have been and are being used for water supply planning purposes since 2005.

Year	MWA Table A[1] Annual Maximum	SWP Reliability Factor (long-term)	Average Annual SWP Yield (Acre-feet)
2005	75,800	77%	58,366
2007	75,800	66-69%	50,028 – 52,302
2009	75,800	61%	46,238
2010	82,800	61%	50,508
2015	85,800	61% [2]	52,338[2]
2020	89,800	61% [2]	54,778[2]

(1) Table A refers to the section within the MWA contract with DWR which specifies the maximum annual amount of water that the MWA can receive from the State Water Project.
(2) The 2009 Reliability Report estimated an average reliability of 60% for the SWP, but also modeled reliability for each Contractor, concluding that the average annual supply for MWA would be 61%. The 2009 Reliability Report estimate is the only known reliability variable at this time and is used for the purposes of this discussion and for water supply estimates in the MWA 2010 UWMP. Current court proceedings and efforts to address issues in the Delta (supply source for the SWP) may result in future changes to SWP supply reliability.

Source: Mojave Water Agency, 2010. Footnote (2) updated by LAFCO staff in 2011.

The 2007 Reliability Report concluded that contractors to the SWP could anticipate average reliability of 66-69% through the year 2027. The range was provided to account for variable impact associated with different conclusions about the potential effects of modeled climate change. The average assumes that in some years contractors are likely to be allocated less than the stated average and in some years contractors are likely to be allocated more than the stated average.

In 2009 the DWR provided an updated reliability report incorporating new biological opinions in place of the referenced interim rules promulgated by the Federal Court. The new biological opinions were significantly more restrictive than the interim rules and consequently the 2009 reliability analysis indicated a reduction in reliability to 61% for long-term (2029) conditions. MWA has subsequently acquired additional contractual amounts to SWP water, increasing the maximum annual amount from 75,800 acre-feet to 82,800 acre-feet in 2010, 85,800 acre-feet in 2015 and 89,800 acre-feet in 2020. Considering the DWR modeling results, the average annual yield to MWA would be 50,508 acre-feet in 2010 and 54,778 acre-feet in 2029.

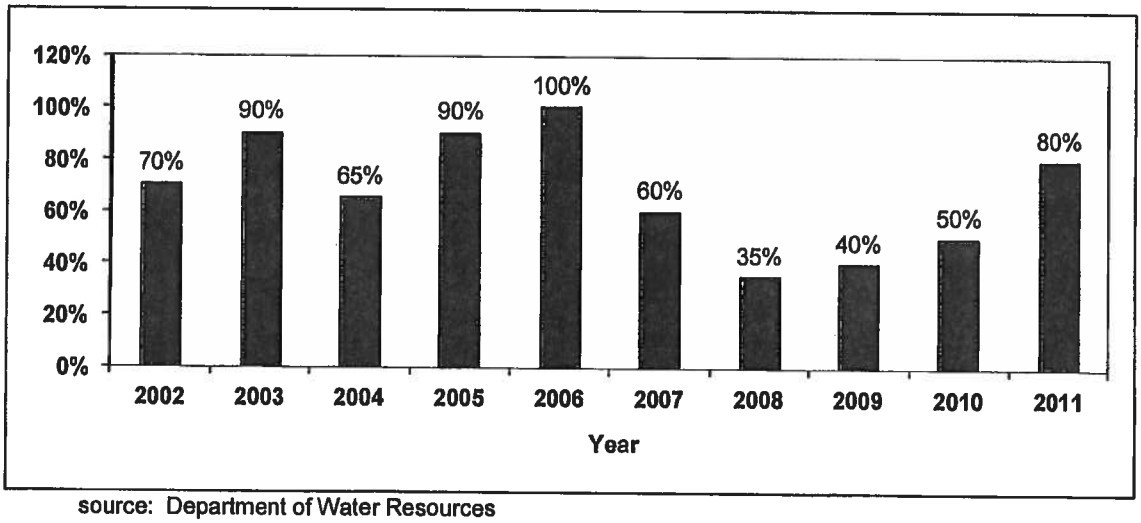
Since preparation of the 2009 Reliability Report, the same Federal Court has found the new biological opinions to be unacceptable (and inappropriately restrictive to Delta water exports) and has ordered them to be redone. There is also a major effort underway to develop a habitat conservation plan to address the myriad of issues impacting water supply exports from the Delta. That effort, if accomplished in a manner consistent with the "co-equal goals" of ecosystem restoration and water supply reliability envisioned by the State Legislature's 2009 Comprehensive Water Package, is anticipated to significantly increase reliability of the

SWP water supply. The eventual success and/or resulting increase to reliability are unknown at this time; however, the outcome will eventually be reflected in the biennial DWR reliability assessments.

MWA operates under the guidance of its Board adopted integrated regional water management plan and is also required by State law to submit an Urban Water Management Plan ("UWMP") to the State of California every 5 years ending in "0" and "5". The MWA UWMP compiles information on all known water supplies and demand on a sub-regional scale for the entire MWA. Future water supplies and demand (population growth) are also projected for at least the ensuing 20 years. MWA adopted its 2010 UWMP in June 2011 which incorporates the most recent reliability information provided by DWR (2009), indicating a reliability of 61% on average. Initial analysis indicates that given projected growth rates, the modeled decrease in reliability for the SWP by DWR, and the acquisition of additional SWP contractual amounts by MWA, there will be sufficient supply to meet anticipated increased demands through the required 20 year planning horizon (Mojave Water Agency, Final 2010 Urban Water Management Plan, Adopted June 2011. Also see Appendix F of the 2010 UWMP).

The figure below shows the allocation percentage that State Water Contractors were allowed to purchase since 2000, which averages 68% over the 10 years summarized. For example, MWA is entitled to purchase up to 82,800 acre-feet of imported water per year. For 2011, the allocation percentage was 80% (State of California. Department of Water Resources. "State Water Project Allocation Increased to 80 Percent", Press Release. 20 April 2011); therefore, MWA could purchase up to 66,240 acre-feet. MWA mitigates for this variability in supply by utilizing the significant water storage capability within the agency ground water basins to take delivery of SWP water when it is available. Water available from the SWP in excess of local demand is delivered and stored in the ground water basins to be used to meet demand during those years when the amount of water available from the SWP is less than the annual demand.

Department of Water Resources State Water Project
Final Allocation Percentages Statewide (2002-2011)



source: Department of Water Resources

Morongo Basin Pipeline (Mojave Water Agency Improvement District M)

In 1990, the southeastern portion of the MWA's territory voted in favor of forming Improvement District M and to incur bonded indebtedness of $66.5 million to finance the construction costs of the Morongo Basin Pipeline. Construction on the approximately 71 mile Morongo Pipeline began in 1992 and was completed in 1995 and serves the areas of Johnson Valley, Joshua Tree, Landers, and Yucca Valley. The Pipeline delivers water from Hesperia to a five million gallon reservoir in Landers. From there, water is delivered to percolation ponds in the Yucca Valley area that act as natural filtration systems where water seeps back into the ground to recharge the aquifer.

The landowners of the improvement district are obligated to pay for 75% of the costs for construction of the Pipeline, and the participating agencies are obligated to pay the remaining 25%. The participating agencies each pay a share of the 25% as follows:

Improvement District M - Participating Agency Share

Agency	Original Share	Current Share
HI-Desert Water District	59%	59%
Joshua Basin Water District	27%	27%
Bighorn-Desert View Water Agency	9%	9%
CSA 70 Zone W-1 (Goat Mountain)	4%	1%
CSA 70 Zone W-4 (Pioneertown)	1%	0%
MWA	0%	4%

Originally, County Service Area ("CSA") 70 Zone W-1 was obligated to pay 4% and CSA 70 W-4 to pay 1%. However, in 1995, MWA acquired 3% of the rights from CSA 70 W-1 and 1% from CSA W-4. According to County Special Districts Department staff, MWA was requested by the County Board of Supervisors to buy CSA 70 W-1 and W-4 shares due to lack of utilization of the water. The percentage share identified for each participating agency also reflects the percentage of water which they are entitled. The Board of Supervisors action relinquished its rights to purchase supplemental water from the Pipeline when they sold the W-1 and W-4 shares.

Improvement District M has entitlement of up to one seventh of MWA's original State Water Project water allotment of 50,800 acre-feet/year ("AFY"); this equates to 7,257 AFY (under maximum delivery conditions the Morongo Basin Pipeline could deliver 15,000 AFY; delivery of the difference between the Improvement District M contracts and 15,000 would be per MWA Ordinance 9 and the equitable policies concerning water allocation adopted by MWA as most recently amended by MWA). The BDVWA has a nine percent share of the Improvement District M entitlement, or 653 AFY. At the time the Morongo Basin Pipeline agreement was executed among the participants and MWA in 1990, MWA's SWP allotment was 50,800 AFY. Subsequently, MWA has acquired additional allotment, currently at 82,800 AFY. Discussion continues as to whether the BDVWA and others within Improvement District M are entitled to a proportionate share of MWA's SWP allotment above 50,800.

The chart below shows the amount of supplemental water sent through the Morongo Basin Pipeline (Improvement District M) from 1998 to September 2010. Subsequent data is not yet available. Currently, the Agency does not utilize State Water Project resources but utilization

of the Morongo Basin Pipeline is planned in the future. However, the entitlement extends only until 2022, at which time all agencies participating in Improvement District M will have access to supplemental water in the same manner as all other municipal water customers.

Mojave Water Agency Morongo Pipeline Deliveries

Year	Improvement District M Entitlement	BDVWA Share (9%)	SWP Allocation	BDVWA Share times SWP Allocation	Improvement District M Delivery
1998	7,257	653	100%	653	2,121
1999	7,257	653	100%	653	2,412
2000	7,257	653	90%	588	3,786
2001	7,257	653	39%	255	2,878
2002	7,257	653	70%	457	2,390
2003	7,257	653	90%	588	2,427
2004	7,257	653	65%	425	4,821
2005	7,257	653	90%	588	2,041
2006	7,257	653	100%	653	3,451
2007	7,257	653	60%	392	4,779
2008	7,257	653	35%	229	3,195
2009	7,257	653	40%	261	2,137
2010	7,257	653	50%	327	3,572
Total				6,068	40,010

source: Department of Water Resources, Mojave Water Agency
units in acre-feet unless otherwise noted
Year is reported from October through September

Additionally, MWA has a four percent entitlement share of the Morongo Pipeline. MWA delivers water through the pipeline for storage in the Warren Basin (Yucca Valley area) for potential sale at a later date. The BDVWA could purchase the water when there is not sufficient water to deliver because of reductions to the State Water Project allocation. The chart below shows the MWA storage from 1998 through 2009.

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Delivery	236	270	144	0	0	0	0	919	1,216	0	0	0

source: Mojave Water Agency
units in acre-feet
Data for 2009 is through September

Bulk Hauled Water

In remote areas of the south desert, the hauling of domestic water is the sole means for water acquisition. In a joint letter to county planning and building departments in 2003, the California Department of Health Services and the California Conference of Directors of Environmental Health specify that, "bulk hauled water does not provide the equivalent level of public health protection nor reliability as that provided from a permanent water system or from an approved onsite source of water supply." This statement is based on five potential public health risks for hauled water:

1. The potential for contamination exists when water is transferred from tanker trucks to water storage tanks.
2. Storage tanks are often the source of bacterial contamination. The Agency states that it provides bacteriological monitoring to any bulk hauler that would desire to obtain such a service.
3. There is no assurance that licensed water haulers follow State guidelines at all times.
4. The future reliability of hauled water is susceptible to economic conditions.
5. There is generally a higher risk for contamination.

The letter further states that hauled water for domestic purposes should only be allowed to serve existing facilities due to a loss of quantity or quality and where an approved source cannot be acquired. A copy of this letter is on-file at the LAFCO staff office.

The County of San Bernardino recognizes the potential health hazards with hauled water. Future development will be restricted unless there is access to an individual well or domestic water system. Therefore, new development could not be approved without verification of access to a domestic water system. However, existing units without connection to a domestic water system or without individual wells on their property must rely on hauled water for domestic and other uses. County Code of San Bernardino Section 33.0623 (last amended in 1996) under Health and Sanitation and Animal Regulations reads:

> *Water furnished by a domestic hauler shall not be used as a source of water by any public water supply system unless it has been demonstrated to DEHS (Department of Environmental Health Services) that there are no reasonable means of obtaining an acceptable quality and quantity of groundwater, and that water treatment methods have been approved by DEHS. Exception: During an officially declared state or local emergency, a public water system may utilize hauled water as a temporary source of supply.*

Adherence to these parameters will limit new development within the Johnson Valley area for the future as it has no current mechanism for providing an organized retail water system for water delivery. Further, a review of the Agency's water plans does not identity plans for a water system in the Johnson Valley even though Johnson Valley is within the boundaries of the Agency.

Water Rates

Due to the limited size and type of outdoor landscaping that is prevalent throughout the South Desert, the average water usage is comparatively lower than other water agencies in San Bernardino County. A comparison of the residential water rates charged by the agencies within the Morongo Basin is identified in the chart below. As shown in the footnotes, some agencies receive a share of the one percent general levy property tax and/or assessments or additional charges.

Water Agency Rate Comparison (as of July 2011)
(rates measured in units, or one hundred cubic feet)

Agency	Water Use Fee				Monthly Meter Charge (3/4" Meter)	Monthly Average Cost (10 units of water)
	Tier One	Tier Two	Tier Three	Tier Four		
Bighorn-Desert View Water Agency [1]	$3.00	-	-	-	$27.50	$57.50
CSA 70 Zone F (Morongo Valley) [1]	$4.51	$5.02	$5.73	-	$57.25	$102.35
CSA 70 Zone W-1 (Landers) [1]	$3.87	$4.31	$5.54	-	$23.87	$62.57
CSA 70 Zone W-3 (Morongo Valley) [1]	$3.21	$3.57	$3.65	-	$40.84	$72.94
CSA 70 Zone W-4 (Pioneertown)	$5.86	$7.31	$9.88	$10.87	$31.05	$89.65
Golden State Water Company (Morongo)	$2.47	-	-	-	$28.15	$52.85
HI-Desert Water District [1,2]	$3.59	$5.69	$6.89	$9.08	$11.80 [4]	$60.30
Joshua Basin Water District [1,3]	$2.14	$2.39	$2.57	$2.75	$23.82	$46.47
Twentynine Palms Water District [3]	$2.33	-	-	-	$11.00 [5]	$34.30

[1] Receives a share of the one percent ad valorem general tax levy
[2] District also charges monthly a pipeline surcharge and capital replacement charge
[3] District also charges a standby charge
[4] Charge is for 5/8" and 1" meter with 5/8" demand
[5] Charge is for 5/8" meter

Note: Standby charges are not included or referenced in this chart as they are not related to active connections.

Bighorn-Desert View Water Agency

For the remainder of this service review factor, cited materials include excerpts from the Agency's narrative response to the factors for a service review, 2007 Water Master Plan, 2010 Initial Study for Water Infrastructure Restoration Program, 2011 Reche Spreading Grounds Recharge Feasibility Report, and the Mojave Water Agency 2010 Urban Water Management Plan. Other materials have been referenced but not cited.

Currently, the BDVWA is the sole retail water provider within the community, actively providing retail water service via a pressurized system to the Landers and Flamingo Heights areas. Most of the customers are residential with lots varying from 2.5 to 5 acres. Outdoor landscaping is mostly zeroscape requiring little, if any, water. Not all areas in the community have direct access to a piped retail water service; therefore, it is understood that water service to those developed properties is provided through on-site wells or through hauling of domestic water. Specifically, the Johnson Valley area is within the Agency but does not have a pressurized water system. In this area, bulk water is either retrieved by customers from an Agency well or delivered by a bulk-water hauler. Although local groundwater is currently the sole source of its water supply, BDVWA holds capacity in the Morongo Pipeline and may purchase State Water Project water from Mojave Water Agency ("MWA"), who is a contractor with the California Department of Water Resources ("DWR"). Currently, BDVWA does not have the necessary infrastructure to utilize this supply.

Groundwater Basins

The BDVWA service area overlies three groundwater basins, historically identified by the DWR as the Ames Valley, the Means Valley, and the Johnson Valley basins. Private individuals and municipal water providers pump groundwater from the Ames Valley and the Johnson Valley basins. The Ames Valley Basin coincides with portions of the United State Geological Survey ("USGS") Morongo Groundwater Basin, including the Pioneertown, Pipes, Reche, Giant Rock and Emerson Sub Basins. Most of the pumping is from the Ames Valley Basin. County Service Area 70 Zone W-1 as well as the Hi-Desert Water District ("HDWD") also pump groundwater from the Ames Basin. Water pumped from the Johnson Valley Basin is pumped into a 10,000 gallon reservoir. Residents in that area receive water using a truck delivery service or via self-hauling.

- *Ames Valley Groundwater Basin*

  The Department of Water Resource's Bulletin 118 (last updated February 2004) describes the Ames Valley Groundwater Basin as follows:

  > This groundwater basin underlies Ames Valley, Homestead Valley, and Pipes Wash in the south central San Bernardino County. The basin is bounded by nonwater-bearing rocks of the San Bernardino Mountains on the west, of Iron Ridge on the north, and of Hidalgo Mountain on the northeast (Rogers 1967). The Emerson, Copper Mountain, and West Calico faults form parts of the eastern and northern boundaries. The southern boundary and parts of the northern and eastern boundaries lie along surface drainage divides. The valley is drained northeastward by Pipes Wash to Emerson (dry) Lake. Average annual precipitation ranges from 4 to 12 inches.
  >
  > Natural recharge of the basin is mainly from percolation of stream flow from the San Bernardino Mountains and precipitation to the valley floor (Mendez and Christensen 1997; Bookman-Edmonston Engineering 1994). Percolation of septic tank effluent from the town of Landers and surrounding communities also contributes to recharge of groundwater. Some subsurface inflow may come from Means Valley Groundwater Basin, and subsurface outflow probably crosses the Emerson fault into Deadman Valley Groundwater Basin (French 1978; Mendez and Christensen 1997).

- *Means Valley Groundwater Basin*

  Bulletin 118 states the principal source of recharge to the basin is likely percolation of runoff from surrounding mountains, with a minor contribution from percolation of precipitation to the valley floor and subsurface flow across the Johnson Valley fault southwest of Means Lake. Groundwater may migrate through fractures in bedrock toward Emerson Lake as subsurface outflow. The following description of the Means Valley Groundwater Basin is taken from Bulletin 118:

  > This groundwater basin underlies Means Valley in southcentral San Bernardino County. The basin is bounded by nonwater-bearing rocks and a drainage divide on the north, by a drainage divide on the south, by the Johnson Valley fault on the west, and by the Homestead Valley fault on the east. Drainage is to Means (dry) Lake in the central part of the valley. Annual average precipitation ranges from about 4 to 8 inches.

- *Johnson Valley Groundwater Basin*

  The following description of the Johnson Valley Groundwater Basin is taken from Bulletin 118.

  > Upper Johnson Valley Subbasin underlies the Upper Johnson Valley in the southern Mojave Desert. The subbasin is bounded on the north by the Fry Mountains and on all other sides principally by other unnamed crystalline rocks. The western boundary follows the Johnson Valley fault, and surface drainage divides form parts of the southern and eastern boundaries. Upper Johnson Valley has internal surface drainage that converges to Melville (dry) Lake. Average annual precipitation ranges from 4 to 6 inches.

Ames Valley Basin Water Agreement

Although not a full adjudication (Adjudication is defined in the *2005 California Water Plan* as the "Act of judging or deciding by law. In the context of an adjudicated groundwater basin, landowners or other parties have turned to the courts to settle disputes over how much groundwater can be extracted by each party to the decision."), the court approved Ames Valley Basin Water Agreement is a 1991 Agreement between the Agency and HDWD. The agreement was initiated by BDWVA due to concerns about a proposed well called the Section 24 Well (the location of this well is the same as the proposed Ames-Means Recharge Project - a 160-acre government-owned parcel, APN 0629-211-01), sometimes called the Mainstream Well in the Ames Valley Basin and possible export of water from that well out of the basin. The Ames Valley Water Basin Agreement provides a partial solution to management of the Ames Valley Basin. The agreement sets forth a legal description of the Ames Valley Basin that does not conform to either the DWR or USGS descriptions and refers to the combined Ames Valley and Means Valley Basins. The basic terms of the agreement are as follows.

1. *Production from the Section 24 Well and any additional wells owned by HDWD, within the Ames Valley Water Basin would be limited to 800 acre-feet per year.*

2. *The production could be increased beyond 800 acre-feet per year depending on the needs of the property owners in the basin by an amount not to exceed one-half of an acre-foot per year per each new water meter installation by HDWD.*

3. *Water from the wells in the Ames Valley Basin would be used only within that basin.*

4. *Establish a monitoring program to mitigate potential environmental damage to the hydrologic resources of the basin caused by the Section 24 Well.*

5. *An environmental review is required if criteria set forth in the agreement with respect to water quality and groundwater level elevations are exceeded. The agreement was amended on two separate occasions. These amendments changed the manner in which a consultant was selected to implement the monitoring program. The terms of the judgment were the similar to those in the agreement. Portions of the agreement were revisited by the court at the request of HDWD who sought to expand the areas of use of water from the Section 24 Well. The court did not rule in favor of HDWD and the agreement remains.*

At the time the Agreement was entered, the HDWD service area included areas within the Ames Valley Basin and the Warren Valley Basin. The agreement is currently in the process of being revised to include BDVWA, MWA, HDWD, County Service Area 70 Zone W-1 (Landers) and County Service Area 70 Zone W-4 (Pioneertown) to provide a monitoring and management plan for operation of the Basin with the Ames Valley Recharge Project. The revision will require the parties to enter into a Stipulation to Enter an Amended and Restated Judgment which shall then supersede the existing 1991 judgment. When approved, this agreement will replace the 1991 Stipulated Judgment and will be incorporated into the groundwater monitoring program ("GWMP") discussed in further detail below. A basin-wide GWMP will provide the necessary data for effective management into the future. Collectively, the agreement and GWMP will provide the institutional framework for the purchase, recharge, and recovery of imported SWP water through the Morongo Basin Pipeline Agreement.

Current Supply and Demand

Facilities and Connections

BDVWA provides water service to customers in portions of Flamingo Heights, Landers, and Johnson Valley. The existing BDVWA infrastructure consists of eight wells, nine reservoirs located in seven active pressure zones, booster pumps, 14 pressure reducing valves, and 108 miles of pipelines.

As of June 2011, there are eight wells all of which are active. Well 4 is in inactive status with the Department of Public Health. Wells 2 and 4 share a single power supply limiting operation to one well at any given time. The same case exists with Wells 6 and 7. The wells produce on average about 500 gallons per minute totaling over 1.8 million cubic feet per day. This equates to roughly 500 acre-feet annually. Two of the wells in the northern portion of the Agency (Bighorn portion of the Agency) are for bulk service (via four separate hauling stations) and produce roughly 66,000 cubic feet, or roughly five percent of all water consumed.

BDVWA has more than 108 miles of pipe within its system. The majority of its pipeline is 6-inch (71%) and 8-inch (22%) mains. BDVWA also has minor amounts of 10-inch, 12-inch and 20-inch mains. All of the pipes are asbestos cement and polyvinyl chloride with the exception of the 20-inch pipe which is mortar lined and cement coated steel pipe. All three of these types of pipe meet American Water Works Association standards. In the past, records were not kept of length and date of installation of each type of pipe. Thus, the Agency is unable to define the exact age, although the system in general is approximately 30 years old. Most of the pipe however is thought to be asbestos cement.

Pressure reducing valves ("PRVs") are generally used to transfer water from one pressure zone to another. In areas of substantial elevation, PRVs are used to provide reasonable pressure in lower lying areas where pressure would otherwise be too high. BDVWA has fourteen PRVs that take water from a higher pressure zone and deliver it to a lower pressure zone. All of the valves are either 8-inch or 6-inch valves. Some of the pressure reducing valves are equipped with a bypass which allows smaller amounts of water to flow into the lower pressure zone during times of minimal use. PRV bypasses are also necessary to maintain pressure during repair of the primary reducing valve.

The Agency's intertie with Hi-Desert Water District ("HDWD") is currently disconnected and isolated from cross-connection. According to the Agency, the pump was removed many years ago; however, with minimal effort a connection could be made whereby the Agency could receive water via gravity flow from HDWD. More work would be needed for the Agency to pump water into HDWD's system. The two agencies are actively seeking a new, permanent emergency intertie solution. In addition, the Agency has the ability to "high line" a connection between fire hydrants to create an emergency intertie with CSA 70 Zone W-1.

Many of the Agency's fire hydrants do not produce sufficient flow and pressure to meet the current fire flow standard of 1,000 gallons per minute with a residual pressure of 20 pounds per square inch. This fire flow standard is identified in the County Development Code.

Connections and Water Use

Historic Annual Use

Calendar Year	Customers (active meters)	Recorded Water Sales (acre-feet)	Production per Customer (af/cust)	Production per Customer (ccf/ cust)
2000	1,533	488	0.32	139
2001	1,529	429	0.28	122
2002	1,532	527	0.34	150
2003	1,532	488	0.32	139
2004	1,522	519	0.34	149
2005	1,549	462	0.30	130
2006	1,584	508	0.32	140
2007	1,566	504	0.32	140
2008	1,554	491	0.32	138
2009	1,592	452	0.28	124
2010	1,554	411	0.26	115
Average	**1,550**	**480**	**0.31**	**135**

Since at least 2000, the Agency has provided water service via pipeline to about 1,550 metered connections, most of which are residential consumers. The area served in this manner is approximately 18,720 acres (68% of the Agency's area). In looking at the average use in the chart above, total water use and production per customer has decreased each year since 2006. According to the Agency, the reason for less water production is due to the area's water conservation efforts. Currently, the Agency has approximately 400 inactive meters.

The Agency's rate structure is based upon a single rate for water use – it does not utilize tiered rates. Tiered rates, in which customers are charged different rates according to the amount of water used, are utilized as an incentive for conservation. The Agency has stated that until the old and under-reported meters are replaced, consumption charges cannot be addressed.

Johnson Valley

The entire area known as Johnson Valley does not have a pressurized water system. The Agency states that it has approached the Johnson Valley community regarding the potential for a future water system and that the community has responded in general that the implementation of a water system would be too costly in addition to fostering development. Population densities are so low that there are not enough customers to financially support the construction of a water system.

- *Johnson Valley Water Hauling Station*

  BDVWA operates and maintains four bulk water hauling stations. Three are connected to the pressurized water systems constructed by the predecessor agencies Bighorn Mountains Water Agency and Desert View Water District. One of the bulk hauling stations connected to the pressurized system is located on the east end of Johnson Valley at Bodick Rd. and Kickapoo Trail. Residents of the Johnson Valley community utilize this facility as well as others who utilize the Well No. 10 facility.

  The fourth is a "standalone" water system located in Johnson Valley located within the boundaries of the predecessor Bighorn Mountains Water Agency. Johnson Valley has a standalone water hauling station supplied by a single groundwater well and a 10,000 gallon storage reservoir. The single well in the community was constructed from grant funding obtained by the County and the Agency now operates this well. This site serves approximately 41 residential self-hauling customers and approximately four commercial (licensed and unlicensed) water hauling customers who deliver water to an unknown number of customers. The Agency has no current plans to extend pipeline service to the Johnson Valley area. Population densities are so low that there are not enough customers to financially support the construction of a water line and appetent water system. The Agency states that redundancy in the Johnson Valley bulk system is needed and is seeking financial participation for an existing U.S. EPA STAG grant to conduct a hydro-geologic investigation in Johnson Valley to determine where a new well should be located.

  The Agency has provided the following explanation of its actions regarding bringing a retail water system to Johnson Valley:

  > *Attempts to bring a pressurized water system were first evaluated in 1967 by Albert A. Webb & Assoc. on behalf of the proposed Johnson Valley County Water District Committee. The JV County Water District was never formed and eventually JV became part of the Bighorn Mountains Water Agency service area. Since that time the Agency has actively engaged in its mission to provide water to its service area. The following summarizes activities to date:*
  >
  > - *In 1994, a Community Development Block Grant was awarded and the Agency executed a Maintenance and Operations Agreement (No. 94-340) for the construction of a community well in JV. In 1995, an Addendum was issued to the original Agreement and the County Special Districts Department began construction of the well in 1996 and Notice of Completion was filed in 1998. The Agency committed*

contractually to operation and maintenance of the well for 10 years from the Notice of Completion. The ten year commitment has expired but the Agency continues to maintain Well No. 10.

- *In 2005, an EPA State and Tribal Assistance Grant was awarded which provided for 55% funding for Johnson Valley Hydrologic Investigation ("JVHI"). The basis for the award was to perform additional studies to better define the characteristics of the basin for the benefit of the region. This project includes the construction of an 8-inch diameter test well.*

- *In April 2007, the Agency received the final report entitled, Basin Conceptual Model and Assessment of Water Supply and Demand for the Ames Valley, Johnson Valley and Means Valley Groundwater Basins.*

- *In 2008, the Agency received federal authorization under the Water Resources Development Act (WRDA) for $15 million to assist in the construction of a water system in JV and to interconnect it with the existing B-zone of the Agency.*

- *In December 2010, the Board of Directors authorized staff to proceed with completion of the JVHI using the EPA Grant funds remaining.*

- *In April 2011, Board of Directors authorized staff to actively seek a willing property seller for the location of the JVHI test well.*

- *In July 2011, Board authorizes purchase of 5-acres of real property for locating the JVHI test well.*

- *In November 2011, Board of Directors authorizes the execution of a Professional Services Agreement with Daniel B. Stephens & Associates for the completion of the JVHI test well. The contract total is $171,000 with EPA providing matching grant funds.*

The BDVWA does not consider hauled water to be an enterprise function of the Agency in the classic sense because it is obligated to operate under the conditions of the consolidation with respect to segregation of funds (Section 33305 of the Water Code, known and cited as the Desert View Water District-Bighorn Mountains Water Agency Consolidation Law). However, the Agency is interested in the overall cost to operate and maintain the bulk system to ensure rates and charges are fair and equitable across the Agency. Therefore, the Agency has set up subaccounts in the general ledger to track revenue from bulk water sales and direct expenses to the Bulk system. According to the Agency, in the future this procedure will add labor efforts and Agency overhead as well.

As mentioned, the lack of a pressurized water system results in either on-site wells or water hauling from the single well operated by the Agency. Adherence to the parameters outlined in the County Development Code will limit new development within the Johnson Valley area for the future as it has no current mechanism for providing an organized retail system for water delivery. Further, a review of the

Agency's current water plans does not identity plans for a water system in the Johnson Valley even though Johnson Valley is within the boundaries of the Agency.

In February 2010, the Agency conducted a survey regarding community desires for water supply. The survey was mailed to all property owners in Tax Rate Areas 88015, 94036 and 94043. Three primary questions were asked and they were directed at any interest in pressurized water, an interest in a redundant bulk water supply, or a "do nothing" option. With a 30% return rate approximately 60% of the respondents expressed a desire for pressurized water service. The primary written comment was a question of cost. At two public hearings, the Agency has presented a task list for developing and completing a pressurized water system in JV as well as outlining parcel identities, basic facilities needed and other features.

- *Johnson Valley Improvement Association*

The Johnson Valley Improvement Association ("JVIA") operates a food facility at its community center. The JVIA community center was notified by the County Department of Public Health ("DPH") that it was not meeting the requirements of a Transient Non-Community Water System. In letters from the DPH to the JVIA from February 2011 and September 2011, the DPH states that hauled water is not a viable potable source for a food facility, and that the water system must be connected to an approved well.

As part of the 2011-12 budget process, the Board of Supervisors set aside an allocation for the five supervisorial districts to finance unbudgeted priority policy needs as identified by the Board throughout the fiscal year. One such project identified by the Third District involves providing financial assistance to JVIA to assist in funding for drilling and installation of a water well, tanks and storage, hood fire suppression system, kitchen equipment to include freezer and/or refrigerator, permits and fees for the Community Center. The Community Center and adjacent County Fire Station does not have access to retail water lines and has to rely on hauled water. In October 2011, the County and the JVIA entered into a contract for the distribution and use of the funds.

The contract between the County and the JVIA reads that the funds would assist the Johnson Valley Community Center to become more self-sufficient; and assist the local Fire Station by acquiring, drilling and installing a water well, tanks and storage, a hood fire suppression system, and kitchen equipment to be used in those two facilities. The estimated cost for the project total was $82,000 and this amount was provided to the JVIA by the County. According to the contract, all funds provided under this contract must only be spent on the acquisition, installation and completion of the project to provide water to the Community Center and Fire Station. In the event there are funds remaining after completion of the project, the JVIA may use remaining funds to purchase a generator, kitchen upgrades and other kitchen equipment. The JVIA has until October 1, 2012 to complete the project.

The Agency states that it informally attempted to assist the JVIA in finding an acceptable resolution to this issue, such as reverse osmosis treatment of the bulk water entering the facility, but the JVIA Board of Directors declined to formally seek the assistance from the Agency. The Agency has identified that is does not have issue with the JVIA having its own well, as it is entitled to its overlying groundwater

rights, for its on-site water needs. The Agency has, however, expressed concern that the water produced from the well could be utilized off-site, as the JVIA is not a licensed public or private water purveyor (the only licensed retail water purveyor overlaying the Johnson Valley is the Agency). To allay these concerns, the contract includes the following, "Water from the well which constitutes the project may only be used for the Community Center's and Fire Station's internal use; water from the well may not be circulated or distributed for use in any manner outside the Community Center and Fire Station except in the event of an emergency." Further, Section 49 of the Agency's Special Act prohibits the establishment of a competing water provider within its boundaries without the consent of the Agency. Therefore, the exportation of water from the parcel would be in violation of the contract and Bighorn-Desert View Water Agency Law.

At first glance, this may seem to be a governmental inefficiency – the County assisting in the acquisition of a local water source when the area is already under the retail water responsibility of the Agency. However, the contracted use of the water is for on-site purposes and is not intended as a source for off-site use such as water hauling. Further, this method serves the JVIA as property owner and community center patrons financially best because the drilling of the well is funded with a County grant and not paid by the property owners.

As mentioned above, the Johnson Valley community in general has expressed interest in a pressurized water system but that the implementation of a water system would be too costly. Population densities are so low that there are not enough customers to financially support the construction of a water system.

County Service Area 70 Zone W-1

In 1995 the Agency submitted a proposal to detach approximately eight square miles from its boundaries in the Landers area (LAFCO 2792) constituting the territory of CSA 70 W-1. Since the formation of CSA 70 W-1, there were a number of disputes between the residents served by CSA 70 W-1 and those served by the Agency. LAFCO 2792 was a means of resolving these periodic disputes. The justification for the application was that residents of CSA 70 W-1 received no specific benefits from the Agency but that CSA 70 W-1 residents voted on the Agency's ballot measures, affected Agency board decisions, and the area could have representation on the Bighorn board. The Commission approved the proposal because it eliminated an overlap of similar-purpose agencies and could possibly lead to a less contentious relationship between the residents of the two agencies.

However, BDVWA was best suited to continue providing retail water to approximately 17 customers within the boundaries of CSA 70 W-1 because the CSA 70 W-1 system for that area deteriorated and could not provide adequate water service and pressure. The arrangement for this service is a contract between the Agency and the County (as the governing body for CSA 70 W-1) signed in December 1997, County Contract No. 97-1059, for the purpose of providing water service to specific properties located within the CSA 70 W-1 service area. At this time, BDVWA does not charge a special rate to these customers that are outside of the Agency's boundaries.

Future Supply and Demand

According to the MWA 2010 Urban Water Management Plan, the local groundwater supply available to BDVWA is estimated to be 500 acre-feet. It is estimated that during the current planning horizon the population could increase by 49 percent. BDVWA will need between 749 and 829 acre-feet per year in order to supply its current and future customers (shown in first figure below taken from BDVWA 2007 Master Plan). The MWA 2010 UWMP further states that BDVWA will need facilities to produce about 2,388 gallons per minute to meet the maximum day plus-fire flow. Looking at the second figure below taken from the MWA 2010 UWMP indicates that the Ames Valley groundwater basin, where most of the pumping occurs, should have a safe yield of 900 acre-feet/year in normal and dry years.

Table 2.6

Present and Future Water Requirements Without Section 35

Year	2006	2010	2015	2020	2025
Number of Connections	1,582	1,742	1,942	2,142	2,342
Annual Requirement (af/yr)	506	557	621	685	749
Average Day (gpm)	314	346	385	425	465
Maximum Day (gpm)	847	933	1,040	1,147	1,254
Peak Hour (gpm)	1,356	1,493	1,664	1,836	2,007
Maximum Day Plus Fire Flow (gpm)	1,847	1,933	2,040	2,147	2,254

TABLE 3-11
MORONGO BASIN/JOHNSON VALLEY AREA GROUNDWATER BASINS
SUPPLY RELIABILITY

Anticipated Supply	Normal Year[a] (afy)	Single-Dry Water Year (afy)	Multiple Dry Water Year (afy)
Regions			
Ames Valley[b]	900	900	900
Johnson Valley[c]	900	900	900
Means Valley[c]	20	20	20
Copper Mountain Valley/Joshua Tree[d]	200	200	200
Warren Valley[e]	100	100	100
Total	2,120	2,120	2,120

Notes:
(a) To avoid double counting with MWA's demand forecast model which includes return flows from septic tanks, this normal year has been calculated as the safe or perennial yield of the basin and does not include return flows in the safe yield calculation.
(b) Todd Engineers is completing a "Hydrogeologic Feasibility Study and Groundwater Management Plan for the Ames/Reche Project" for the Bighorn Desert View Water Agency, in 2011, that will better define the Ames Valley perennial yield. The perennial yield of 900 afy shown above represents subsurface inflow/recharge to the region only and no return flows are included.
(c) Source: "Basin Conceptual Model and Assessment of Water Supply and Demand for the Ames Valley, Johnson Valley, and Means Valley Groundwater Basins", April 2007, Kennedy/Jenks/Todd. Tables in ES.
(d) USGS Nishikawa, Izbicki et al., 2004.
(e) USGS Nishikawa, Densmore et al., 2003.

In April 2007, BDVWA adopted the Bighorn-Desert View Water Agency Water System Master Plan ("WSMP"). The master plan identified the following deficiencies in the existing infrastructure: heavy reliance on 6-inch and 8-inch water mains which do not provide adequate fire flow; inability of most reservoirs to refill overnight after a 500-gallons-per-minute (gpm) fire; need for spreading grounds for groundwater storage and recovery; a groundwater management plan and the inefficient operation of portions of the system. Once the deficiencies were identified, the Agency prepared the Bighorn-Desert View Water Agency Water Infrastructure Restoration Program ("WIRP"). The WIRP outlines specific system improvements to remediate these deficiencies.

Two WIRP projects that are near completion include a Groundwater Management Plan ("GWMP") and the Ames Valley Recharge Project. Local groundwater is currently the sole source of its water supply, but BDVWA has annual nine percent capacity from the Morongo Basin Pipeline and may purchase State Water Project ("SWP") water from MWA. Although the infrastructure needed to deliver SWP water to the Ames Valley region already exists, additional facilities are needed to convey imported SWP water to spreading grounds for recharge, storage, and subsequent recovery. A Feasibility Study, including a groundwater model, is scheduled for completion in 2012 which will document the ability to store and recover SWP water in the basin. This document will also outline the ability of water to be routed to Pioneertown (CSA 70/W-4) enabling the area to supplement its groundwater supply.

BDVWA is the Lead Agency for the WIRP and the GWMP, but the implementation also includes other participating agencies. MWA is a financial participant, while Hi-Desert Water District and County Service Area 70 are cooperative partners who will benefit through participation in the groundwater storage and recovery program. The GWMP will address the purchase of SWP water for recharge and pumping restrictions in the event that overdraft conditions are not controlled.

Ames Valley Recharge Project

The proposed Ames Valley Recharge Project will deliver SWP water to the Ames Valley for recharge at the Pipes Wash Spreading Grounds to mitigate historical overdraft conditions in the Region. This project was originally identified as the Ames/Means Valley Recharge Project in the MWA 2004 Regional Water Management Plan, but since recharge is occurring only in the Ames Valley, it is also referred to as the Ames Valley (or Reche) Recharge Project. This report will refer to it as the Ames Valley Recharge Project. The recharge project will serve water agencies using groundwater in the basin including BDVWA, HDWD, and CSA 70 (through its zones W-1 and W-4). BDVWA, in cooperation with MWA, is implementing the project, which consists of a feasibility study, approximately 0.75 miles of conveyance pipeline to connect to the Morongo Basin Pipeline, recharge to the Pipes Wash, and the installation of monitoring wells. The initial recharge capacity is planned at 1,500 AFY.

The project envisions the banking of water from the State Water Project. Each participating entity would accrue water in a water storage account. The water would be purchased, and percolated into the groundwater basin. There would be no restrictions on the use of that water and inter-entity transfers could occur as well. This project is intended to mitigate impacts from over pumping of the Ames Valley Basin, provide for beneficial use of water and

insure the conjunctive use of local groundwater and imported water from the State Water Project.

The proposed project will utilize an Environmental Protection Agency State and Tribal Assistance Grant (grant) to complete tasks associated with environmental proceedings for the WIRP and the Ames Valley recharge basin. Additionally, the Agency and MWA have executed a memorandum of understanding to secure the 45% matching funds for the remainder of the grant as well as MWA pledging up to $1 million to construct the project. According to the Agency, at this time the project is expected to be operational by July 2012.

3. Financial ability of agencies to provide services:

The Commission reviewed the Agency's budgets and audits, State Controller reports for special districts, and County filing records. The first three sections of this determination review activities that relate to the two predecessor districts. The remaining sections review the financial ability and requirements of the Agency.

Net Assets and Property Tax Assessments

According to the Agency's financial statements, the bond resolutions of the Agency and those of its predecessor districts contain provisions that require the tracking of certain operational funds with respect to the geographical areas of the two predecessor districts. The following is a description of this matter taken from the FY 2009-10 financial statements.

> *Prior to fiscal year 2010, the Agency took the position that property tax assessments associated with each predecessor district were restricted solely for the payment of principal and interest associated with the debt of that predecessor district.*
>
> *However, legal research conducted in fiscal year 2010, disclosed the following:*
>
> *Section 9 of the Resolution No. 174 of the Bighorn Mountains Water Agency dated June 21, 1977 states: "The Board of Directors, so far as practicable, shall fix such rate or rates for water in Improvement District No. 1 as will result in revenues which will pay the operating expenses of the improvement district, which provide for the operating expenses of the improvement district, provide for repairs and depreciation of works, provide a reasonable surplus for improvements, extensions, and enlargements, pay the interest on the bonded debt, and provide a sinking or other fund for the payment of the principal of such debt as it may become due. If the revenues of the improvement district will be inadequate for any cause to pay the expenses set forth above, the Agency must provide for the levy and collection of a tax sufficient to raise the amount of money determined by such Board of Directors to be necessary for the purpose of paying such charges and expenses as set forth above and the principal and the interest on the bonds as the same become due."*
>
> *Similarly, Section 5.11 of Resolution No. 304 of the Desert View Water District provides that revenues of the Agency will be used to pay "any reasonable and necessary maintenance and operation costs of the Enterprise.*

Section 33305 of the Desert View Water District-Bighorn Mountains Water Agency Consolidation Law and Section 31012 of the County Water District Law provide as follows:

a) *All funds derived from the operation of the former district system shall be separately accounted for and used exclusively for the purposes of maintenance, operation, betterments, and bond debt service of the acquired system.*

b) *No funds derived from the former district system shall be used for any other such purpose until all debt of that former system has been paid in full or until a former system has authorized such other expenditures.*

The above restrictions remain in effect until a vote of the electorate of each predecessor district authorizes differently.

Based on the language above, legal counsel has concluded that all revenues (not just property tax levies) of each predecessor district are restricted for the expenditures of that district. It was also determined that qualified uses of such restricted revenues include the operating expenses (not just principal and interest payments) associated with that district.

As of June 30, 2011, the portions of net assets associated with this restriction are as follows:

Bighorn Mountains Water Agency ("Bighorn"):	
Invested in capital assets, net of related debt	$ 2,302,548
Resources restricted for Bighorn	(182,214)
Total Bighorn Mountains Water Agency	$ 2,120,334
Desert View Water District ("Desert View")	
Invested in capital assets, net of related debt	$ 1,028,625
Resources restricted for Desert View	1,164,613
Total Desert View Water District	$ 2,193,238

LAFCO Resolution No. 2255, approving the consolidation of the two predecessor agencies, included a condition of approval that required the indebtedness of each district remain the legal obligation of only the lands and areas which incurred such indebtedness, and that improvement districts of each entity shall be the improvement districts of the consolidated agency. Additionally, LAFCO's review of the legislation allowing for the consolidation identifies specific reference regarding the use of the revenues from the predecessor districts and identifies that it can only be changed when "until a former system has authorized such other expenditures". That would mean that the funds from the former districts would have to be used within the former territory and separately accounted. Whereas the separation may be inefficient, the law requires it until the Agency takes the matters to the voters.

The Agency has identified to LAFCO that it acquired new legal counsel since the completion of the FY 2009-10 audit, and the legal counsel is currently reviewing this matter. Questions at this time generally revolve around how the Agency should operate its finances. Would keeping the separate books increase expenses as the staff workload and operational activities are tracked and then split accordingly? Would this lead to a different rate structure with a single administration operating and tracking essentially two different systems? At this time, the Agency is not taking any action until a proper analysis can be undertaken. The Commission determines that the Agency shall provide LAFCO with its determinations on these matters.

Long-Term Debt

The Agency is presently repaying two bond issues: (1) the 1979 Bighorn Mountains Water Agency General Obligation Bonds; and (2) the 1980 Desert View Water District Revenue Bonds. Additionally, the Agency has also entered into an agreement with Mojave Water Agency for Construction, Operation and Financing of the Morongo Basin Pipeline Project. Each of these bond issues and the agreement with Mojave Water Agency includes a series of covenants to which the Agency, or its predecessors, has agreed. One of the covenants in each issue is that the Agency will, at a minimum set its rates in a manner to provide sufficient revenue to cover operating costs, pay the principal and interest due on the bond installments, pay the annual payment required by the agreement with Mojave Water Agency, and have a specified coverage. The 1980 Desert View bonds have a coverage requirement of 20% over the annual principal and interest payment, while the agreement with Mojave Water Agency requires additional coverage of 25% over the annual principal and interest payment.

(4) **Long-term debt**

Bonds Payable:

	June 30, 2011
General obligation bonds:	
Original issue $1,875,000, 5%, maturing in 2019; secured by tax levy revenues	$ 702,000
Water revenue bonds:	
Original issue $700,000, 5%, maturing in 2019; secured by a pledge of all revenues	286,977
Improvement District 71-2 bonds:	
Original issued $275,000; 7%; matured July 2, 1988	2,000
Total bonds payable	990,977
Less portion due within one year	(100,000)
	$ 890,977

For the year ended June 30, 2010, the aggregate debt service coverage of the Agency was approximately 77%. Future debt service of the Agency through 2019 is $1,085,977. The Agency expects debt service coverage to be comparable to that of the current year throughout the period to which the coverage requirement applies.

Future long-term debt maturities are as follows:

Year Ending June 30	General Obligation Bonds Principal	General Obligation Bonds Interest	Water Revenue Bonds Principal	Water Revenue Bonds Interest
2012	74,000	35,100	26,000	14,530
2013	77,000	31,400	28,000	13,250
2014	81,000	27,550	29,000	11,850
2015	85,000	23,500	31,000	10,400
2016	89,000	19,250	32,000	8,850
2017	94,000	14,800	34,000	7,250
2018	98,000	10,100	35,000	5,550
2019	104,000	5,200	37,000	3,800
2020	-	-	34,977	1,950
Total	702,000	166,900	286,977	77,430

The Pledge of Revenues and Funds of the 1980 Desert View Water District Revenue Bonds (the "pledge") requires that a Reserve Fund be established to further secure the payment of the principal of and interest on those bonds. Pursuant to the pledge, the balance of this Reserve Fund is to be maintained at the average of all future payments. As of June 30, 2011, the Agency has sufficient reserves to meet this requirement.

Tax Rate Areas

The State Board of Equalization (BOE) identifies five different taxing categories for the Agency:

- Bighorn-Desert View Water Agency – this represents all of the 13 tax rate areas (TRAs) of the Agency. The Agency is assigned to receive a share of the one percent general ad valorem property tax levy from each parcel within its boundaries. The County classifies this tax share as GA01. The Agency does not receive a share of the one percent general levy from one TRA since it was annexed to the Agency post-Prop. 13 (there was no concurrent detachment from another agency so there was no property tax transfer). The average share to the Agency from GA01 is 3.6% of the general levy.

- Bighorn-Desert View, 1974 Anx. (BLO) – This territory was annexed into the Agency in 1974 (pre-Prop 13) and was assigned a separate TRA by the BOE at that time as a result of the annexation. It appears that there is no need for a separate category. Therefore, the Agency can request that the County remove this separate category in order to clean up the tax rolls.

- Bighorn-Desert View, Imp. 01 – The voters within this territory approved a bond proposition to "issue general obligation bonds for its Improvement District 1 for $2,500,000 for the purpose of acquisition/ construction/ completion or repair of a waterworks system ... for the benefit of Improvement District 1 (Resolution No. 121 adopted June 21, 1977). County Assessor records indicate that the additional tax levy to pay the debt did not begin until FY 1978-79. The bonds are scheduled to mature in 2019.

- Bighorn-Desert View, Imp. A – There are no records available as to the purpose of Improvement District A. In FY 1977-78 (pre-Prop 13) Bighorn Mountains Water Agency levied a tax for Improvement District A. This was converted as a separate share of the one percent ad valorem in FY 1978-79 (post-Prop.13). Therefore, the Agency receives two shares of the one percent general property tax levy from those within this territory (comprising only one, although large, TRA). The County classifies this second tax share as GA02. The average share to the Agency from GA01 is 3.6% of the general levy, and the share to the Agency from GA02 is 10.3%. Roughly 31% of the assessed valuation of the Agency comes from this TRA. Therefore, this second share of the general levy generates significant additional revenue for the Agency.

- Bighorn-Desert View, Imp. B. In 1981, Agency Resolution 200 formed Improvement District B to finance an engineering study for a domestic water system. It is believed that voter approval of the tax to pay for the study raised $50,000. There is no current additional tax associated with for these three TRAs. It is clear that the use for this improvement district is extinguished. Therefore, the Agency can request that the County remove this separate category in order to clean up the tax rolls.

Net Assets and Fund Balances

In reviewing the Agency's financial documents, net assets have increased by 22% since FY 2006-07 as shown on the chart below. As of June 30, 2010, the Agency had $4.3 million in net assets. Not including capital assets value and debt, the Agency had roughly $982,399 in restricted funds. Of concern is the lack of any unrestricted assets, which for a water agency can provide for unanticipated occurrences.

	2006-07	2007-08	2008-09	2009-10	2010-11
Net Assets					
Invested in capital assets – net of related debt	2,619,161	2,816,559	2,546,637	3,087,501	3,311,173
Restricted	442,820	0	940,679	766,463	982,399
Unrestricted	403,128	423,169	0	0	0
Total Net Assets	**$3,537,109**	**$3,269,728**	**$3,487,316**	**$3,853,964**	**$4,313,572**

Considering net assets does not indicate if an agency has enough fund balance to operate short and long-term operations. The chart below shows cash flow activities for the past five fiscal years. During this time, the decline and rise of total cash flow corresponded with the receipt of grants, increase in water rates, improvements, and decline and increase of water sales. For FY 2008-09, four substantial reasons contributed to the slowing of losses: water

rate increases, identifying customer accounts that were not being charged the basic connection fee, reduction in staff, and additional reductions in expenses.

For FY 2009-10, the increase is generally attributed to a $105,324 increase in basic surcharge revenue due to identification of accounts that had not been paying (first full year), and significant revenue in form of an EPA grant for the Ames Valley Recharge Project ($232,343 earned in 2010 for costs incurred through the fiscal year).

	2006-07	2007-08	2008-09	2009-10	2010-11
NET CASH FLOW FROM:					
Operating Activities	$137,223	$(112,047)	$19,735	$245,237	$79,950
Non-capital Financing	88,604	108,998	113,960	113,732	95,783
Capital & Related Financing	(368,449)	(291,028)	(211,902)	(48,298)	(121,464)
Investing	43,371	28,175	9,537	4,234	3,549
NET INCREASE (DECREASE)	**(99,251)**	**(265,902)**	**(68,670)**	**314,905**	**57,818**
Total Cash Flow	**724,068**	**458,166**	**389,496**	**704,401**	**762,219**

Operating Revenues and Expenses

Operational Revenues (water sales) totaling over $1.1 million comprise the majority of the Agency's revenue. Roughly a similar amount is spent on Operating Expenses (operations and maintenance, labor, and depreciation). For FY 2008-09 and FY 2009-10, Operating Expenses exceeded Operational Revenues by two percent, an amount not statistically significant. For FY 2009-10, the Agency experienced an increase in basic surcharge revenue by $105,324 due to identification of accounts that had not been paying. Without this revenue, Operating Loss would have been greater. However, for FY 2010-11 Operating Expenses exceeded Operating Revenues by eight percent. The primary reasons for the net operating loss are due to a reduction in water sales in combination with an increase in general and administrative expenses.

Non-Operating Revenues and Expenses

1. *Tax Levy: Property Tax*

   Making up the operating loss and paying for debt and other expenses is primarily through the receipt of a share of the one percent general ad valorem property tax levy (the Agency's financial statements classify the share of the 1% general levy as a part of "Tex Levy" under Non-Operating Revenue). However, the budgets separately identify the share of the 1% general levy under Operating Revenue, roughly $104,000 per year.

   In 1977-78, before Proposition 13, the Agency levied the following taxes, as identified in the County's 1977-78 tax rate book:

Bighorn Mountains (General Levy)	$0.0000
Bighorn Mountains (Improvement A)	$1.0000
Desert View (General Levy)	$0.5285
Desert View (Bond, Land Only)	$3.5906

Following Proposition 13, the Legislature enacted statutes to implement its provisions. Under these statutes, a local government's share of the one percent general property tax levy was based on the property tax rate and any tax levied for bond debt going to that local government before Proposition 13 in relation to other agencies. The debt for Improvement District A has been retired and is not shown in the County Tax Rate book. LAFCO understands that the Agency's FY 1977-78 property tax rate and the tax rate for Improvement District A were converted into the Agency's share of the one percent general levy.

The FY 2010-11 County Tax Rate book identifies that the Agency receives a share of the one percent general tax levy and levies a tax for Improvement District 1 at a rate of $0.2399 per $100 of assessed valuation. The bond for Improvement District A has been retired and is not shown in the County Tax Rate book. However, FY 2009-10 was the first year within the past five years that experienced a decline in property tax revenues, which continued for FY 2010-11. This overall trend correlates with the stable number of active water meters during this time period.

Foreclosure Activity

Foreclosure activity has affected the nation in general and the Homestead Valley is no exception. The County of San Bernardino Assessor's Office has identified that 221 housing units have been foreclosed from 1994 to 2010 for the areas identified as Flamingo Heights, Landers, and Johnson Valley. From 2004 to 2006 the area had nine foreclosures. The number rose sharply to 26 in 2007 and escalated to 58, 60, and 68 for the next three years.

For the purposes of generally representing the extent of the foreclosure activity, LAFCO identifies that there are 2,479 total housing units within the Agency. The foreclosure of 221 homes represents 9% of the household units within the Agency have been in foreclosure since 2004. Even with the current economic conditions, the long-term population trend remains – the Agency is projected to experience 104% growth through 2040.

Real property values have declined as a result of foreclosures and short-sale activity coupled with property owner requests for temporary reductions in assessed valuation under Proposition 8 have resulted in a corresponding reduction in ad valorem property tax revenues. These factors have been anticipated by the Agency in its budgets.

2. *Tax Levy: Bighorn Mountains service area - Improvement District 1*

Those within the Bighorn Mountains Improvement District 1 ("BH ID 1") pay an assessment to generate revenue for the annual bond payment and a repair/refurbishment fund to maintain the BH ID 1 water system which was constructed with a fixed interest rate, forty-year general obligation bond (secured by tax levy revenues), purchased through the Farmers Home Administration (FHA).

According to the Agency's resolutions that set this tax, if the revenues of the agency or any improvement district are inadequate to pay the operating expenses of the agency, provide for repairs and depreciation, and to meet all obligations of the agency, then the Agency must provide for a levy to raise the amount of money

determined for such purposes. The cited sections allowing for the levy are Sections 26 and 27 of the Agency's law.

Up until FY 2009-10, the Agency set the tax rate itself (for example $0.21 per $100 of assessed valuation). However, the tax roll is not static. Therefore, the Agency made educated guesses as to what rate to levy. This resulted in either a collection of either too much or too little to cover the required expenses. Realizing the difficulties in determining the correct levy rate, in FY 2009-10 the Agency changed it methodology and now requests that the County collect levy a tax at the rate necessary to raise the identified amount (for example $125,900). This change in methodology has reduced the guessing game and provides for more clarity to the levy.

According the Agency's annual adoption of the tax levy, the tax rate statement that accompanied the 1977 bond proposition discussed the impact of the bond proposition on property tax rates. This tax rate statement estimated that the property tax rates would be about $4.70 per $100 of assessed valuation in the first fiscal year after the bond sale and $0.76 per $100 by the 20th year after the bond sale.

Fiscal Year	ID #1 Net Valuation (Secured)	Debt Payable	ID #1 Tax Rate (per $100 assessed valuation)	Revenue Budgeted	Budgetary Notes
2011-12	n/a	$109,000	$0.3100	$175,900	Additional $70,000 for replacement and refurbishment of Bighorn water system
2010-11	$42,762,325	109,000	0.2399	125,900	Additional $20,000 for replacement and refurbishment of Bighorn water system
2009-10	46,126,106	105,900	0.2274	125,900	Additional $20,000 for replacement and refurbishment of Bighorn water system
2008-09	47,138,976	105,900	0.2100	106,315	
2007-08	43,327,983	105,900	0.2000	76,000	Used $29,000 from Local Agency Investment Fund (LAIF) debt service reserves

Sources: County of San Bernardino. Valuations-Tax Rates, Code Area Tax Rates, Bonded Indebtedness For Fiscal Years 2007-08 through FY 2010-11; Agency Budgets

The chart above shows the Improvement District 1 tax levy for the past five years. For comparison, the levy imposed in FY 2010-11 equated to approximately $0.2399 per $100 of assessed value (or a gain of $125,900). In FY 2011-12 the levy is estimated at $0.3100 (29% increase) per $100 of assessed value based on $175,900 identified by the Agency as the required amount. The breakdown of the $175,900 required amount is:

- Annual principal and interest payments are approximately $109,000. Payments will be made in FY 2011-12 according to the following schedule: December (interest only approximately $17,500) and June (interest approximately $17,500.00 and principal approximately $74,000).

- Any additional funds collected, estimated at $20,000, will be used for needed infrastructure improvements within BH ID 1.

- The additional $50,000 was proposed and adopted in the FY 2011-12 budget to begin to close the deficit in net assets of the Bighorn Mountains service

area against the Desert View service area as outlined in the FY 2009-10 Audit Report. The bond payments will conclude in 2019.

The Agency has identified that its independent auditors review the Agency's Improvement District 1 collections and the use of those funds for its debt and that the remaining funds collected are utilized within the boundaries of Improvement District 1.

3. *Mojave Water Agency Surcharge*

   The Agency collects this surcharge on the water bill to fund the Agency's share of the debt service for the Morongo Basin Pipeline. This debt will be paid in full in 2021.

4. *Desert View service area - Surcharge*

   Those within the Desert View portion of the Agency pay a $9.30 bi-monthly surcharge to generate revenue for the annual bond payment for the Desert View Water District Revenue Bonds. This surcharge on the bi-monthly water bill generates roughly $50,000 annually with an annual required payment of roughly $40,500. The remaining amount is collected and used for needed infrastructure improvements within the Desert View Water System (Flamingo Heights area). The bond payments will conclude in 2019.

5. *Grant Revenue*

   For FY 2009-10, the Agency received significant revenue in the form of an EPA grant for the Ames Valley Recharge Project ($232,343 earned in 2010 for costs incurred through the fiscal year). This was one-time revenue and is not-reflective of annual activity.

6. *Standby charge*

   The Agency currently does not receive a standby charge. This assessment was removed in 1998 by voter action (Measures Q, S, and T of the November 1998 election successfully removed the standby charges of the Agency. The assessments have not been reinstated).

The chart below taken from the FY 2010-11 financial statements shows the revenue and expenditure categories with respective amounts.

	2011	2010
OPERATING REVENUES		
Water sales	$ 457,078	513,026
Water services	50,253	33,881
Basic surcharge	595,583	597,680
TOTAL OPERATING REVENUES	1,102,914	1,144,587
OPERATING EXPENSES		
Transmission and distribution	351,065	406,370
General and administrative	605,744	535,884
Depreciation	239,331	229,766
TOTAL OPERATING EXPENSES	1,196,140	1,172,020
OPERATING INCOME (LOSS)	(93,226)	(27,433)
NON-OPERATING REVENUES (EXPENSES)		
Interest income	4,472	3,266
Tax levy	223,764	237,111
Desert View debt surcharge	50,206	50,345
Grant income	430,605	232,343
Gain/loss on disposal of asset	(38,832)	(1,170)
Other income/Expense	9,036	(4,099)
Interest expense	(51,309)	(50,461)
Mojave Water Agency pipeline interest (note 6)	(73,097)	(73,254)
Amortization of debt issuance costs	(2,011)	-
TOTAL NON-OPERATING REVENUES (EXPENSES)	552,834	394,081
CHANGE IN NET ASSETS	459,608	366,648
NET ASSETS BEGINNING, JULY 1	3,853,964	3,487,316
Prior period adjustment	-	-
NET ASSETS ENDING, JUNE 30	$ 4,313,572	3,853,964

Non-Agency Related Charges on Property Tax Bill

MWA DEBT 1 – Assessed by the Mojave Water Agency after voter approval. These funds are used primarily for the payment of debt service and maintenance in connection with the State Water Project (The California Aqueduct).

MWA DEBT 2 – Assessed by the Mojave Water Agency after voter approval. These funds are used primarily to supplement the MWA 1 tax and additionally provide funding for Mojave Water Agency administration.

MWA ID "M" – Assessed by the Mojave Water Agency after voter approval. These funds are used to fund 40% of the debt service for the pipeline extension from the California Aqueduct to the Morongo Basin (MWA Improvement District M).

FY 2011-12 Budget

The FY 2011-12 Budget totals $1,407,043 – an increase of $84,147. However, the FY 2011-12 Budget identifies that $91,647 from operational and non-operational revenue is available to allocate. Therefore, the two budgets are statistically similar. Nonetheless, there are a few noteworthy differences:

- Administration expense is increasing by 15% due to salary merit increases and the hiring of a new executive secretary at a higher starting pay than the previous employee as well as an additional 20% for overtime.

- Operating expense is decreasing by 16% due to the resignation of the field supervisor and no current intent for the Agency to fill the position.

- As for Non-Operating Revenue, the debt income to pay for the Bighorn FMHA loan is increasing by 40% to pay for infrastructure improvements and to close the deficit in net assets of the Bighorn Mountains service area.

Salaries and benefits for FY 2011-12 include seven full-time employees and no seasonal or temporary employees. The Field Supervisor position remains vacant and there is no intent to fill the position at this time.

Exec. Sec./Personnel Administration (1 position – filled FT)
Accounting Technician II/Customer Service Rep. (1 position – filled FT)
Customer Service Rep – (1 position –filled FT)
Water Distribution II (2 positions – filled FT)
Water Distribution I (1 position – filled FT)
Field Supervisor (1 FT position – vacant, not actively recruiting)
General Manager (1 position – filled FT)

In reviewing the Agency's budgets submitted for this review, the budgets do not include at least one year's worth of actual financial data, as recommended by the *Best Practices* of the Government Finance Officers Association. The Commission recommends that for the future the Agency include at least one year's worth of actual figures.

Commitments

On March 15, 1991, the Agency entered into an agreement with the MWA to become a participant in the Morongo Basin Pipeline project. Under the agreement, the Agency was obligated to pay its project allotment percentage of the estimated fixed project cost commencing July 1, 1991. The payment made to MWA for the current year was $73,524. The payments commencing June, 1996, and thereafter will be determined by MWA based upon various factors.

Internal Control over Financial Reporting

The FY 2009-10 financial statements have identified significant deficiencies in the internal controls of the Agency. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance. The independent auditors noted the following matters that provide an opportunity for the Agency to enhance its existing internal controls. A detailed description of each matter with the auditor's recommendation and the Agency's comments are included at the back of the FY 2009-10 audit, included as Attachment #2).

1. Positive Pay - the Agency does not use positive pay. Positive pay is a process by which an organization's bank would be electronically provided a list of check numbers and check amounts that the bank would be authorized to allow to process for payment.

   The Agency has responded to LAFCO that the costs for positive pay are high in addition to concerns about the effect on customers. At this time, Agency staff has not taken this matter to a committee.

2. Lock Box - The Agency does not use a "lock box" service (P.O. Box under the control of the Agency's bank) for collecting its revenues. A lock box service significantly reduces the risk of theft of funds by employees of the Agency.

   The Agency has responded to LAFCO that the Agency board rejected this recommendation based on cost and the fact that many customers pay at the office with checks and cash. Therefore, implementation of this expense does not eliminate this concern.

3. Inventory Controls - The inventory custodian currently performs data entry for service orders that involve inventory requisitions. He also has system access rights to make adjustments to inventory records. Internal control is maximized when those persons that have physical access to inventory do not also have the ability to adjust the inventory data recorded in the system.

   The Agency has responded to LAFCO that implementation of recommendations 3 and 4 were implemented by the Agency staff without going to the board.

4. Bank Reconciliations - Bank reconciliations of the Agency are performed by the individual that performs data entry for cash disbursements. Best practice provides that reconciliations be performed by individuals that are not involved in the creation of cash disbursements and that do not have direct or indirect access to the funds in the bank account.

5. Ethical Culture - New auditing standards recommend that organizations consider certain best practices to reinforce a strong ethical culture. Accordingly, the auditors recommended that the Agency consider inclusion of certain ethical conduct policies into its Employee Handbook.

The Agency has responded to LAFCO that the policy recommendation for Ethical Conduct Policies were brought before the Board of Directors and approved as a revision to the Employee Handbook in April 2011.

Other Information

Regular Audits

Government Code Section 26909 requires all districts to provide for regular audits; the Agency conducts annual audits and meets this requirement. Section 26909 also requires districts to file a copy of the audit with the county auditor within 12 months of the end of the fiscal year. According to records from the County Auditor, the last audit received was in March 2011 for FY 2009-10.

Pension and Post-Employment Benefits

The Agency contributes to the California Public Employees Retirement System (PERS), an agent multiple-employer public employee defined benefit pension plan. PERS provides retirement, disability benefits, and death benefits to plan members and beneficiaries. PERS acts as a common investment and administrative agent for participating public entities within the State of California. According to the FY 2009-10 financial statements, the actuarial value of PERS assets was determined using techniques that smooth the effects of short-term volatility in the market value of investments over a three-year period (smoothed market value). PERS unfunded actuarial accrued liability is being amortized as a level percentage of projected payroll on a closed basis (copies of PERS' annual financial report may be obtained from their executive office: 400 P Street, Sacramento, CA 95814). A review of the financial statements identifies that the Agency has a zero net pension obligation. The financial statements do not identify if there are any other Post Employment Benefits. However, the Agency states that there are no Post Employment Benefits offered to employees.

Appropriations Limit

Article XIIIB of the State Constitution, the Gann Spending Limitation Initiative (in 1979, the voters amended the California Constitution by passing Proposition 4, the Gann Initiative), mandates local government agencies receiving the proceeds of taxes to establish an appropriations limit. Without an appropriations limit, agencies are not authorized to expend the proceeds of taxes. Section 9 of this Article provides exemptions to the appropriations limit, such as Section 9(a) provides exemption for debt service, and Section 9(c) exempts the appropriations limit for special districts which existed on January 1, 1978 and which did not levy an ad valorem tax on property in excess of $0.125 (12 ½ cents) per $100 of assessed value for the 1977-78 fiscal year. According to the *County of San Bernardino 1977-78 Valuations/Tax Rates* publication (excerpt included as a part of Attachment #2), the tax rate for the two predecessor districts were as follows:

Bighorn Mountains (General Levy)	$0.0000
Bighorn Mountains (Improvement A)	$1.0000
Desert View (General Levy)	$0.5285
Desert View (Bond, Land Only)	$3.5906

Prior to consolidation the Bighorn Mountains Water Agency never established an appropriations limit based upon its lack of general levy. However, the general levy tax rate

for Desert View for FY 1977-1978 was $0.5285 per $100 of assessed value. Being over the $0.125 tax rate, at that time Desert View did not qualify for an exemption from the requirement of an appropriations limit and fulfilled this mandate through annual adoption. As a part of the LAFCO resolution approving the consolidation of the two predecessor districts in 1990, LAFCO imposed the condition that the appropriations limit of the consolidated agency, if any, shall be the aggregate appropriations limits of the two agencies (a copy of the resolution is on file in the LAFCO office). Therefore, in the years following consolidation, the Agency was required to annually set an appropriation limit in compliance with Article XIIIB of the Constitution and implementing legislation contained in Government Code Section 7910 and the Agency's audits were required to review and ascertain its accuracy.

The Agency has indicated in the materials submitted to LAFCO that is has relied upon a legal opinion from its attorney that it was not required to comply with the provisions related to setting an appropriation limit based upon an analysis of the previous Bighorn Mountains Water Agency. LAFCO has identified its position that the conditions of approval for the consolidation clearly stated that it was required to do so and without an appropriations limit, the agency is not authorized to expend the proceeds of ad valorem property taxes. The Commission determines that the Agency shall comply with the requirements of the consolidation requiring the annual establishment of an appropriation limit. The Agency has provided a copy of its Resolution adopting an appropriation limit

4. Status of, and opportunities for, shared facilities:

The Agency's intertie with Hi-Desert Water District ("HDWD") is currently disconnected and isolated from cross-connection. The pump was removed many years ago. According to the Agency, with minimal effort a connection could be made whereby the Agency could receive water via gravity flow from HDWD. However, more work would be needed for the Agency to pump water into HDWD's system. The two agencies are actively seeking a new, permanent emergency intertie solution. In addition, the Agency has the ability to "high line" a connection between fire hydrants to create an emergency intertie with CSA 70 Zone W-1.

5. Accountability for community service needs, including governmental structure and operational efficiencies:

Current Board Composition

The BDVWA is an independent special district governed by a five-member board of directors elected at-large. Membership elections are held in odd years as a part of the consolidated November election. A review of records available though the County Registrar of Voters identifies an election for director membership has been held every two years since at least 1997.

As a result of the November 2011 elections, the board is composed of the following, effective December 2011 along with board positions:

Board Member	Title	Term	Elected/Appointed
Terry Burkhart	President	2013	Elected full term
Vacant *		2013	To be appointed in lieu of election - short term
Judy Corl-Lorono	Director	2013	Elected short term
Michael McBride	Director	2015	Appointed (ran unopposed)
David Larson	Director	2015	Appointed (ran unopposed)

* The director-elect from the November 2011 election neglected to file his Oath of Office by noon December 2 as required by the Election Code and the position was subsequently declared vacant by the remaining Board members on December 8, 2011. The Board then acted to appoint a new director for which advertising has begun, again in accordance with the Election Code.

Regular Board Meetings are scheduled at 6:00p.m. on the fourth Tuesday of each month. The location of the meetings is not at the Agency office at 622 South Jemez Trail; rather meetings are held at 1720 North Cherokee Trial in Landers at the former Bighorn office. Standing committees include the Finance/Public Relations/Education/Personnel Committee and the Planning/Engineering/Legislative/Grant/Security Committee. Each committee meets bi-monthly. Additionally, a member of the Board is also appointed to the Morongo Basin Pipeline Commission.

Board and General Manager Turnover

As stated in the introduction to this service review portion of this report for the Agency, LAFCO has adopted the Governor's Office of Planning and Research (OPR) Municipal Service Review Guidelines by reference for its use during the conduct of service reviews. The Guidelines read that in evaluating an agency's local accountability and governance structure, LAFCO may wish to address agency representatives in its review (OPR Guidelines, Page 42, item 9.3).

Board Members

Up until 2007, the bi-annual election was typical with other special districts with five member boards – with either two or three candidates running each year with modest director turnover. However, at the August 2007 election the voters successfully recalled three members with the regularly scheduled election taking place three months later in November. The past four elections have had 13 seats open with eight changes in membership, representing a 62% election turnover rate (77% turnover rate when adding appointments). Taking into account 13 open seats and seven seats not up for election, the overall turnover rate has been 54% since August 2007.

Election	Seats open	Newly elected/appointed	Voter turnout
Aug 2007	3	3 elected	45%
Nov 2007	2	1 elected	15%
Nov 2009	4	3 elected (2 resigned, replaced by appointments)	26%
Nov 2011	4	1 elected	25%
TOTAL	**13**	**10 total (8 elected with 2 appointments)**	

Whereas a modest turnover is natural and even healthy, the high turnover rate coupled with low voter turnout is a cause for concern. In a recent edition of its report, *What's So Special about Special Districts*, the state Senate Local Government Committee states that the, "narrow and technical nature of a district's activities often results in low civic visibility until a crisis arises." The August 2007 recall election had a 45% voter turnout. However, the past three elections have had voter turnouts of 15%, 26%, and 25% (it should be noted that the elections conducted by the County Registrar of Voters for November 2007 and November 2009 had a grand total turnout of 13%, 10%, and 10%, respectively). The high turnover and low voter turnout has resulted in the two longest tenured board members being elected in 2007. The three other members were either elected or appointed since the 2009 election.

General Managers

The employee leadership has also experienced a high turnover rate within the past ten years. In that time, there have been six general managers (nine since 1998) in charge of the Agency's operations, administration, and policy implementation.

In general, a high turnover rate of elected members in conjunction with general manager turnover could produce a lack of continuity and institutional knowledge, possible missteps in administrative compliance, and the resetting of the learning curve with each turnover. This agency continues to operate without an appropriation limit and has not segregated the operations and funds of the two predecessor agencies. This service review cannot offer a remedy for this occurrence other than to point out that a reduced turnover rate of elected membership and employee leadership would, in the Commission's opinion, result in increased steady direction for the Agency.

Brown Act

The OPR Guidelines read that in evaluating an agency's local accountability and governance structure, LAFCO may wish to address in its review an agency's compliance with state disclosure laws and the Brown Act (OPR Guidelines, Page 42, item 9.1).

Within the past four years, the Agency has been notified by the Office of the District Attorney, County of San Bernardino that it has violated the Brown Act (Open Meeting Law, Gov. Code §54950 et seq.). First, in 2007 County prosecutors strongly criticized the board for repeatedly violating the Brown Act, especially its refusal to address public concerns over secret meetings.

Second, the District Attorney's Office in March 2011 responded to Agency legal counsel regarding a Brown Act violation stemming from a complaint that the Agency Board approved four items of compensation for an Agency officer without providing notice of its actions. A copy of the letter is on file at the LAFCO office.

According to the District Attorney's letter, the Agency noticed and held a closed session meeting regarding the officer's evaluation, and at the open session meeting announced that the officer received a favorable review and the Board voted on compensation items. Based on the below items, the District Attorney's letter identifies its opinion that the Board's actions were a violation of the Brown Act.

- §54957(b)(4) expressly states: "Closed sessions held pursuant to this subdivision shall not include discussion or action on proposed compensation except for a

reduction of compensation that results from the imposition of discipline." In other words, there are statutes that require compensation to be called out on an open session agenda even when an evaluation of the same employee is noticed for the closed session portion of the same meeting (Gov. Code §54957(b)(4) states that the term "employee" shall include an officer or an independent contractor who functions as an officer or an employee but shall not include any elected official, member of a legislative body or other independent contractors).

- Discussions about the salaries of non-elected officers must be discussed in open session. Gov. Code §54954.2(a) specifically states that the agenda must describe "each item of business" to be discussed or transacted. Hence, the statute plainly requires that compensation be called out specifically on the agenda if it will be discussed at the Board meeting.

- In San Diego Union v. City Council of the City of San Diego (1983) 146 Cal. App. 3d 947, the court expressly held that compensation must be discussed – *and properly noticed* – in an open session. Hence, San Diego Union clarifies that after an evaluation of a public employee is held in a closed session; compensation of that employee must be discussed in "a *properly noticed*, open session."

The letter further identifies the Agency's statement that in the future the Board will provide separate notice on the open session agenda when employee compensation is to be considered even if notice of consideration of an employee's evaluation is also placed on the same agenda for closed session. Based upon the Agency's statement that it will not repeat its above-described actions, the District Attorney considered the matter closed.

Nonetheless, the District Attorney voiced concern about the Board's future compliance with the Brown Act since the Board failed to admit a violation. Therefore, the District Attorney recommended that the current Board members obtain training on the requirements of the Brown Act. The Agency has responded to LAFCO regarding this recommendation, and state that Board members attended the Special District and Local Government Institute Brown Act, Public Records Act and Conflict of Interest Workshop, San Diego, CA June 2011.

The November 2011 election has resulted in new membership on the Board. The Commission determines that the Agency should implement a policy that Board members obtain periodic training on the requirements of the Brown Act.

Operational Efficiencies

Operational efficiencies are realized through several joint agency practices, for example:

- Mojave Water Agency (MWA) provides professional guidance and services to BDVWA in areas such as geohydrology, engineering, and grant assistance. MWA also advises on and provides technical support towards project grant applications.

- The Agency is a member of the Special District Risk Management authority (SDRMA), a Joint Powers authority, which provides medical benefits, property and liability insurance and workers compensation insurance to the Agency as well as safely and loss prevention services.

- The Agency is a member of the Association of California Water Agencies (ACWA), a statewide non-profit Joint Powers Insurance Authority with a mission to assist members in the areas of leadership, advocacy and information. In addition, ACWA-HBA (Health Benefits Authority) provides dental, vision and life insurance benefits to all Agency employees.

- The Agency is a partner, through MOU, in the Morongo Basin Alliance for Water Awareness and Conservation ("AWAC"). The mission of AWAC is to promote the efficient use of water and increase the communities' awareness of conservation as an important tool to help ensure an adequate water supply.

- The Agency works closely with the Open Space Group, a collaborative effort between all of the towns, the Morongo Basin Open Space Group, the U.S. Marine Corps, Joshua Tree National Park, Mojave Desert Land Trust, Defenders of Wildlife, and the Wildlands Conservancy among others.

Government Structure Options

There are two types of government structure options:

1. Areas served by the Agency outside its boundaries through "out-of-agency" service contracts;

2. Other potential government structure changes such as consolidations, reorganizations, dissolutions, etc.

Out-of-Agency Service Agreements:

Pursuant to Government Code Section 56133, LAFCO is charged with the responsibility for reviewing and taking action on any city or district contract to extend service outside of its jurisdiction. Correspondence from the Agency in 1994, on file at the LAFCO office, identifies that the Agency did not have any out-of-agency service contracts at that time. However, amendments to Section 56133 (subsection e) effective January 2, 2002, indicate the provision of this subsection do not apply to an extended service that a city or district was providing on or before January 1, 2001. For this review, the Agency has notified LAFCO that it serves three connections outside of its boundaries located in Section 24. Agency records identify that service was provided before 2001, and therefore further review by LAFCO is not required.

BDVWA provides retail water outside of its boundaries to approximately 17 customers within the boundaries of County Service Area 70 Zone W-1. The arrangement for this service is between the Agency and the County (as the governing body for CSA 70 Zone W-1) though a contact signed in December 1997. This contract is exempt from LAFCO review since it is solely between two public agencies. At this time, BDVWA does not charge a special rate to these customers that are outside of the Agency's boundaries. There are four additional parcels within this area that are undeveloped at this time. Service to these parcels by the Agency would require either: 1) an amendment to the December 1997 contract, or 2) an out-of-agency service contact approved by LAFCO since the four parcels are to be within the Agency sphere of influence.

As noted in the Water section of this report, Johnson Valley does not have a pressurized water system. Johnson Valley has a standalone water hauling station supplied by a single groundwater well and a 10,000 gallon storage reservoir operated by the Agency. This site serves approximately 30 residential hauling customers and approximately three commercial water hauling customers who deliver water to an unknown number of customers. The Agency has no current plans to extend pipeline service to the Johnson Valley area. Population densities are so low that there are not enough customers to financially support the construction of a water line. At issue is if the water is hauled outside of the Agency's sphere of influence. Government Code Section 56133 limits the provision of service to within an agency's sphere. With a pressurized system with pipes in the ground, it is easy to ascertain the location of the recipient. However, with hauled water, it is difficult to ascertain the final destination from a hauler. Furthermore, this single well is the sole public source of water for the Johnson Valley. Given this circumstance, the Agency's parent law and policies do allow for water to be delivered outside of its boundaries. Section 15, Item 7, of the Agency's operating law does allow the Agency to sell water to anyone if it finds that there is a surplus of water above that which may be required by consumers within the agency. Expanding on Section 15, Item 7, the Agency's Rules and Regulations (Section 1.6 – Service Outside Agency Boundaries) provide a mechanism to supply bulk water to properties located outside of the Agency's boundaries.

Government Structure Options:

The State has published advisory guidelines for LAFCOs to address all of the substantive issues required by law for conducting a service review ("Local Agency Formation Commission Municipal Service Review Guidelines", State of California Governor's Office of Planning and Research, August 2003). The Guidelines address 49 factors in identifying an agency's government structure options. Themes among the factors include but are not limited to: more logical service boundaries, elimination of overlapping boundaries that cause service inefficiencies, economies of scale, opportunities to enhance capital improvement plans, and recommendations by a service provider.

In some cases, functional consolidation or integration can reduce costs so that services can be maintained and improved with fewer dollars. The following scenarios are not being presented as options for the Commission to consider for action as a part of this service review. Rather, a service review should address possible options, and the following are theoretical, yet possible, scenarios for the community to consider for the future. Movement towards these scenarios would include, but not be limited to, a plan for service, fiscal impact analysis, and any other required studies.

- <u>Expansion of boundaries.</u>

    - In 1995 the Agency submitted a proposal to detach approximately eight square miles from its boundaries in the Landers area (LAFCO 2792). The Commission approved the proposal because it eliminated an overlap of similar-purpose agencies and could possibly lead to a less contentious relationship between the residents of the two agencies.

      The current staff of the Agency has expressed desire to explore the option of returning this area to the boundaries of the Agency. At this time, the Agency serves 17 customers within the area through contract with the County. The Agency, residents, or landowners could submit an application to expand the

boundaries of the Agency to the east to include the Goat Mountain area. Such an application would be processed to include the dissolution of CSA 70 W-1 with the Agency identified as the successor agency. The Agency would then be responsible for extending its services to the area, including continuing the services of the dissolved CSA 70 zone.

Including the area of CSA 70 W-1 would allow those that the Agency currently serves within the area the opportunity to participate in Agency elections and have a voice in Agency matters. The Agency would obtain additional tax revenue and be able to allocate any cost savings to all of its customers. Before the detachment, these properties were within the Agency's Improvement District 1 and contributed to the Improvement District 1 bond debt for the Bighorn water system. Currently, these properties outside of Agency's boundaries pay the same amount for the water but do not contribute to the debt repayment that provided funding for the water infrastructure.

- The Proposed Ames Valley Recharge Facility is located in the Pipes Wash area of Section 24 which is within the BDVWA Sphere of Influence. The Agency has stated that eventual annexation of this area as well as Sections 25 and 35 would be best to manage and protect the underlying water resources and promote continuity in institutional arrangements. Should any Agency facilities be located within these areas, annexation would provide the opportunity for the facilities to be removed from the tax rolls.

- Consolidation with one of the bordering water districts. Consolidation with the neighboring Joshua Basin Water District and/or Hi-Desert Water District would allow for economies of scale and allow for a more consolidated voice to address water issues and potentially future wastewater treatment issues. Given the historical sentiment in the areas, this option is unlikely at this time, even if it would pose benefits to the customers and citizens of the area.

- Wastewater Services provided by the Agency. There is no wastewater service in the area; all the properties are on septic systems. Should the Regional Water Quality Control Board require the community to install a sewer system to handle wastewater, the Agency would be best suited to provide wastewater collection and transportation.

- Joint Powers Agency for Sewer Treatment. The Mojave Water Agency ("MWA") is authorized by LAFCO an active sewer function (although it does not actively provide such a service at this time), and being a regional entity it could help shepherd the development of a regional wastewater treatment facility.

  A similar situation occurred in the late 1970s in the Victor Valley region of the County. To meet the requirements of the federal Clean Water Act and provide wastewater treatment for the growing population, the communities of the Victor Valley requested that the MWA, being a regional entity, help shepherd the development of a regional wastewater treatment facility. In accepting the request, MWA was designated by the Lahontan Regional Water Quality Control Board as the responsible entity for the design of the Victor Valley Regional Wastewater Reclamation Project. A few years later, the communities of the Victor Valley completed the creation of the joint powers authority, which became known as the Victor Valley Wastewater Reclamation Authority ("VVWRA"). VVWRA was expressly created for the purpose of providing

the operation and management of the treatment of wastewater through a regional facility and the ultimate disposal of effluent and solids. On June 1, 1978, VVWRA assumed the assets and authority for the Project, and MWA divested itself from the Project and the provision of sewer service.

A similar response could occur in the Morongo Basin portion of MWA. In February 2010, the LAFCO Commission approved the Hi-Desert Water District's request to expand the service description of its sewer function in order to actively provide for development of a regional wastewater treatment plant. The District is undertaking a project titled "Hi-Desert Water District Water Reclamation Facility, Wastewater Treatment Plant, and Sewer Collection System Project". The project anticipates a treatment facility to treat the collected effluent within the project's boundaries. Both agencies, and more, could form a joint powers agency for treatment of wastewater from within each agency. In general, each agency would collect wastewater within its own boundaries through collection systems owned independently, and transport the collected wastewater to a regional treatment plant. Governance of the joint powers agency would be the participating agencies. Such an agreement could reduce duplication of treatment plants and provide the opportunity for economies of scale while maintaining the independence of each agency.

- Detachment of the Johnson Valley area from the Agency and formation of an independent Community Services District. The historical record reveals those within the Johnson Valley area expressing dissatisfaction with their water situation. Those within Johnson Valley directly (through special taxes) or indirectly (as a share of the general tax levy) pay for the State Water Project, Mojave Water Agency, MWA Improvement District M, and Bighorn-Desert View Water Agency. With all the payments, they still lack a pressurized water system. At this time, the Agency has no current plans to extend pipeline service to the Johnson Valley area. However, population densities are so low that there are not enough customers to financially support the construction of a water system.

  In this scenario, the Johnson Valley area would detach from the Agency and form a community services district. The new agency would have local control over board representation and any operational matters to include assumption of the well that is currently used for water hauling. However, with a population of less than 500 and being sparsely developed, it is questionable if the tax base is adequate to fund not only a new district but also construction of a pressurized water system.

- Maintenance of the status quo. This option would maintain the existing governmental structure of the Agency.

At this time, the Agency, landowners, or residents have not formally expressed interest in any of the options outlined above. As stated above, movement towards these scenarios would include, but not be limited to, a plan for service, fiscal impact analysis, and any other required studies.

The preamble to the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 reads that while the Legislature recognizes the critical role of many limited purpose agencies, especially in rural areas, it finds and declares that a single multipurpose governmental agency accountable for community service needs and financial resources may be the best mechanism for establishing community service priorities. Further, the law states that the

Commission may recommend governmental reorganizations to particular agencies using the spheres of influence as the basis for those recommendations.

At this time, the Commission is not recommending any reorganization be considered. However, the Commission is recommending modifications to the Agency's sphere of influence to address the community definition for Homestead Valley.

WHEREAS, the following determinations are made in conformance with Government Code Section 56425 and local Commission policy:

1. Present and Planned Uses in the Area, Including Agricultural and Open-Space Lands:

Within the Agency's entire sphere, roughly 46% of the land is privately owned and the remainder, 54%, is public, which are devoted primarily to resource protection and recreational use.

Approximately 53 percent of the County of San Bernardino land use designations is designated Rural Living (RL, RL-5, and RL-40), 45 percent is Resource Conservation, and the remainder of the land use designations comprises two percent (Special Development-Commercial, Neighborhood Commercial, Rural Commercial, General Commercial, Service Commercial, and Institutional). The commercial developments within the Agency are generally located along State Route 247 and Reche Road.

By 2040, the population within the Agency's boundaries is estimated to reach 6,154. This represents a projected annual growth rate of approximately 2.4 percent between 2010 and 2040, which also represents a total population increase of 49 percent from 2010.

The population projections identified earlier indicates that the population within the Agency's boundaries will be 6,154 by 2040. Based on the maximum residential build-out within the Agency's boundaries, the projected maximum population is anticipated to reach 11,759. Likewise, based on the projected population for 2040, it is anticipated that the number of households within the Agency's boundaries will be 2,619 with a maximum potential build-out to reach approximately 5,005. These imply that the study area will reach 52 percent of its potential household and population capacity by 2040.

2. Present and Probable Need for Public Facilities and Services in the Area:

Johnson Valley

The entire area known as Johnson Valley does not have a pressurized water system. Johnson Valley has a standalone water hauling station supplied by a single groundwater well and a 10,000 gallon storage reservoir. The single well in the community was constructed from grant funding obtained by the County and the Agency now operates this well. This site serves approximately 41 residential hauling customers and approximately four commercial water hauling customers who deliver water to an unknown number of customers. The Agency has no current plans to extend pipeline service to the Johnson Valley area. Population densities are so low that there are not enough customers to financially support the construction of a water line. The Agency states that redundancy in the Johnson Valley bulk system is needed.

Ames Valley Recharge Project

The proposed Ames Valley Recharge project will deliver SWP water to the Ames Valley for recharge at the Pipes Wash Spreading Grounds to mitigate historical overdraft conditions in the Region. The recharge project will serve water agencies using groundwater in the basin including BDVWA, HDWD, and CSA 70 (through its zones W-1 and W-4). BDVWA, in cooperation with MWA, is implementing the project, which consists of a feasibility study, approximately 0.75 miles of conveyance pipeline to connect to the Morongo Basin Pipeline, recharge to the Pipes Wash, and the installation of monitoring wells. The initial recharge capacity is planned at 1,500 AFY.

The project envisions the banking of water from the State Water Project. Each participating entity would accrue water in a water storage account. The water would be purchased, and percolated into the groundwater basin. There would be no restrictions on the use of that water and inter-entity transfers could occur as well. This project is intended to mitigate impacts from over pumping of the Ames Valley Basin, provide for beneficial use of water and insure the conjunctive use of local groundwater and imported water from the State Water Project. This is a regional project with multiple beneficiaries including the piped area of the Agency, the Hi-Desert Water District, CSA 70 Zone W-1 (Landers), CSA 70 Zone W-4 (Pioneertown), and the Mojave Water Agency.

3. Present Capacity of Public Facilities and Adequacy of Public Services

Current Supply and Demand

The agency has seven pressure zones in the primary water system. Well No. 10 in Johnson Valley serves as a stand-alone water system for the purposes of Department of Public Health Consumer Confidence Reporting. There are seven active production wells operated by the Agency. There are four separate bulk hauling station locations around the Agency, one being the Well No. 10 facility. The other three are located within the larger pressurized water system with two stations located in the predecessor Bighorn Mountains Water Agency area. The last station is located in Flamingo Heights is in the predecessor Desert View Water District area. The three hauling stations inside the pressurized system are supplied by the 6 active production wells (not by Well No. 10).

The agency's intertie with Hi-Desert Water District ("HDWD") is currently disconnected and isolated from cross-connection. The pump was removed many years ago. According to the Agency, with minimal effort a connection could be made whereby the Agency could receive water via gravity flow from HDWD. However, more work would be needed for the Agency to pump water into HDWD's system. The two agencies are actively seeking a new, permanent emergency intertie solution. In addition, the Agency has the ability to "high line" a connection between fire hydrants to create an emergency intertie with CSA 70 Zone W-1.

Many of the fire hydrants do not produce sufficient flow and pressure to meet the current County Fire Flow standard of 1,000 gallons per minute with a residual pressure of 20 pounds per square inch.

Future Supply and Demand

According to the MWA 2010 Urban Water Management Plan, the local groundwater supply available to BDVWA is estimated to be 500 acre-feet annually. It is estimated that during the current planning horizon the population could increase by 60 percent. BDVWA will need between 749 and 829 acre-feet per year in order to supply its current and future customers (an additional minimum of 249 acre-feet). The MWA 2010 UWMP further states that BDVWA will need facilities to produce about 2,388 gallons per minute to meet the maximum day plus-fire flow. With the potential for future reductions in the State Water Project allocation, the Agency may or may not be able to meet its future requirements with water from the State Water Project.

In April 2007, BDVWA adopted the Bighorn-Desert View Water Agency Water System Master Plan ("WSMP"). The master plan identified the following deficiencies in the existing infrastructure: heavy reliance on 6-inch and 8-inch water mains which do not provide adequate fire flow; inability of most reservoirs to refill overnight after a 500-gallons-per-minute (gpm) fire; need for spreading grounds for groundwater storage and recovery; a groundwater management plan and the inefficient operation of portions of the system. Once the deficiencies were identified, the Agency prepared the Bighorn-Desert View Water Agency Water Infrastructure Restoration Program ("WIRP"). The WIRP outlines specific system improvements to remediate these deficiencies.

Two WIRP projects that are near completion include a Groundwater Management Plan ("GWMP") and the Ames Valley Recharge Project. Local groundwater is currently the sole source of its water supply, but BDVWA has annual nine percent capacity in the Morongo Basin Pipeline and may purchase SWP water from MWA. Although the infrastructure needed to deliver SWP water to the Ames Valley region already exists, additional facilities are needed to convey imported SWP water to spreading grounds for recharge, storage, and subsequent recovery. A Feasibility Study, including a groundwater model, is scheduled for completion in late 2011/early 2012 and documents the ability to store and recover SWP water in the basin. This document will also include assistance to Pioneertown (CSA 70/W-4) enabling them to secure a potable water supply. The GWMP will address the purchase of SWP water for recharge and pumping restrictions in the event that overdraft conditions are not controlled.

4. Social and Economic Communities of Interest:

The social communities of interest are the unincorporated areas of Landers, Flamingo Heights, and Johnson Valley. The Lucerne Valley Unified School District overlays Johnson Valley while the Morongo Unified School District overlays Landers and Flamingo Heights. There is a little commercial activity is along Highway 247.

5. Additional Determinations

- As required by State Law notice of the hearing was provided through publication in a newspaper of general circulation, the *Hi-Desert Star*. Individual notice was not provided as allowed under Government Code Section 56157 as such mailing would include more than 1,000 individual notices. As outlined in Commission Policy #27, in-

lieu of individual notice the notice of hearing publication was provided through an eighth page legal ad.

- As required by State law, individual notification was provided to affected and interested agencies, County departments, and those agencies and individuals requesting mailed notice. In addition, on December 6, 2011, LAFCO staff met with the agencies and representatives to review the determinations and recommendations made within its draft report, to solicit comments on the determinations presented and to respond to any questions of the affected agencies.

- Comments from landowners/registered voters and any affected agency have been reviewed and considered by the Commission in making its determinations.

WHEREAS, pursuant to the provisions of Government Code Section 56425(i) the range of services provided by the Bighorn-Desert View Water Agency shall be limited to the following:

FUNCTIONS	SERVICES
Water	Acquisition, retail, distribution

WHEREAS, having reviewed and considered the findings as outlined above, the Commission determines to reduce the Bighorn-Desert View Water Agency's existing sphere of influence by approximately 11,882 acres, expand its sphere of influence by a total of approximately 8,140 acres, and affirm the balance of its existing sphere of influence.

NOW, THEREFORE, BE IT RESOLVED by the Local Agency Formation Commission of the County of San Bernardino, State of California, that this Commission shall consider the territory shown on the map attached as Exhibit "A" as being within the sphere of influence of the Bighorn-Desert View Water Agency; it being fully understood that establishment of such a sphere of influence is a policy declaration of this Commission based on existing facts and circumstances which, although not readily changed, may be subject to review and change in the event a future significant change of circumstances so warrants;

BE IT FURTHER RESOLVED that the Local Agency Formation Commission of the County of San Bernardino, State of California, does hereby determine that the Bighorn-Desert View Water Agency shall indemnify, defend, and hold harmless the Local Agency Formation Commission of the County of San Bernardino from any legal expense, legal action, or judgment arising out of the Commission's designation of the modified sphere of influence, including any reimbursement of legal fees and costs incurred by the Commission.

THIS ACTION APPROVED AND ADOPTED by the Local Agency Formation Commission of the County of San Bernardino by the following vote:

AYES:	**COMMISSIONERS: Bagley, Coleman, Curatalo, Rutherford**
NOES:	**COMMISSIONERS: Cox, Mitzelfelt, McCallon**
ABSENT:	**COMMISSIONERS: None**

RESOLUTION NO. 3155

****

STATE OF CALIFORNIA)
) ss.
COUNTY OF SAN BERNARDINO)

I, KATHLEEN ROLLINGS-McDONALD, Executive Officer of the Local Agency Formation Commission of the County of San Bernardino, California, do hereby certify this record to be a full, true, and correct copy of the action taken by said Commission, by vote of the members present, as the same appears in the Official Minutes of said Commission at its meeting of April 18, 2012.

DATED: April 19, 2012

KATHLEEN ROLLINGS-McDONALD
Executive Officer

EXHIBIT A

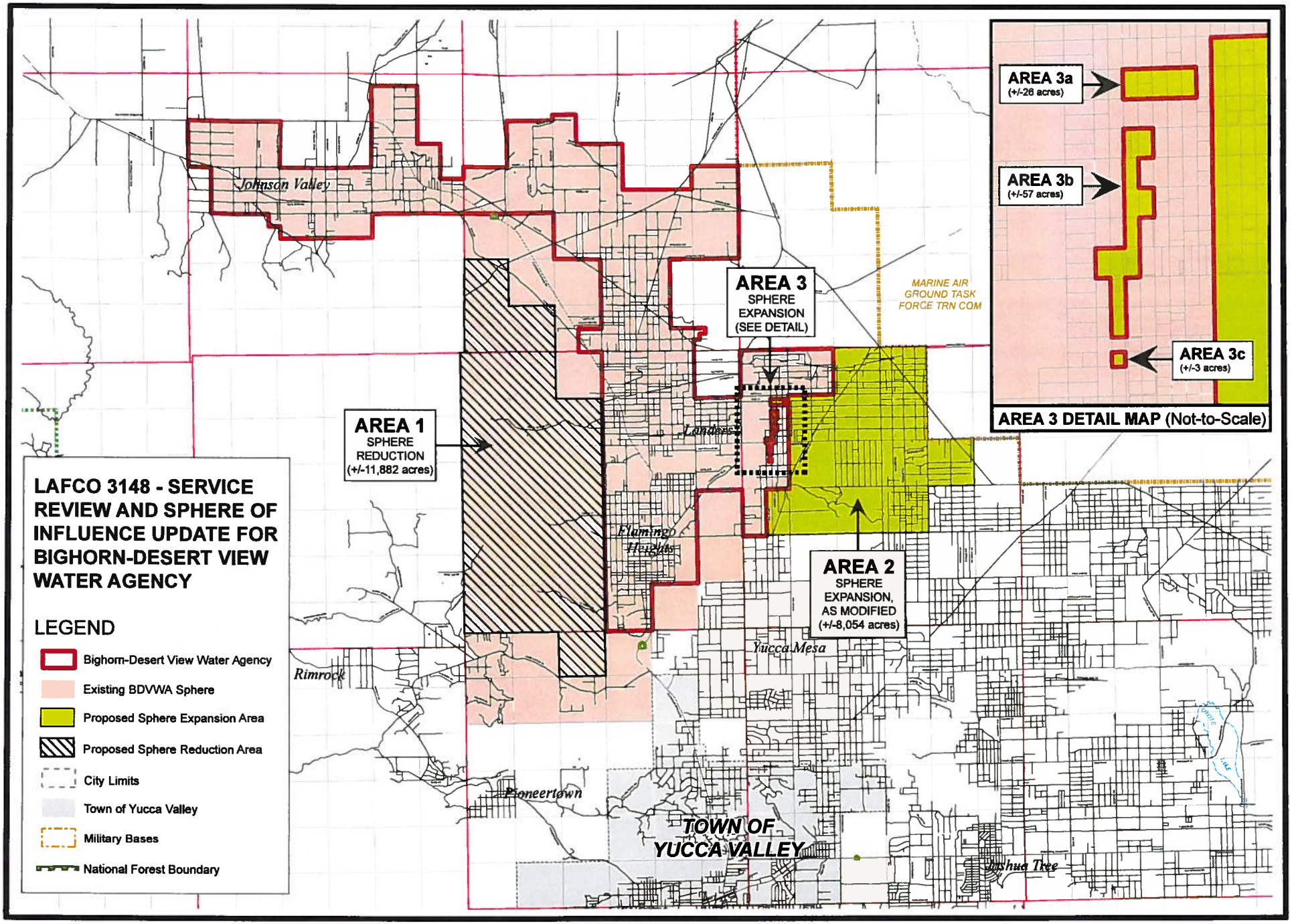


EXHIBIT A

BIGHORN DESERT VIEW WATER AGENCY
AGENDA ITEM SUBMITTAL

Meeting Date: July 24, 2012

To: Board of Directors

Budgeted: N/A
Budgeted Amount: N/A

From: Marina D. West

General Counsel Approval: N/A
CEQA Compliance: N/A

Subject: Change in Schedule for the Mojave Water Agency Legal, Legislative and Public Information Committee and its Conflict with Regularly Scheduled Planning/Legislative/Engineering/Grant/Security Standing Committee

SUMMARY

Mojave Water Agency has changed the date of their regularly scheduled Legal, Legislative and Public Information Committee (LLPI) from the third Thursday of the month to the first Wednesday of the month to better accommodate their staff's schedule.

The Bighorn-Desert View Water Agency Planning/Legislative/Engineering/Grant/Security Standing Committee (PLEGS) has scheduled, through Board Policy Statement No. 08P-03, its meetings to be concurrent with the LLPI so as to take advantage of the updates MWA receives from its state and federal legislative advocates.

The PLEGS Committee discussed the conflict and developed three scenarios for the full Board to consider. The Board should discuss the options and provide direction to the PLEGS Committee and staff on how to proceed.

RECOMMENDATION

That the Board considers taking the following action(s):

1. Provide direction to the Planning/Legislative/Engineering/Grant/Security Standing Committee on the impact of the change in regular meeting date of the Mojave Water Agency Legal, Legislative and Public Information Committee; and
2. If necessary, direct staff to revised Policy Statement No 08P-03 and bring back to the Board for formal adoption at a regularly scheduled Board of Directors meeting.

BACKGROUND/ANALYSIS

The Mojave Water Agency has decided to change the date of their regularly scheduled Legal, Legislative and Public Information Committee (LLPI) from the third Thursday of the month at 9am to the first Wednesday of the month at 9:30 am to better accommodate their staff's schedule.

The Bighorn-Desert View Water Agency Planning/Legislative/Engineering/Grant/Security Standing Committee (PLEGS) has scheduled, through Board Policy Statement No. 08P-03, its meetings to be concurrent with the LLPI so as to take advantage of the updates MWA receives from its state and federal legislative advocates.

On June 21st the Committee discussed the change and proposes following options for the full Board to consider:

1. Do nothing, leaving the PLEGS Standing Committee schedule as is; or
2. Change the PLEGS Standing Committee from the third Thursday to the first Wednesday of the even months. If the Board chooses this option, Dir. Burkhart will have to resign from the PLEGS Committee due to a scheduling conflict; or
3. Create an Ad Hoc Committee to virtually attend the MWA LLPI each month and report to the Board as needed.

PRIOR RELEVANT BOARD ACTION(S)

6/21/2012 Planning/Legislative/Engineering/Grant/Security Committee: Discuss change in schedule for the Mojave Water Agency Legal, Legislative and Public Information Committee and its impact on the regular PLEGS Committee standing meeting date schedule.

8/26/2008 Policy Statement No. 08P-03 A policy statement of the Board of Directors establishing Standing Committees and authorizing the creation of Ad Hoc Committees.

POLICY STATEMENT NO. 08P-03

POLICY STATEMENT OF THE BOARD OF DIRECTORS OF THE BIGHORN-DESERT VIEW WATER AGENCY ESTABLISHING STANDING COMMITTEES AND AUTHORIZING THE CREATION OF AD HOC COMMITTEES

The purpose of this policy statement is to ensure efficient administration of the Bighorn-Desert View Water Agency ("Agency") by the establishment of standing committees of the Board of Directors ("Board") and the authorization for the creation of *ad hoc committees of the Board. Standing committees allow for the* productive use of Directors' individual expertise on matters and to work with staff in developing better background information for the full Board's consideration.

All standing committees shall be subject to meeting requirements specified under the Ralph M. Brown Act, California Government code sections 54950 through 54963.

The Board President shall, with board consensus, appoint and publicly announce the members of the standing committees at the first regularly-scheduled meeting of the Board in February of each year and at other meetings of the Board as circumstances may require.

Each committee shall have a maximum of two (2) members and each standing committee shall hold a scheduled meeting six (6) times per year.

All standing committee meetings of the Bighorn-Desert View Water Agency shall hereafter be held at the Bighorn Office located at 1720 N. Cherokee Tr., Landers, CA 92285

All standing committee meetings, Adjourned standing committee meetings and Special standing committee meetings may be fixed from time to time and by legal public notice, to other locations within and without the agency, at times as determined by the standing committee or Board of Directors.

The Board's standing committees shall be assigned to review Agency functions, activities, and/or operations pertaining to their designated concerns as specified. Any recommendations resulting from said review shall be submitted to the Board via a written or oral report.

The following shall be the Board's standing committees, duties, and meeting schedule:

Planning & Engineering/Legislative/Grant Committee-Meetings of the Bighorn-Desert View Water Agency Planning & Engineering/Legislative/Grant Committee shall hereafter be held on the 3rd Thursday of every other month, beginning August 2008, at the hour of 08:45 a.m.

Planning & Engineering-shall be concerned with, but not limited to, the study and development of Agency operational goals, including planning /engineering reviews and proposals of capital improvement projects as well as the development and periodic review of an Agency general plan, safety and security issues (i.e. Homeland Security, Vulnerability Assessment and facilities general security).

Legislative-shall be concerned with matters related to, or involving other governmental and/or regulatory agencies which may have an effect on the Agency. It shall monitor and review legislation or potential legislation which may affect the Agency. The committee shall also annually review existing ordinances, resolution and/or Agency policies, except those pertaining specifically to personnel matters.

Grant-shall be concerned with matters related to, or involving other governmental and/or regulatory agencies which may have an effect on the Agency's grants or grant policies. It shall monitor and review grant legislation or potential grant legislation which may affect the Agency and monitor and review progress of grant funded projects. This committee shall work directly with the General Manager and Grant Consultant(s) in an effort to obtain/secure grants.

Finance/Personnel/Pubic Relations & Education Committee-Meetings of the Bighorn-Desert View Water Agency Finance/Personnel/Public Relations & Education Committee shall hereafter be held on the 2nd Wednesday of every other month, beginning September 2008, at the hour of 4:00 p.m.

Finance-shall be concerned about, but not limited to the financial management of the Agency, including the preparation of an annual budget, periodic reviews of Agency revenues, Agency investments, expenditures, and audit.

Personnel-shall be concerned with the functions, activities, compensation, and welfare of agency staff. This committee shall work directly with the General Manager on personnel related matters.

Public Relations & Education-shall be concerned with assuring that information relative to the affairs of the Agency is accurately and appropriately communicated to the public. This committee shall work with staff on the Agency Newsletter and website; developing and communicating water education programs for the public; the development of community, customer, and employee relations programs to enhance Agency/Customer relationships and understanding.

Morongo Basin Pipeline Commission/Mojave Water Agency Technical Advisory Committee Representative(s)- A member of the Planning & Engineering subcommittee shall be appointed as the representative (the "Representative") of the Agency to the Mojave Water Agency TAC meetings and shall be concerned with assuring the costs of the Morongo pipeline are proportionately charged to the benefiting districts/agencies, and that the Agency has representation on the Mojave Water Agency TAC on matters affecting the Agency. The Representative shall attend all Morongo Basin Pipeline Commission and Mojave Water Agency TAC meetings. An alternate Representative may also be appointed if the primary Representative is unable to attend any Commission or TAC meetings.

Ad Hoc Committee Appointments-The Board President shall, with board consensus, appoint such ad hoc committees as may be deemed necessary by the President or the Board of Directors. The duties of the ad hoc committees shall be outlined at the time of appointment, and the committee shall be considered dissolved when its final report has been made.

This policy becomes effective immediately upon adoption and hereby rescinds Policy Statement 08P-02

Policy Statement No. 08P-03 was adopted at a regular meeting of the board held on August 26, 2008

Phillip Johnson, Board President

I, the undersigned, hereby certify that I am the duly appointed Secretary of the Board of Directors of the Agency, and that at a regular meeting of the Board held on August 26, 2008 the foregoing Policy Statement No. 08P-03 was adopted by said Board and that it has not been rescinded or amended since the date of its adoption, and is now in full force and effect.

Kim Heller, Board Secretary

BIGHORN-DESERT VIEW WTR AGENCY
CHECK REGISTER -
JUNE 30, 2012

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
12230	06/13/12	* VOID *	
12231	06/14/12	MOJAVE WATER AGENCY	
		2013 MWA PIPELINE DEBT SVC	73,181.00
12232	06/15/12	AKLUFI AND WYSOCKI	
		LEGAL FEES MAY 2012	701.25
12233	06/15/12	AT&T MOBILITY	
		COMMUNICATION EXP	103.13
12234	06/15/12	BUCKNAM & ASSOCIATES, INC.	
		GRANT CONSULTING FEE	3,730.00
12235	06/15/12	BURRTEC WASTE & RECYLING SVCS	
		TRASH FEE JUNE 2012	79.92
12236	06/15/12	CA SPECIAL DISTRICTS ASSN	
		MCBRIDE & CORL-LORONO	
		LEGISLATIVE DAYS	450.00
12237	06/15/12	CLINICAL LABORATORY OF	
		GEN PHYS,BACT TEST,PLATE CT	
		URANIUM, INORGANIC, GRSS ALPHA	
		GEN PHYS,GEN MINERAL,LANGLIER	1,943.00
12238	06/15/12	GPW I.T.	
		COMPUTER REPAIR	62.50
12239	06/15/12	MOJAVEWIFI.COM LLC	
		INTERNET JUNE 2012	95.00
12240	06/15/12	UNDERGROUND SERVICE ALERT	
		DIG ALERTS, 8 TICKETS	12.00
12241	06/18/12	CANDIDA NEAL	
		ENVIRO STUDY MAY 2012 NON-EPA	1,575.00
12242	06/18/12	CINTAS CORPORATION #150	
		UNIFORM SVC MAY 2012	125.00
12243	06/18/12	CLINICAL LABORATORY OF	
		GEN PHY, EPA 504	
		BACT TEST, PLATE CT	
		PLATE CT, BACT TEST, GEN PHY	401.00
12244	06/18/12	DISCOUNT TIRE CENTERS	
		'10'RANGER 9128 TIRES, OIL CHG	530.98
12245	06/18/12	FRED'S TIRES	
		REPAIR BACKHOE TIRE	42.93
12246	06/18/12	GOODSPEED DISTRIBUTING INC	
		UNLEADED FUEL	1,800.62
12247	06/18/12	GPW I.T.	
		RESET 2 COMPUTERS	
		CUSTOMER COMPUTER SETTINGS	37.00
12248	06/18/12	HI-DESERT STAR	
		CAREERS IN WATER ADVERTISEMENT	
		CSR/ACCT TECH JOB AD	246.82
12249	06/18/12	OFFICE DEPOT	
		PAPER	
		BINDERS	200.95
12250	06/18/12	PETTY CASH	
		MISC PETTY CASH	687.32
12251	06/18/12	THE PRINTER WORKS, INC	

BIGHORN-DESERT VIEW WTR AGENCY
CHECK REGISTER -
JUNE 30, 2012

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
		FORMATTER FOR HP 3005	
		PRINTER REPAIR	98.48
12252	06/18/12	PROTECTION ONE ALARM MONITORNG	
		OFFICE 3RD QTR 2012	
		SHOP 6/27/12-7/25/12	184.52
12253	06/18/12	SDRMA	
		SDRMA MED BENEFITS JULY 2012	6,274.10
12254	06/18/12	USA BLUEBOOK	
		METER SEAL PRESS, LEAD SEALS	
		FOR LOCKOFFS	121.59
12255	06/18/12	VALLEY INDEPENDENT PRINTING	
		DOOR HANGERS	244.86
12267	06/26/12	* VOID *	
12292	06/26/12	ANN SCHNEIDER	
		BALANCE RFND ACCT# 0501107	64.04
12293	06/26/12	BDVWA	
		POST REFUND TO NEW ACCT	
		POST REFUND TO NEW ACCT	40.19
12294	06/26/12	CHRISTI HORN	
		BALANCE RFND ACCT# 0801181	42.40
12295	06/26/12	CHRISTOPHER J. NICHOLS	
		BALANCE RFND ACCT# 1103212	75.26
12296	06/26/12	EARL E III BISHOP	
		BALANCE RFND ACCT# 0902084	20.09
12297	06/26/12	JAMES LUKE SHOVEY	
		BALANCE RFND ACCT# 0408704	83.87
12298	06/26/12	KELLEY TUCKER	
		BALANCE RFND ACCT# 0800915	35.33
12299	06/26/12	MERL ABEL	
		BALANCE RFND ACCT# 0612401	12.76
12300	06/26/12	RIVONNE ALSTED FAMILY TRUST	
		BALANCE RFND ACCT# 0615853	95.93
12301	06/26/12	SHELLY O'MALLEY	
		BALANCE RFND ACCT# 0903461	54.99
12302	06/26/12	BAKERSFIELD WELL & PUMP CO	
		REPAIR WELL #9	600.00
12303	06/26/12	CLINICAL LABORATORY OF	
		IRON, PLATE CT, BACT TEST	
		CUSTOMER TESTING-REIMBURSED	
		URANIUM, GROSS ALPHA, GEN PHY	436.00
12304	06/26/12	CYBERSPIKE	
		WEBSIGHT DESIGN DEPOSIT	
		WEBSITE UPDATES MAR-JUNE 2012	662.50
12305	06/26/12	THE HOME DEPOT #6971	
		SMALL TOOLS	
		OFFICE SUPPLIES & SM TOOLS	905.27
12306	06/26/12	INLAND WATER WORKS	
		INVENTORY	
		INVENTORY	396.52
12307	06/26/12	LAFCO	
		MUNICIPAL SPHERE REVIEW/SOI	
		FINAL INVOICE	1,378.49
12308	06/26/12	OFFICE DEPOT	
		PRINTER INK	86.19

BIGHORN-DESERT VIEW WTR AGENCY
CHECK REGISTER -
JUNE 30, 2012

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
12309	06/26/12	PITNEY BOWES PURCHASE POWER	
		POSTAGE FOR JUNE 2012 (2)	
		POSTAGE FOR JUNE 2012	1,000.00
12310	06/26/12	SOUTHERN CALIFORNIA EDISON	
		POWER EXP MAY 2012	5,529.87
12311	06/26/12	VERIZON CALIFORNIA	
		OFFICE PHONES & AUTO CONTROLS	43.60
12312	06/26/12	WATERLINE TECHNOLOGIES	
		HYPOCHLORITE SOLUTIONS	685.03
12313	06/28/12	BAKERSFIELD WELL & PUMP CO	
		BOOSTER PUMP-C REPLACEMENT	5,053.48
12314	06/28/12	CINTAS CORPORATION #150	
		UNIFORMS SVC JUNE 2012	100.00
12315	06/28/12	CLINICAL LABORATORY OF	
		BACT TEST, PLATE CT	63.00
12316	06/28/12	JUDY CORL-LORONO	
		CSDA LEGISLATIVE DAYS EXP	
		CORL-LORONO	108.85
12317	06/28/12	FIRST NATIONAL BANK OMAHA	
		CREDIT WILL BE ISSUED	
		LEGISLATIVE DAYS MISC	
		MCBRIDE, CORL-LORONO	
		AD HOC AMES, MWA ENG COMM MTG	
		LUNCH	
		MWA BOD AMES - DINNER	
		1/4" FLOOR PLATE	
		MWA TEA & SB COUNTY WATER	
		VISION MTG - DINNER	515.38
12318	06/28/12	FRED PRYOR SEMINARS/CAREER TRK	
		REFERENCE BOOKS- COMPUTER	97.26
12319	06/28/12	GRAINGER	
		WELL CONTROLS TIME DELAY FUSE	
		WELL 9	
		WELL CONTROLS-TIMER	129.00
12320	06/28/12	C & L SERVICE, INC	
		RADIOS	3,621.48
12321	06/28/12	US POST OFFICE	
		POSTAGE FOR CCR 2011	508.62
12322	06/28/12	USA BLUEBOOK	
		NEW CHLORINATORS (2 OF 3)	
		NEW CHLORINATOR	1,552.14
12336	06/30/12	AKLUFI AND WYSOCKI	
		LEGAL JUNE 2012	82.50
12337	06/30/12	BARR LUMBER CO INC	
		PARTS FOR STEEL PLATES PRV #14	25.31
12338	06/30/12	BUCKNAM & ASSOCIATES, INC.	
		GRANT CONSULTING FEES JUNE	
		FINAL	1,312.50
12339	06/30/12	CA DEPT OF PUBLIC HEALTH-OCP	
		GRADE 2 WATER TREATMENT CERT	
		REWAL	60.00
12340	06/30/12	CLINICAL LABORATORY OF	
		PLATE CT, BACT TEST, GEN PHY	33.00
12341	06/30/12	GRISWOLD INDUSTRIES	

BIGHORN-DESERT VIEW WTR AGENCY
CHECK REGISTER -
JUNE 30, 2012

CHECK#	DATE	PAYEE & DESCRIPTION	AMOUNT
		PRV #13	2,449.52
12342	06/30/12	INLAND WATER WORKS	
		FIELD SUPPLIES	71.12
12343	06/30/12	KRIEGER & STEWART, INC	
		DISTRICT ENGINEER DEC-MAY 2012	
		DISTRICT ENGINEER CONSULTING	
		JAN 2012-MAY 2012	14,674.90
12344	06/30/12	OFFICE DEPOT	
		TONER & OFFICE SUPPLIES	166.13
12345	06/30/12	PETTY CASH	
		CSDA CONF EXP FOR CORL-LORONO	
		REPLACE DAMAGED MOUSE	
		WORKBOOTS - BOYD, CARUSO	142.03
12346	06/30/12	SDRMA	
		PRORATED -ADD DODGE RAM 150	128.73
12347	06/30/12	UNDERGROUND SERVICE ALERT	
		DIG ALERTS, 8 TICKETS	12.00
12348	06/30/12	VALLEY INDEPENDENT PRINTING	
		CCR- PRINTNG, FOLDING, TABBING	1,361.96
12349	06/30/12	VERIZON CALIFORNIA	
		OFFICE PHONES & AUTO CONTROLS	546.92
		TOTAL	137,993.13

Prepared By JB
Date 7/12/12
Reviewed By

GENERAL FUND

ASSETS		
CASH & CASH EQUIVALENTS		
01 13120	CASH UNION BANK OF CA	19,845.95
01 13130	CASH CASH DRAWERS BASE FUND	750.00
01 13400	CASH PETTY CASH FUND	800.00
TOTAL CASH & CASH EQUIVALENTS		21,395.95
INVESTMENTS		
01 13303	LAIF UNENCUMBERED CASH FUND	696,737.62
01 13306	LAIF-BASIC FACILITIES CHGS	27,196.00
01 13307	LAIF-CUSTOMER DEPOSITS	50,000.00
01 13309	LAIF EMERGENCY CONTINGENCIES	50,000.00
01 13310	LAIF REPLACE & REFURBISH FUND	50,000.00
TOTAL INVESTMENTS		873,933.62
ACCOUNTS RECEIVABLE, WATER		
01 13710	A/R WATER	163,789.44
01 13713	A/R UNBILLED	59,053.05
01 13950	2009-2010 LIEN RECEIVABLE	23,606.51
01 13951	2010-2011 LIEN RECEIVABLE	21,277.13
TOTAL ACCTS RECEIVABLE, WATER		267,726.13
ACCOUNTS RECEIVABLE, OTHER		
TOTAL ACCTS RECEIVABLE, OTHER		0.00
INVENTORIES		
01 14301	INVENTORY-WATER SYSTEM PARTS	62,910.61
TOTAL INVENTORY		62,910.61
PREPAID EXPENSES		
01 14400	PREPAYMENTS	6,274.10
01 14402	PREPAYMENTS PL & PD LIAB INS	50.00
TOTAL PREPAID EXPENSES		6,324.10
FIXED ASSETS		
01 11130	FA ORGANIZATION	336,271.36
01 11130 01	ACCUMMULATED DEP ORGANIZATION (	85,532.42)
01 11135	FA LAND	12,507.94
01 11140	FA LAND & BUILDINGS	294,654.63
01 11150	FA YARDS	52,957.71
01 11160	FA FUELS TANKS	16,604.30
01 11170	FA WATER SYSTEM	7,710,968.71
01 11180	FA SHOP EQUIPMENT	43,075.46
01 11181	FA MOBILE EQUIPMENT	469,641.19
01 11190	FA OFFICE EQUIPMENT	129,713.10

GENERAL FUND

01 11400	ACCUMULATED DEPRECIATION	(5,400,975.10)	
	TOTAL FIXED ASSETS	3,579,886.88	
WORK IN PROGRESS (FOR OTHERS)			
	TOTAL WORK IN PROGRESS(OTHERS)	0.00	
WORK IN PROGRESS (AGENCY)			
01 12005	WIP EPA GRANT	807,305.43	
01 12044	PRV 13 REFURBISH	2,917.86	
01 12045	PRV 14 REFURBISH	3,327.64	
01 12047	C-BOOSTER STATION PUMP RRPLACE	5,053.48	
	TOTAL WORK IN PROGRESS(AGENCY)	818,604.41	
DEBT ISSUANCE COST			
	TOTAL DEBT ISSUANCE COST	0.00	
	TOTAL ASSETS		5,630,781.70
LIABILITIES			
ACCOUNTS PAYABLE			
01 22700	ACCOUNTS PAYABLE	6,680.87	
	TOTAL ACCOUNTS PAYABLE	6,680.87	
ACCRUED PAYROLL			
01 22900	ACCRUED PAYROLL LIABILITIES	15,402.85	
	TOTAL ACCRUED PAYROLL	15,402.85	
CUSTOMER DEPOSITS			
01 22550	CUSTOMER DEPOSITS PENDING	1,000.00	
01 22600	CUSTOMER DEPOSITS	53,141.39	
	TOTAL CUSTOMER DEPOSITS	54,141.39	
WORK IN PROGRESS DEPOSIT			
	TOTAL WORK IN PROGRESS DEPOSIT	0.00	
LIAB PYBL FRM RESTRICTD ASSETS			
	TOTAL LIAB PYBL FRM REST ASSET	0.00	
LONG TERM DEBT			
01 21101	REVENUE BONDS PAYABLE - DV	260,977.05	
01 22300	REVENUE BONDS PAYABLE - BH	628,000.00	

GENERAL FUND

	TOTAL LONG TERM DEBT		888,977.05	
	TOTAL LIABILITIES			965,202.16
EQUITY				
01 30109		CONTRIBUTED CAPITAL/HUD	291,035.88	
01 30111		FMHA GRANTS	758,297.76	
01 31000		FUND BALANCE	2,855,146.53	
01 31001		FUND BALANCE FEMA & OES	427,895.00	
01 31111		CURR YEAR NET REVENUE/EXPENSE	333,204.37	
	TOTAL EQUITY			4,665,579.54
	TOTAL LIABILITIES & EQUITY			5,630,781.70

Prepared By GB
Date 7/12/12
Reviewed By _____

GENERAL FUND

		BUDGET	REV OR EXP THIS MONTH	REV OR EXP YEAR TO DATE	AVAILABLE	YTD % OF BUDGET
REVENUE						
OPERATING REVENUE						
01 41000	SERVICE LINE INSTALLATION FEES	1,255.00	0.00	0.00	1,255.00	0.00%
01 41001	BASIC FACILITIES CHARGE	4,098.00	0.00	0.00	4,098.00	0.00%
01 41100	INCOME METERED WATER	439,848.00	45,622.80	396,645.17	43,202.83	90.18%
01 41200	INCOME AVAILABILITY/STANDBY	0.00	0.00	0.00	0.00	0.00%
01 41300	BASIC SERVICE CHARGE	594,000.00	48,998.14	595,374.74	-1,374.74	100.23%
01 41400	INCOME METERED BULK WATER	0.00	5,196.31	51,159.62	0.00	0.00%
01 41500	INCOME CONNECT/FACILITY CHARGE	0.00	0.00	0.00	0.00	0.00%
01 41700	INCOME OTHER (OPERATING)	34,480.00	5,866.87	40,134.16	-5,654.16	116.40%
01 41800	WATER SYSTEM IMPROVEMENT JOBS	0.00	0.00	0.00	0.00	0.00%
01 41900	INTERBASIN WATER TRANSFER	0.00	0.00	0.00	0.00	0.00%
TOTAL OPERATING REVENUE		1,073,681.00	105,684.12	1,083,313.69	-9,632.69	100.90%
NON-OPERATING REVENUE						
01 49100	GA02 GEN LEVY IMP DIST A BH	52,100.00	3,060.54	48,578.91	3,521.09	93.24%
01 49101	DA01 DEBT SRVC IMP 1 (BH BOND)	175,900.00	15,698.83	167,678.84	8,221.16	95.33%
01 49102	GA01 GENERAL TAX LEVY (BDV)	52,100.00	2,364.51	46,917.27	5,182.73	90.05%
01 49103	INCOME REVENUE BONDS DV FMHA	49,662.00	8,319.93	50,006.25	-344.25	100.69%
01 49200	INTEREST INCOME	3,600.00	0.00	2,326.10	1,273.90	64.61%
01 49400	MWA PIPELINE SURCHARGE	0.00	0.00	0.00	0.00	0.00%
01 49401	MWA PIPELINE OMP&R	0.00	0.00	0.00	0.00	0.00%
01 49500	ID B DEBT SERVICE	0.00	0.00	0.00	0.00	0.00%
01 49600	INCOME OTHER (NON OPERATING)	0.00	0.00	0.00	0.00	0.00%
01 49601	INCOME-CONT CAPTL WIP(NONOPER)	0.00	0.00	0.00	0.00	0.00%
01 49999	FEDERAL/STATE GRANTS FEMA/OES	0.00	33,915.52	128,216.94	0.00	0.00%
TOTAL NON-OPERATING REVENUE		333,362.00	63,359.33	443,724.31	-110,362.31	133.11%
TOTAL REVENUE		1,407,043.00	169,043.45	1,527,038.00	-119,995.00	108.53%
EXPENSE						
OPERATIONS EXPENSE						
01 54102	OPERATIONS COMPENSATION	145,000.00	19,297.83	144,451.24	548.76	99.62%
01 54103	UNIFORMS	2,525.00	310.65	1,974.64	550.36	78.20%
01 54105	AUTO CONTROLS	2,640.00	253.75	2,578.61	61.39	97.67%
01 54106	VEHICLE/TRACTOR/EQUIP EXPENSE	9,000.00	573.91	4,566.72	4,433.28	50.74%
01 54107	VEHICLE EXPENSE - FUEL	18,000.00	1,800.62	18,233.67	-233.67	101.30%
01 54109	FIELD MATERIALS & SUPPLIES	25,000.00	1,882.12	15,258.38	9,741.62	61.03%
01 54111	WATER TESTING	5,000.00	2,655.00	8,025.63	-3,025.63	160.51%
01 54112	CONTRACTUAL SERV- ENGINEERING	52,000.00	14,674.90	68,040.42	-16,040.42	130.85%
01 54114	WATER SYSTEM REPAIRS	25,000.00	600.00	1,535.34	23,464.66	6.14%
01 54115	BUILDING MAINTENANCE/REPAIR	11,680.00	418.25	12,594.65	-914.65	107.83%

GENERAL FUND

		BUDGET	REV OR EXP THIS MONTH	REV OR EXP YEAR TO DATE	AVAILABLE	YTD % OF BUDGET
01 54117	AMES BASIN MONITORING	0.00	0.00	755.00	0.00	0.00%
01 54119	COMMUNICATIONS EXPENSE	1,680.00	3,828.95	5,422.26	-3,742.26	322.75%
01 54121	DISINFECTION EXPENSE	4,000.00	2,237.17	7,374.64	-3,374.64	184.37%
01 54125	POWER WELLS & PUMPS	59,570.00	10,075.60	58,613.65	956.35	98.39%
01 54130	OTHER OPERATIONS EXPENSES	17,000.00	1,378.49	18,956.25	-1,956.25	111.51%
01 54150	PAYROLL LABOR TO PROJECTS	0.00	-6,576.73	-8,868.97	0.00	0.00%
01 54160	VEH & EQUIP EXPENSE TO PROJECT	0.00	0.00	-333.30	0.00	0.00%
01 54170	INVENTORY EXP TO WIP PROJECTS	0.00	0.00	-574.37	0.00	0.00%
TOTAL OPERATIONS EXPENSE		378,095.00	53,410.51	358,604.46	19,490.54	94.85%
BULK SYSTEM EXPENSE						
01 55001	PUMPING PLANT EXPENSE	8,935.00	1,281.59	6,720.95	2,214.05	75.22%
01 55002	BULK OPERATIONS & MAINTENANCE	5,000.00	0.00	278.96	4,721.04	5.58%
TOTAL BULK SYSTEM EXPENSE		13,935.00	1,281.59	6,999.91	6,935.09	50.23%
ADMINISTRATIVE EXPENSE						
01 56001	DIRECTOR FEES	20,000.00	1,800.00	16,300.00	3,700.00	81.50%
01 56002	DIRECTOR MEETING EXPENSES	11,000.00	704.98	4,885.28	6,114.72	44.41%
01 56003	ADMINISTRATIVE COMPENSATION	260,000.00	29,865.80	219,858.64	40,141.36	84.56%
01 56005	ADMINISTRATIVE MEETING EXPENSE	1,000.00	24.64	195.27	804.73	19.53%
01 56006	CONTRACTUAL SERV-AUDITOR	29,418.00	0.00	26,472.00	2,946.00	89.99%
01 56007	CONTRACTUAL SERV-LEGAL	80,000.00	783.75	18,270.28	61,729.72	22.84%
01 56008	PERS CONTRIBUTION	40,450.00	2,652.15	34,879.60	5,570.40	86.23%
01 56009	PAYROLL TAXES	9,375.00	1,033.10	8,315.64	1,059.36	88.70%
01 56011	TELEPHONE/FAX/INTERNET/WEB	7,420.00	1,086.42	7,021.83	398.17	94.63%
01 56012	MAILING EXPENSES	7,550.00	1,510.00	7,608.06	-58.06	100.77%
01 56014	CONTRACTUAL SERV-OTHER	38,660.00	211.50	15,145.28	23,514.72	39.18%
01 56016	PROPERTY/LIABILITY EXPENSE	30,000.00	2,485.43	26,663.24	3,336.76	88.88%
01 56017	WORKERS COMP INSURANCE	14,500.00	536.00	3,066.42	11,433.58	21.15%
01 56018	DUES & SUBSCRIPTIONS	7,725.00	24.00	9,246.17	-1,521.17	119.69%
01 56020	POWER OFFICES & YARDS	5,200.00	948.06	4,670.67	529.33	89.82%
01 56022	BAD DEBT EXPENSE	43,000.00	0.00	-303.55	43,303.55	-.71%
01 56023	LEAK RELIEF	0.00	0.00	0.00	0.00	0.00%
01 56025	PROPANE	1,800.00	0.00	1,515.63	284.37	84.20%
01 56026	ASSESSMENT EXPENSE	0.00	0.00	0.00	0.00	0.00%
01 56030	OFFICE SUPPLIES	5,000.00	1,020.74	8,997.65	-3,997.65	179.95%
01 56100	EMPLOYEE BENEFITS INSURANCE	70,850.00	-745.74	65,029.24	5,820.76	91.78%
01 56101	FLEXIBLE SPENDING ACCOUNT	0.00	22.43	-.03	0.00	0.00%
01 56102	CHILD DEPENDENT CARE	0.00	0.00	0.00	0.00	0.00%
01 56103	PLAN PARTICIPATION FEE	0.00	1.56	-.11	0.00	0.00%
01 56104	SUPPLEMENTAL LIFE	0.00	7.99	0.06	0.00	0.00%
01 56105	DISABILITY INS	0.00	-36.30	0.04	0.00	0.00%
01 56106	CANCER INS	0.00	0.00	0.00	0.00	0.00%
01 56107	HOSPITAL INS	0.00	0.00	0.00	0.00	0.00%
01 56110	EMPLOYEE EDUCATION	3,300.00	89.00	4,134.31	-834.31	125.28%
01 56150	PAYROLL FRINGE EXP TO PROJECTS	0.00	-802.66	-2,667.11	0.00	0.00%
01 56160	OVERHEAD TO PROJECTS	0.00	-363.87	-2,350.94	0.00	0.00%

GENERAL FUND

		BUDGET	REV OR EXP THIS MONTH	REV OR EXP YEAR TO DATE	AVAILABLE	YTD % OF BUDGET
TOTAL ADMINISTRATIVE EXPENSE		686,248.00	42,858.98	476,953.57	209,294.43	69.50%
TOTAL OPERATING EXPENSE		1,078,278.00	97,551.08	842,557.94	235,720.06	78.14%
NON-OPERATING EXPENSE						
01 56200	OFFICE EQUIPMENT EXPENSE	4,950.00	217.36	6,507.41	-1,557.41	131.46%
01 56300	CUSTOMER RELATIONS	3,000.00	1,609.48	4,782.45	-1,782.45	159.42%
01 56400	OTHER ADMINISTRATIVE EXPENSES	3,000.00	412.26	3,374.67	-374.67	112.49%
01 57000	INTEREST EXPENSE - BH BONDS	0.00	0.00	14,624.99	0.00	0.00%
01 57100	DEPRECIATION EXPENSE	0.00	0.00	214,056.58	0.00	0.00%
01 57110	AMORTIZATION	0.00	0.00	0.00	0.00	0.00%
01 57350	MWA PIPELINE DEBT	0.00	73,181.00	73,181.00	0.00	0.00%
01 57360	MWA PIPELINE FIXED OMP & R	0.00	0.00	0.00	0.00	0.00%
01 58100	ELECTION COSTS	12,000.00	0.00	6,320.00	5,680.00	52.67%
01 58200	EMPLOYEE SOC SEC REFUND	0.00	0.00	0.00	0.00	0.00%
01 59100	INTEREST EXPENSE - DV BONDS	0.00	0.00	29,396.59	0.00	0.00%
01 59400	GAIN (LOSS) ASSET DISPOSAL	0.00	-2,000.00	-968.00	0.00	0.00%
TOTAL NON-OPERATING EXPENSE		22,950.00	73,420.10	351,275.69	-328,325.69	1530.61%
TOTAL EXPENSE		1,101,228.00	170,971.18	1,193,833.63	-92,605.63	108.41%
NET REV/EXP GENERAL FUND		305,815.00	-1,927.73	333,204.37	-27,389.37	108.96%

Prepared By GB
Date 7/12/12
Reviewed By

SOURCES & USES OF FUNDS STATEMENT
GENERAL ACCOUNT (UNION BANK)
Jun-12

SOURCES OF FUNDS:

SERVICE LINE INSTALLATION FEES		
BAD DEBT ADJUSTMENT (CORRECTIONS)		
A/R - WATER	89,369.40	
MISCELLANEOUS REVENUE	1741.12	
1% GENERAL TAX	191.59	
BIGHORN AD VALOREM TAX	1,101.52	
CUSTOMER DEPOSITS	2,500.00	
EPA GRANT REIMBURSEMENT		
TOTAL		**94,903.63**

USE OF FUNDS:

A/R WATER & OTHER	554.86	
CAPITAL PURCHASES (EPA GRANT)	6,653.03	
CAPITAL PURCHASES (C-BOOSTER)	5,053.48	
CAPITAL PURCHASES (PRV 13)	2,449.52	
INVENTORY PURCHASES	396.52	
PIPELINE DEBT	73,181.00	
UNCLAIMED FUNDS		
PAYMENTS FOR SALARIES & WAGES	32,604.87	
OPERATIONS EXPENSES	35,362.00	
ADMINISTRATIVE EXPENSE	14,554.22	
TRANSFER FROM LAIF		
TOTAL		**170,809.50**

Prepared By GB
Date 7/13/12
Reviewed By _____

UNION BANK OF CALIFORNIA
DISBURSEMENTS JUNE 2012

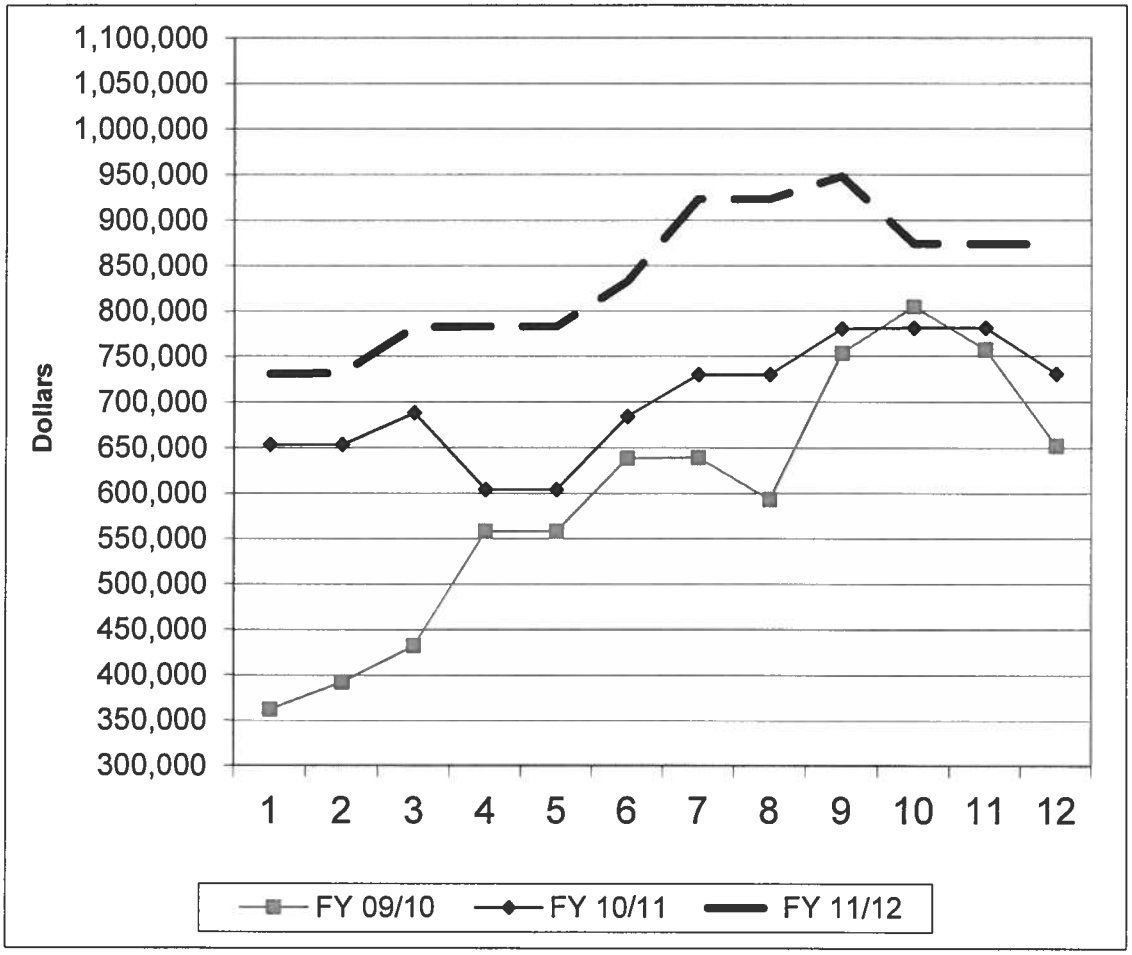
Datastream Check Register	137,993.13		
		137,993.13	
EFT for Vendor Services			
Bank Fees	211.50		
Total EFT for Vendor Services		211.50	
Wages for Paydate 06/07/2012			
State & Fed Taxes plus PERS Paid	5,282.54		
Payroll checks 11216-22 & 11228-29	11,019.56		
Director Per Diem cks 11223-27	660.45		
		16,962.55	
Wages for Paydate 06/21/2012			
State & Fed Taxes plus PERS Paid	5,160.19		
Payroll checks 12256-63 & 12265-66	10,387.78		
Director Per Diem ck 12264	94.35		
		15,642.32	
Transfers to LAIF		-	
Total Disbursements			170,809.50

Prepared By
Date 7/13/12
Reviewed By

Local Agency Investment Fund Balance Timeline

Balance as of

	FY 09/10	FY 10/11	FY 11/12
July	362,520	653,168	730,685
August	392,520	653,168	731,593
September	432,520	688,168	781,593
October	558,397	604,025	782,302
November	558,397	604,025	782,302
December	638,397	684,025	832,302
January	639,258	729,762	923,069
February	593,258	729,762	923,069
March	753,258	779,762	948,069
April	804,136	780,685	873,934
May	757,136	780,685	873,934
June	652,136	730,685	873,934



T:\A-Month End Reports\LAIF Graph

DATE: July 1, 2012
TO: Marina West
FROM: Michelle Corbin
RE: Consumption & Billing Comparison June 2012

Consumption

Residential- North- Bighorn

	Meters	Usage (c.f.)
Book 1	148	389
Book 2	183	0
Book 3	161	0
Book 4	152	41
Book 5	128	0
Book 6	137	0
Total	**909**	**41**

Residential- South- Desert View

	Meters	Usage (c.f.)
Book 7	164	213,502
Book 8	176	286,698
Book 9	188	419,866
Book 10	178	281,799
Book 11	191	318,465
Total	**897**	**1,520,330**

Bulk -Kickapoo, Well 4, Cherokee

	Meters	Usage (c.f.)
Book 30	41	20,063
Book 31	6	6,066
Book 32	4	13,030
Total	**51**	**39,159**

Bulk - Well 10

	Meters	Usage (c.f.)
Book 33	49	21,973
Total	**49**	**21,973**

Construction Meters

	Meters	Usage (c.f.)
Book 40	0	0
Total	**0**	**0**

Billed Consumption	1,581,892
Non Billed Usage	60,483
Total Consumption	**1,642,375**

Active Residential Meters	1,806
Active Bulk Meters	98
Total Active Meters	**1,904**

Billing Comparison

	This Year JUNE 2012	Last Year JUNE 2011	Difference JUNE (Less)
Statistics			
Total Customer Accounts	995	996	(1)
Usage in Cubic Feet	1,581,892	1,369,108	212,784
Percentage Increase/(Decrease)			16%
Revenues			
Water Revenues	50,819.11	44,733.73	6,085.38
Basic Service Charge	49,285.81	49,374.40	(88.59)
Miscellaneous	440.00	185.55	254.45
Delinquent Charges	1,616.51	1,475.41	141.10
Total Operating Revenues	**102,161.43**	**95,769.09**	**6,392.34**
Debt Service Revenues (pass through)			
FMHA **	8,319.93	8,343.27	(23.34)
Total Debt Service Revenues	**8,319.93**	**8,343.27**	**(23.34)**

Additional Information Regarding Pass Through Revenues

*** FMHA annual debt service of $41,150 divided over 6 months equals $6,858*

Total Charges (Proof)	**110,481.36**	**104,112.36**

Date: 7/1/12
To: Marina West
From: Michelle Corbin
Subject: Service Order Report July 2011 through June 2012
Update for June 2012

	J	A	S	O	N	D	J	F	M	A	M	J	YTD
After Hours Call	1	4	3	1	2	2	3	1	0	2	0	6	25
Maint. Bulk Station (New Category)												1	
Close Account	29	31	21	39	13	26	16	21	22	23	28	30	299
Customer Service	8	12	9	6	8	2	2	6	6	4	7	4	74
Customer Leak	1	0	1	0	0	0	1	1	0	0	0	0	4
Destroy Service Line	0	1	0	1	0	0	0	0	0	0	0	0	2
Exchange Meter	2	0	0	0	5	0	3	1	1	1	2	4	19
Fire Flow Test	0	0	0	0	1	0	0	0	0	0	0	1	2
Flush Deadend/Blowoffs	0	0	0	1	0	0	0	0	0	3	1	4	9
Hangtag (not 48 hour)	0	0	0	0	0	7	5	5	7	5	8	10	47
Install New Service	0	0	0	0	0	0	0	0	0	0	0	0	0
Leak Response	4	9	7	2	4	6	2	4	3	3	2	8	54
Lock-Off Service	13	8	16	24	9	23	20	20	20	16	20	12	201
Repair Mainline	0	0	0	0	0	0	2	0	0	0	0	0	2
Miscellaneous	26	7	18	10	7	9	12	12	16	17	11	15	160
Office Repairs	0	0	0	1	2	1	0	1	3	1	0	1	10
Open New Service	30	31	21	39	13	26	16	21	22	23	28	30	300
Pressure Complaint	1	0	0	0	0	1	0	0	0	0	1	0	3
Pull Meter	2	0	0	0	1	0	1	0	0	0	2	0	6
Read Meter	4	0	0	0	0	2	3	3	1	1	1	0	15
Repair Service Line	9	14	7	3	3	2	4	1	6	4	7	11	71
Replace Service Line	3	0	0	0	0	0	0	0	0	0	0	0	3
Reread Meter	35	55	28	20	4	3	10	6	2	14	9	17	203
Safety Meeting (New Category)										1	1	1	
Tamper	3	0	0	0	1	0	1	0	0	1	1	1	8
Unlock Service	4	7	10	11	10	14	20	10	22	9	15	15	147
Valve Maintenance	0	0	0	0	0	0	0	1	0		0	0	1
Verify Meter Locked	10	2	6	7	7	11	10	11	1	11	5	1	82
Well Repairs	0	0	1	0	0	0	0	0	0	2	0	1	4
Water Issues **	0	0	0	0	1	0	0	0	0	1	0	3	5
Hydrant Maint.	1	0	0	0	0	32	23	0	0	0	53	30	139
TOTAL	186	181	148	165	91	167	154	125	132	142	202	206	1899

Fire Hydrant Maintenance and Overhaul activities began in November 2010

*** Includes Water Quality (taste, odor, color) as well as high or low pressure concerns.*

DATE: 6/1/2012

TO: Board of Directors

FROM: Kit Boyd

RE: JUNE

	Cubic Feet Pumped	Total Gallons Pumped	Average GPM	Total Running Time	acre feet
Well 2	0	0	#DIV/0!	0	0.00
Well 3	241,190	1,804,101	375	80.1	5.54
Well 4	0	0	#DIV/0!	0	0.00
Well 6	218,370	1,633,408	437	62.3	5.01
Well 7	390,530	2,921,164	361	135	8.97
Well 8	389,900	2,916,452	928	52.4	8.95
Well 9	719,600	5,382,608	636	141	16.52
Well 10	15,470	115,716	43	45.1	0.36
Total	1,975,060	14,773,449			45.34

Well 2 Bac T sample only

Well 4 is in "inactive" status with the Department of Public Health

New hour meter installed in c booster (west side)

A Boosters	96,820	724,214	126	95.7	
C Boosters	467,300	3,495,404	1,221	47.7	
Total	564,120	4,219,618			

Bighorn-Desert View Water Agency

Board of Directors
Michael McBride, President
Judy Corl-Lorono, Vice President
David Larson, Director
Terry Burkhart, Director
J. Dennis Staley, Director

Marina D West, PG, General Manager

A Public Agency

Agency Office
622 S. Jemez Trail
Yucca Valley, CA 92284-1440

760/364-2315 Phone
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www.bdvwa.org

BOARD OF DIRECTORS' SPECIAL MEETING MINUTES

BOARD MEETING OFFICE
1720 N. Cherokee Trail, Landers, CA 92285
Tuesday, June 19, 2012 - 6:00 p.m.

CALL TO ORDER
Meeting convened by Board President Michael McBride at 6:02 p.m.

PLEDGE OF ALLEGIANCE
Led by Mike Adams.

ROLL CALL
Directors Present:
Terry Burkhart
David Larson
Judy Corl-Lorono
Michael McBride
J. Dennis Staley

Staff Present:
Marina West
Gayla Blanton

APPROVAL OF AGENDA
Motion to approve the agenda.
MSC (Larson/Corl-Lorono) unanimously approved.

RESOLUTION NO. 12R-23 ESTABLISHING THE AGENCY'S APPROPRIATION LIMIT FOR FISCAL YEAR 2012/13 AT $136,651.50
General Manager West gave the staff report and corrected the appropriation limit for fiscal year 2012-2013 at $136,671.50.

Public comments:
No Public Comment

MOTION NO. 12-046

(After brief Board discussion), Vice-President Corl-Lorono made a motion to adopt Resolution 12R-23 Establishing the Agency's Appropriation Limit for Fiscal Year 2012/13 at $136,671.50. Director Burkhart seconded the motion.

MSC[1] (Corl-Lorono/Burkhart) unanimously approved.

RESOLUTION NO. 12R-22 - A RESOLUTION OF THE BOARD OF DIRECTORS OF THE BIGHORN-DESERT VIEW WATER AGENCY PROVIDING FOR THE LEVY AND COLLECTION OF TAXES (SETTING THE AD VALOREM TAX) WITHIN IMPROVEMENT DISTRICT NO. 1 FOR FISCAL YEAR 2012-13 AT $175,900

General Manager West gave the staff report.

No public comment.

MOTION NO. 12-047

(After brief Board discussion), Director Burkhart made a motion to adopt Resolution 12R-22 setting the Ad Valorem Tax at $175,900 for Fiscal Year 2012-2013. The motion was seconded by Vice-President Corl-Lorono.

Roll Call Vote:

Ayes:	Staley, Larson, McBride, Corl-Lorono, Burkhart
Nays:	None
Abstain:	None
Absent:	None

MSC[1] (Burkhart/Corl-Lorono) motion carried.

RESOLUTION NO 12R-24 FIXING AND ADOPTING THE AGENCY BUDGET FOR FISCAL YEAR 2012/13

General Manager West gave the staff report.

Public comment:
Anonymous asked if the revenue had gone down.

MOTION NO. 12-048

(After brief Board discussion), Director Larson made a motion to adopt Resolution No. 12R-24 Fixing and Adopting the Agency Budget for Fiscal Year 2012/13. Director Burkhart seconded the motion.

MSC[1] (Larson/Burkhart) motion carried.

AUTHORIZE PURCHASE OF FIXED FREQUENCY RADIOS FOR AGENCY VEHICLES AND OFFICE FOR A COST ESTIMATE OF $4,000

General Manager West gave the staff report.

Anonymous asked what a narrow band was.

Anonymous described the narrow band frequency and how the compliance was due by 2013.

Anonymous asked how the Agency currently communicates.

MOTION NO. 12-049

(After brief Board discussion), Vice-President Corl-Lorono made a motion to Authorize Purchase of Fixed Frequency Radios for Agency Vehicles and Office for a Cost Estimate of $4,000. Director Larson seconded the motion.

MSC[1] (Corl-Lorono/Larson) unanimously approved.

CALIFORNIA SPECIAL DISTRICTS ASSOCIATION 2012 BOARD ELECTIONS BALLOT
General Manager West gave the staff report.

Public comments:
No Public Comment

MOTION NO. 12-050

(After brief Board discussion), Director Burkhart made a motion to support Elaine Freeman. The motion was seconded by Director Larson
MSC[1] (Burkhart/Larson) unanimously approved.

AUTHORIZE 60-MONTH LEASE AND FIXED ANNUAL SERVICE CONTRACT WITH IMAGE SOURCE FOR A NEW XEROX COPIER
General Manager West gave the staff report.

Anonymous asked if the copier comes with the staples.

MOTION NO. 12-051

(After brief Board discussion), Director Larson made a motion to authorize General Manager to execute a 60-month lease agreement with Image Source for a Xerox WorkCentre 7535PH copier at a cost of $199.82 (+tax) per month; and authorize General Manager to execute a concurrent 60-month fixed cost per copy service agreement for maintenance and supplies which is based on actual copies produced; and dispose of existing Asset No. OE06004 Kyocera KM-C2630D in accordance with Policy No 12R-02 - Fixed Asset and Surplus Property Policy. Vice President Corl-Lorono seconded the motion.

MSC[1] (Larson/Corl-Lorono) unanimously approved.

Adjourned for a Break at 6:55 p.m. - Reconvened from Break at 7:04 p.m.

DISBURSEMENTS MAY 2012

President McBride commented on how happy he was for the final cost of the new Dodge truck.

Public comments:
No Public Comment

MOTION NO. 12-052

Director Burkhart made a motion to ratify the Disbursements (Check Register - Payment of Bills) for May 2012. Vice President Corl-Lorono seconded the motion.

MSC[1] (Burkhart/Corl-Lorono) unanimously approved.

CONSENT ITEMS

a. Financial Statements May 2012
   1. Balance Sheet
   2. Statement of Revenue and Expense
   3. General Account (Union Bank)
   4. Disbursements
   5. Local Agency Investment Fund Balance Timeline

b. Consumption & Billing Comparison Report, May 2012
c. Service Order Report, May 2012

d. Production Report, May 2012
e. Regular Board Meeting Minutes, May 22, 2012

Items a and e are pulled from the Consent Items.
No Public Comment.

MOTION NO. 12-053

Director Burkhart made a motion to approve consent items b - d. The motion was seconded by Vice President Corl-Lorono

MSC[1] (Burkhart/Corl-Lorono) unanimously approved.

MATTERS REMOVED FROM CONSENT ITEMS

Item a - Financial Statements.
No Public Comment

Director Staley inquired about customer deposits. General Manager described the LAIF Policy and how the Agency holds customer deposits until the customer shows good payment history for 12 billing cycles.

MOTION NO. 12-054

Director Burkhart made a motion to approve consent item a. The motion was seconded by Vice President Corl-Lorono

MSC[1] (Burkhart/Corl-Lorono) unanimously approved.

Item e - Regular Board Meeting Minutes, May 22, 2012
No Public Comment

Vice President Corl-Lorono announced the proposal of a focus group regarding County Special Districts Zone W-1 to be discussed at the upcoming PLEGS meeting Thursday, June 21, 2012. She also noted that her name was miss-spelled once within the May 22, 2012 minutes.

MOTION NO. 12-055

Director Burkhart made a motion to approve consent item e. The motion was seconded by Director Larson

MSC[1] (Burkhart/Larson) unanimously approved.

PUBLIC COMMENT PERIOD

Larry Coloumbe thanked the Board of Directors for the Resolution recognizing the time he had spent as a Board member for the Agency.

VERBAL REPORTS

General Manager West reported that they have canceled the July finance meeting. West also reported on the county-wide vision meeting she had recently attended with Directors Burkhart and Staley and the importance of the Agency's involvement.

Director Burkhart stated that she had also attended the county-wide vision meeting. She thought it was enlightening and interesting.

Vice-President Corl-Lorono reported on the pipeline meeting she had attended with General Manager West. She reported that Joshua Basin Water District recharge project is already out to bid and noted that they had purchased their land for that project.
She also noted that Jim Ventura of the Mojave Water Agency stated that our recharge project is unique and will be the model for future grants.

Director Staley reported that he had attended the county-wide vision meeting with General Manager West. He was disappointed and felt the meeting was taken over by audience members and that much time was wasted.

Director Larson reported on the Homestead Valley Community meeting he had recently attended. He stated that HVCC prepared a letter opposing a windmill project. Also, they went over a press release from the County Supervisor Office. The Marine Base is looking to expand the base and the County Supervisors are proposing that the military acquire a permit for the two months that they will need that proposed land wanted for the expansion. The County Supervisors cited the off-road use and the revenue they bring to our area.

President McBride reported he had attended the Joshua Basin Water District Board of Directors meeting. He talked about the difference between our recharge project and Joshua Basin's recharge project.
President McBride also reported on the Mojave Water Agency meeting he attended the month prior and that they had approved the Agency recharge project.

FUTURE AGENDA ITEMS
The property liens public hearing will be brought to the Board on July 24, 2012.

ADJOURNMENT - President McBride adjourned the meeting at 7:43 p.m.

Approved by:

_____
David Larson, Secretary of the Board

MSC[1] – Motion made, seconded, and carried.

BIGHORN DESERT VIEW WATER AGENCY
AGENDA ITEM SUBMITTAL

Meeting Date: July 24, 2012

To: Board of Directors

Budgeted: N/A
Budgeted Amount: N/A

From: Marina D. West

General Counsel Approval: N/A
CEQA Compliance: Mitigated Negative Declaration filed June 29, 2010

Subject: Reche Spreading Grounds Recharge Feasibility Study Completed February 2011

SUMMARY

Todd Engineers completed the Reche Spreading Grounds Recharge Feasibility Study in February 2011. Staff has realized it was never brought before the Board to Receive and File.

This report satisfies the Agency's commitment to the EPA State and Tribal Assistance Grant (EPA STAG) Task 9 and was completed to further evaluate the feasibility of implementing a conjunctive use project at the proposed Pipes Wash recharge area.

RECOMMENDATION

That the Board consider taking the following action(s):

1. Receive and File Reche Spreading Grounds Recharge Feasibility Study, February 2011.

BACKGROUND/ANALYSIS

Todd Engineers completed the Reche Spreading Grounds Recharge Feasibility Study in February 2011. Staff has realized it was never brought before the Board to Receive and File.

This report satisfies the Agency's commitment to the EPA State and Tribal Assistance Grant (EPA STAG) Task 9 and was completed to further evaluate the feasibility of implementing a conjunctive use project at the proposed Pipes Wash recharge area.

The Scope of Work for the Feasibility Study was divided into several tasks:

1. Conduct a field investigation to characterize the geologic and groundwater conditions in the vicinity of the Reche Spreading Grounds; and
2. Develop a numerical groundwater flow model to evaluate potential groundwater impacts from recharge operations, including identification of groundwater flow paths and fate of recharged water; and
3. Communicate with regulatory agencies having oversight responsibilities for the proposed recharge project to identify permitting requirements.

The following are key conclusions that can be made based on the assessment of soil and aquifer properties, evaluation of water quality, completion of a preliminary field investigation and development of numerical groundwater flow model:

1. The vadose (unsaturated) and saturated zones beneath the proposed Ames/Reche Recharge Facility is approximately 230 feet thick and comprised primarily of sand and sufficiently permeable to provide for surface recharge and increased water table elevations.
2. Analysis of soil and aquifer hydraulic properties as well as water table mounding indicate that recharge in the amount of 1,500 Acre Feet per year is feasible and potentially more could be stored on a seasonal basis for recovery.
3. Recharge of State Water Project water is not expected to degrade native groundwater quality in the Reche Subbasin based on a water quality evaluation comparing native groundwater to State Water Project water.

The report was completed in February 2011 but recently staff discovered that the Board had not yet received and filed the report.

PRIOR RELEVANT BOARD ACTION(S)

2/28/2012 Motion No. 12-021 Motion to Receive and File Groundwater Management Plan - Pipes and Reche Groundwater Subbasins - Ames Valley Groundwater Basin San Bernardino, CA - February 2012

1/10/2012 Motion No. 12-004 Motion to approve the Ames/Reche Groundwater Storage and Recovery Program and Management Agreement.

11/30/2011 Motion No. 11-065 Authorize General Manager to execute Change Order No. 4 with Todd Engineers for Water Infrastructure Restoration Program Project Management, Permitting, Hydrogeologic Feasibility Study and Groundwater Management Plan Project Services in the Amount of $12,300; and extend contract completion date to March 30, 2012.

2/8/2011 Motion No. 11-006 Approve Change Order No. 3 to Todd Engineers for project management, permitting, hydrologic feasibility study and groundwater management plan project extending the contract completion date to November 30, 2011 only.

12/28/2010 Motion No. 10-080 Approved the Water Infrastructure Restoration Program/EPA STAG Grant: Corrections to Todd Engineers Change Order Nos. 1 and 2.

10/25/2010 Motion No. 10-071 Board authorization of Change Order No. 2 to Todd Engineers in the amount of $63,900 and Change Order No. 1 to Bucknam & Assoc. in the amount of $20,500 for the EPA STAG grant Ames/Reche Recharge Project

6/29/2010 Resolution No. 10R-04 Approving the Water Infrastructure Restoration Program: Ames/Reche Groundwater Storage and Recovery Program and Pipeline Installation/Replacement Program pursuant to California Environmental Quality Act (CEQA) and state of California CEQA guidelines.

6/15/2010 BOD Public Hearing: Notice of Intent to Adopt a Mitigated Negative Declaration (MND) Pertaining to the Water Infrastructure Restoration Program: Ames/Reche Groundwater Storage and Recovery Program; and Pipeline Installation/Replacement Project

1/26/2010 Board Authorization of Change Order No. 1 to Todd Engineers for an amount not to exceed $53,340 for the Project Management, Permitting, Hydrologic Feasibility Study and Groundwater Management Plan for the Ames/Reche Project.

11/17/2009 Motion to authorize staff to award Professional Services Contract to Todd Engineers/Kennedy/Jenks Consultants for Project Management, Permitting, Hydrologic Feasibility Study and Groundwater Management Plan for the Ames/Means Reche Basin Groundwater Recharge Facility in the amount of $408,463.45.

8/25/2009 Motion to authorize staff to execute Memorandum of Understanding by and between Mojave Water Agency and Bighorn Desert View Water Agency regarding Project Management of Phases for Phase I and II Planning and Design of the Ames-Means Recharge Project (aka Reche Recharge Facility) and accepting financial participation from Mojave Water Agency in the amount of $279,495.

6/16/2008 Motion to authorize staff to seek formal partnerships with interested parties to participate financially in the Agency's EPA Grant Program – Water Infrastructure Restoration Program CEQA/NEPA documentation.
3/28/2006 06R-04 Resolution authorizing General Manager to enter Grant Agreement of $477,000.

Bighorn-Desert View Water Agency

Reche Spreading Grounds Recharge Feasibility Study

February 2011

Todd Engineers
Alameda, California

Reche Spreading Grounds
Recharge Feasibility Study

Prepared for:

Bighorn-Desert View Water Agency

622 S. Jemez Trail

Yucca Valley, California 92284

Prepared by:

Todd Engineers

2490 Mariner Square Loop, Suite 215

Alameda, CA 9501-1080

February 2011

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1. INTRODUCTION

1.1 Background

The Bighorn-Desert View Water Agency (BDVWA) is located in the western Mojave Desert of San Bernardino County (also known as the High Desert). Groundwater is the primary source of water supply in the region, but increasing water demand is expected to stress limited groundwater resources in the future. BDVWA's service area includes most of the Pipes and Reche groundwater subbasins (Study Area), two of seventeen subbasins that comprise the greater USGS Morongo Groundwater Basin and are also included in the DWR Ames Valley Groundwater Basin.

During 2007 and in cooperation from Mojave Water Agency (MWA), BDVWA completed a comprehensive evaluation of hydrogeologic conditions and an assessment of water supply and demand for three High Desert groundwater basins, including the Ames Valley Groundwater Basin (Kennedy/Jenks/Todd LLC, 2007). The scope of the 2007 study was divided into two interrelated tasks: 1) the development of a basin conceptual model describing the basin geology and geometry, groundwater recharge and discharge sources, aquifer parameters, and groundwater occurrence, flow, and quality over time; and 2) an assessment of current and future water supply and demand under varying future climatic conditions. The combination of these two components provided the scientific basis to support future groundwater management decisions.

Results of the 2007 regional study demonstrated the need to augment the water supply of the Ames Valley Basin to satisfy future water demands. Specifically, the study identified an opportunity for a conjunctive use project in the Reche Subbasin involving surface recharge of imported State Water Project (SWP) water delivered through the Morongo Basin Pipeline within Pipes Wash, a dry alluvial wash that traverses the Study Area.

BDVWA initiated the Reche Spreading Grounds Recharge Feasibility Study (Study) to further evaluate the feasibility of implementing a conjunctive use project at the proposed Pipes Wash recharge area, herein referred to as the Reche Spreading Grounds.

1.2 Hydrogeologic Setting

The Pipes and Reche subbasins represent two of seventeen subbasins that comprise the greater USGS Morongo Groundwater Basin (Stamos et al., 2004). The two subbasins are also included in the DWR Ames Valley Groundwater Basin (DWR, 2004) (Figure 1). The region is tectonically active and is characterized by numerous primarily northwest-trending geologic faults that serve as partial barriers to groundwater flow. As shown in Figure 2, the Pipes Subbasin is separated from the neighboring Reche Subbasin to the east by two geologic faults, the Johnson

Valley Fault in the north and inferred Pipes Barrier in the south. Bedrock outcrops of the Little San Bernardino Mountains form the western and southern boundaries of the Pipes Subbasin. The Reche Subbasin is separated from neighboring subbasins by the Johnson Valley Fault and inferred Pipes Barrier to the west, the Kickapoo Fault to the north, and Homestead Valley Fault to the east. A groundwater divide forms the southern subbasin boundary, while bedrock outcrops represent the remaining boundaries.

Consolidated, pre-Tertiary rocks comprise the bedrock underlying the basin fill deposits of the Pipes and Reche subbasins. Bedrock is generally considered to be non water-bearing and constitutes the basin floor. As a result of historical faulting in the area, the elevation of bedrock across the subbasin is highly variable but generally ranges from 300 to 600 feet below ground surface (bgs). Basin fill deposits are represented by Tertiary and Quaternary alluvial and fluvial deposits, including interbedded layers of unconsolidated to semi-consolidated gravel, sand, silt, and clay.

Natural recharge to the Pipes and Reche subbasins is represented primarily by subsurface inflow fed by runoff generated in the upland areas of the adjacent San Bernardino Mountains, where average annual precipitation ranges from 6 to 16 inches. Runoff percolates through the permeable alluvial sediments to the water table and enters the Pipes Subbasin as groundwater. Subsurface inflow is concentrated beneath three dry washes – Pipes Wash, Whalen's Wash, and an unnamed wash associated with Ruby Mountain Creek (Figure 3). Recharge from precipitation that falls directly on the groundwater basin area is considered negligible due to low precipitation (about 4 inches per year) and high evaporation rates.

Groundwater flows in an east/northeast direction across the Pipes and Reche subbasins and exits through specific areas along the Homestead Valley Fault to the Giant Rock Subbasin (Figures 2 and 4). Clay gouge and low permeability zones associated with the Johnson Valley Fault and Pipes Barrier impede groundwater flow from Pipes Subbasin to Reche Subbasin, although groundwater does seep through these partial barriers. The Homestead Valley Fault similarly impedes groundwater flow from the Reche Subbasin to the Giant Rock Subbasin.

Groundwater has served as the sole source of water supply historically in the Study Area. Service areas for three water agencies overlie portions of the Pipes and Reche subbasins, including BDVWA, HDWD, and CSA 70 W-1 (Figure 5). In addition to the water service providers, a small amount of groundwater is pumped from private wells. Several commercial water haulers purchase water from BDVWA and serve outlying areas. Also shown on Figure 5 is the Morongo Basin Pipeline, which conveys SWP water through the High Desert region.

For the past several decades, groundwater pumping has been the major outflow of groundwater from the Pipes and Reche subbasins. BDVWA is the only major pumper in the Pipes Subbasin, while BDVWA, HDWD, and CSA 70 W-1 represent the major pumpers in the Reche Subbasin. Since routine groundwater level monitoring began in 1990, groundwater level declines have

been observed in municipal production wells. Most of the total groundwater level decline in the subbasin occurred from 1993 to 1999 due to increased groundwater production during those years. Since 1999, the average rate of groundwater level declines has decreased in response to decreased groundwater production.

Groundwater quality in the Reche Subbasin is generally high, as represented by average total dissolved solids (TDS) concentrations of less than 300 milligrams per liter (mg/L). No elevated concentrations of inorganic or organic constituents above drinking water standards were identified from available groundwater quality data prior to this Study.

1.3 Study Objectives

The primary purpose of this Study was to evaluate the feasibility of recharging up to 1,500 acre-feet per year (AFY) of imported SWP water through the Reche Spreading Grounds. The 1,500 AFY represents the maximum amount of SWP water likely to be available for recharge in the Reche Subbasin. Specific project objectives included the following:

1. Characterize subsurface conditions beneath the Reche Spreading Grounds to determine the feasibility of long-term infiltration of SWP water
2. Evaluate the hydraulic impacts of recharge operations at various rates and schedules, including water table mounding beneath the spreading grounds and groundwater flow to downgradient discharge points
3. Characterize groundwater quality establishing baseline conditions to evaluate future water quality impacts from recharge operations
4. Identify regulatory permit requirements to construct and operate the Reche Spreading Grounds

1.4 Scope of Work

The scope of work for this Study was divided into the following tasks: 1) conduct a field investigation to characterize the geologic and groundwater conditions in the vicinity of the Reche Spreading Grounds and 2) develop a numerical groundwater flow model to evaluate potential groundwater impacts from recharge operations, including identification of groundwater flow paths and fate of recharged water, and 3) communicate with regulatory agencies having oversight responsibilities for the proposed recharge project to identify permitting requirements.

The field investigation task was comprised of the following technical components:

1. Drill two deep exploratory soil borings and complete each soil boring as a 4-inch diameter, PVC groundwater monitoring well for future monitoring of water levels and quality.

2. Record lithology of formation samples collected during drilling and laboratory analyze selected formation samples to estimate hydraulic properties of the vadose zone beneath the proposed Reche Spreading Grounds.
3. Perform aquifer pumping tests on water supply well HDWD 24 (using one of the new monitoring wells as an observation well) to confirm hydraulic properties including aquifer transmissivity, hydraulic conductivity, and storativity.
4. Collect and analyze groundwater quality samples from both monitoring wells to establish baseline groundwater quality conditions

Figure 6 shows the locations of the two soil borings/monitoring wells (BDVWA MW1 and MW2) and HDWD 24 in relation to the proposed Reche Spreading Grounds. Also shown on the figure are the limits of environmental and biological surveys performed previously in support of this Study.

BDVWA MW1 was drilled primarily to identify the lithologic and hydraulic properties of the vadose zone in beneath the Reche Spreading Grounds. Selected formation samples were submitted to a laboratory for hydraulic testing, and the soil boring was subsequently completed as a monitoring well to confirm the current depth to groundwater and to allow for future monitoring of groundwater levels and water quality. An initial water quality sample was obtained from BDVWA MW1 and laboratory analyzed to characterize the ambient groundwater quality and establish baseline conditions to evaluate potential water quality impacts of recharge operations.

BDVWA MW2 was drilled and installed approximately 38 feet west of HDWD 24, an active water supply well located approximately 4,300 feet northeast (downgradient) of the Reche Spreading Grounds. BDVWA MW2 was drilled in close proximity to HDWD 24 to serve as an observation well during aquifer testing of HDWD 24. A water quality sample was obtained from BDVWA MW2 and analyzed to characterize the water quality at this location.

Results of the field investigation were evaluated and incorporated with other hydrogeologic information in a numerical groundwater flow model of the Pipes and Reche subbasins constructed using the MODFLOW code to complete the recharge feasibility analysis. The model area is shown on Figure 7. The groundwater flow model includes variable aquifer thickness and hydraulic conductivity, hydraulic barriers represented by faults, and time-varying subsurface inflow, septic return flow, production well pumping, and outflow from the Pipes and Reche subbasins. The model was calibrated to steady-state and transient flow conditions and then used to predict water table mounding response to different recharge volumes. Groundwater flowpaths from the recharge site to downgradient areas including local water supply wells were simulated to assess fate of the recharged water.

2. WELL DRILLING, CONSTRUCTION AND DEVELOPMENT

To characterize the geologic and groundwater conditions in the vicinity of the Reche Spreading Grounds, two deep exploratory soil borings were drilled and completed as 4-inch diameter groundwater monitoring wells (BDVWA MW1 and MW2). Selected formation core samples were submitted to a laboratory for analysis of hydraulic properties relevant to the recharge feasibility analysis. Well drilling, construction, and development activities, as well as subsurface conditions encountered and results of hydraulic property testing are described in this section.

2.1 Pre-Drilling Activities

On Monday August 2, 2010, preliminary well drilling sites were verified in the field by staff from Todd Engineers, BDVWA's biological consultant, Circle Mountain Biological Consultants, Inc., BDVWA, and HDWD. Final drilling sites were chosen based on geologic and hydrogeologic criteria, property access, and biological considerations. Final locations for BDVWA MW1 and MW2 are shown on Figure 6. BDVWA MW1 is located approximately 150 feet from the southeastern edge of Pipes Wash. BDVWA MW2 is located approximately 35 feet due west from HDWD 24.

Prior to field mobilization, drilling permits were obtained from San Bernardino County Health Department (Appendix A), and land access was granted by the U.S. Department of the Interior, Bureau of Land Management.

The Study Area includes critical habitat of the endangered Desert Tortoise. As such, protective measures described in the Technical Memorandum *Biological monitoring during well exploratory activities* (Circle Mountain Biological Consultants, Inc., August, 2010) were also taken to ensure no harm to habitat or animals during the field investigation. Protective measures included installation and maintenance of a tortoise fence around each drilling site, and protocol for entry to and exit from the drilling site. All onsite workers reviewed the technical memorandum and attended a protective measures training workshop on August 16, 2010, prior to commencing field activities.

2.2 Technical Approach

The sonic method was chosen to drill the two deep soil borings and install the monitoring wells. The sonic drilling method is known by several names including Rotasonic, Rotosonic, Sonicore, Vibratory, or Resonant Sonic drilling. Sonic drilling is a "dry" drilling method, meaning no materials (air, fluid, or additives) are added to the borehole during drilling. Sonic drilling is a dual-cased drilling system that uses high frequency mechanical vibrations to advance flush-threaded casing while collecting continuous, relatively undisturbed core samples. An added benefit of the sonic drilling method is that there are very few waste products to be disposed of at the completion of the project as nearly all the subsurface materials are preserved in the inner

core casing. Because it does not require the use of downhole drilling muds or other fluids, the sonic method also minimizes the time needed for well development.

During sonic drilling for this investigation, an 8-, 9-, or 10-inch diameter outer casing (i.e., drill string) was vibrated into the ground using a sonic drill head to stabilize and hold open the borehole. An inner casing (i.e., 6-inch core casing) was vibrated ahead of the outer casing to collect undisturbed formation materials as the core sample. At 10-foot intervals, the core barrel was brought up to the surface to retrieve the core sample, which was extruded into visqueen sleeves.

2.3 Drilling

On August 16, 2010, Boart-Longyear Drilling Company, Inc. (Upland, CA) mobilized a track-mounted sonic drill rig and support vehicles to the BDVWA MW1 site. The track-mounted rig was necessary to negotiate the soft terrain of Pipes Wash. Initial drilling was conducted between August 16 and August 22, 2010 to a total depth of about 250 feet. However, while placing the cement seal, attempts to remove the 8-inch diameter casing were unsuccessful, and the PVC well casing eventually broke at about 20 feet above the top of the well screen (at a depth of 210 feet). The entire 8-inch diameter casing could not be removed from the borehole even after over-drilling using 9-inch and 10-inch diameter drill casings. Therefore, on September 7, 2010, the soil boring was abandoned and grouted to the surface. Prior to abandonment a borehole destruction permit was obtained from the San Bernardino County Health Department, along with a new drilling permit for the replacement soil boring/monitoring well. BDVWA MW1 was drilled approximately 20 feet northeast of the original location. BDVWA MW1 was drilled and completed to a total depth of 256 feet (and screened from 236 to 256 feet) between September 7 and 11, 2010.

On September 7, 2010, a second truck-mounted sonic drill rig was mobilized to the BDVWA MW2 site. BDVWA MW2 was drilled to a total depth of 348.5 feet and completed to 348.5 feet (and screened from 298 to 348 feet) between September 7 and 16, 2010.

Figure 8 shows the sonic drilling rig setup at both monitoring well locations.

2.4 Subsurface Lithology

The lithology of each section of core sample was recorded and classified according to the Unified Soil Classification System (USCS) Visual Method by a Professional Geologist.

Figure 9 shows the lithologic log for BDVWA MW1, drilled at the site of the proposed Reche Spreading Grounds. Based on collected continuous core samples, subsurface lithology beneath the proposed recharge site is comprised predominantly of clean fine- to coarse-grained sand. Well- to poorly-graded sand (USCS classifications SW and SP) was logged from the ground surface to a depth of 226 feet bgs. A seven-foot thick low-plasticity silt layer (USCS

classification ML) was logged from 226 to 232, which was underlain by a 3.5-feet thick silty sand layer (USCS classification SM). Well- to poorly-graded sand was logged from 236 to 256.5 feet bgs, the total depth of the well. The water table in BDVWA MW1 was encountered at 236 feet bgs.

Based on the lithology encountered during drilling, no continuous fine-grained soil layers are present in the upper portions of the vadose zone that could significantly impede vertical infiltration beneath the proposed spreading grounds. Minor pooling of recharge water could occur above the finer-grained silt layer at 226 feet bgs, but recharge water would subsequently infiltrate (albeit at a slower rate) through the silt and/or flow sub-horizontally along the top of the silt before ultimately reaching the water table.

Figure 10 shows the lithologic log for BDVWA MW2, located adjacent to HDWD 24. Similar to BDVWA MW1, subsurface lithology in BDVWA MW2 is also predominantly coarse-grained well- to poorly-graded sand (USCS classifications SW and SP) in the upper 206 feet of the vadose zone. Several thin silty sand and low-plasticity silt layers (USCS classifications SM and ML) were logged in the intervals between 206 and 211 feet bgs (SM), 223 and 227 feet bgs (ML), 255 and 262 feet bgs (ML) and 292 and 303 feet bgs (ML-SM). Well- to poorly-graded sand (USCS classifications SW and SP) was logged from 303 to 348.5 feet bgs, the total depth of the well. The water table in BDVWA MW2 was encountered at 298 feet bgs. Well BDVWA MW2 monitors the uppermost 50 feet of the aquifer under semi-confined conditions.

2.5 Hydraulic Properties of Selected Soil Samples

Selected formation sample cores from BDVWA MW1 were sealed in their respective plastic sleeves and transported under chain-of-custody to Keantan Laboratories (Diamond Bar, CA) for analysis of hydraulic properties relevant to the recharge feasibility analysis, including total and effective porosities and vertical hydraulic conductivity (K_V). Core samples were partially re-molded in the laboratory and, therefore, are not considered undisturbed. However, the laboratory measurements of total and effective porosity and K_V are reasonable estimates. Saturated K_V tests were conducted in accordance with ASTM Standard D 5084 using a permeameter in combination with a constant-head system. Total and effective porosity tests were conducted using the ASTM D 854/2937 and SWRCB test methods, respectively. Prior to performing the measurements, Modified Proctor Compaction tests were performed in accordance with the American Society for Testing and Materials (ASTM) Procedure D 1557.

Selected core samples were chosen to ensure representative subsurface lithologies observed during drilling were characterized. In total, six 2.5-foot sample cores from BDVWA MW1 ranging from 10 to 245 feet were selected for laboratory analyses. Vadose zone samples included the following depth intervals: 10-12.5 feet, 25-27.5 feet, 50-52.5 feet, 100-102.5 feet, and 150-152.5 feet. One sample core (242.5-245 feet) just below the water table was also analyzed.

The results of the laboratory analyses of the six core samples are summarized in Table 1. The laboratory report is presented in Appendix B. As shown in the table, the total and effective porosities and vertical hydraulic conductivity of the six samples are relatively uniform. Total porosity ranges from 41 to 45 percent. Effective porosity ranges from 22 to 23 percent. Vertical hydraulic conductivity ranges from 1.60 to 6.21 feet/day with a mean value of 4.13 feet/day. The lowest hydraulic conductivity value was measured for the deepest sample tested (242.5-245 feet). Overall, the physical property values are consistent with the identified soil types of well- to poorly-graded sand.

2.6 Well Construction

BDVWA MW1 and MW2 were constructed using four-inch diameter, flush-threaded, Schedule 80 PVC casing with 0.020-inch slotted screen. Equipment, well materials, and tools that entered the borehole were steam cleaned by a pressure washer before use. No glues or adhesives were used to connect the casing sections or screen. PVC slip caps were used to cover the top of the well and the bottoms of wells. Filter pack material (washed, graded Monterey No.2/12 Lapis Lustre silica sand) was tremied through the annulus between the drill casing and the well casing as the drill casing was lifted. The filter pack extended five feet above the top of the screen. The level of filter pack in the annulus was verified by tag-line measurement during placement.

The well seal consisted of bentonite pellets and cement-bentonite grout . A three-foot bentonite pellet seal was placed directly above the filter pack. The level of the top of the bentonite seal was verified by tag-line measurement. Adequate time for hydration of the pellets was allowed prior to sealing the remaining annulus with cement-bentonite grout. A tremie pipe was used to slowly emplace the cement-bentonite grout seal in 50-foot lifts while the drive casing was removed. Sealing was continued until grout returned to the ground surface. The seal was allowed to cure for at least 24 hours prior to well development. After the grout had set, it was inspected for shrinkage and additional grout was added, as necessary. Monitoring wells were sealed to the ground surface, and a concrete well pad and locking enclosure was constructed at each well head.

Table 2 summarizes the well construction details for BDVWA MW1 and MW2. As shown in the table, BDVWA MW1 was drilled to a total depth of 257 feet bgs. The groundwater level in BDVWA MW1 was estimated at 236 feet based on the water content of formation samples and observation by the geologist and sounding of the water level in the open borehole. The completed total depth of monitoring well BDVWA MW1 is 256 feet, with a screened interval of 236 to 256 feet. For BDVWA MW1, a three-foot above grade stand pipe was set in a 36-inch square by 6-inch thick concrete pad, surrounded by four steel pipe bollards constructed for protection of the wellhead.

BDVWA MW2 was drilled to a total depth of 348.5 feet. The groundwater level in BDVWA MW2 was estimated at 298 feet based on the water content of formation samples and observation by

the geologist and sounding of the water level in the open borehole. The completed total depth of the well was 348 feet, with a screened interval of 298 to 348 feet. BDVWA MW2, was completed at-grade using a flush-mounted well vault set in a 36-inch square by 6-inch thick concrete pad.

2.7 Well Development

The monitoring wells were developed on September 23 and 24, 2010 using a combination of bailing, swabbing, and pumping. Water bailed and pumped from the wells was transported to the BDVWA office in Landers for disposal. Well development records are included in Attachment C. A Smeal Rig with a wire-line winch was used to rapidly bail the wells using a 4-inch diameter by 8- or 5-foot long PVC bailer and swab the wells using a 4-inch diameter surge block. For each well, multiple cycles of bailing and swabbing were performed prior to pumping with a submersible pump. During development of BDVWA MW1, a total of 38 gallons of groundwater were removed by bailing and 200 gallons were removed by pumping. During development of BDVWA MW2, a total of 35 gallons of groundwater were removed by bailing and 338 gallons were removed by pumping. During pumping, water quality parameters including temperature, pH, conductivity, turbidity, dissolved oxygen, and oxidation-reduction potential were monitored. In general, the field-measured water quality parameters stabilized rapidly indicating representative water quality samples could be obtained. Water quality samples were obtained from each monitoring well after development and submitted to an analytical laboratory as described in Section 2.5.

2.8 Hydrogeologic Cross Section

Figure 11 shows a hydrogeologic cross-section through the Pipes and Reche subbasins and the proposed Reche Spreading Grounds, including the well profiles of BDVWA MW1 and MW2, HDWD 24, and other wells in the vicinity (the location of the cross section is shown on Figure 6). The cross-section shows the spatial relationship between the alluvial aquifer in the vicinity of the Reche Spreading Grounds, bedrock, the Pipes Barrier, and the water table. As illustrated on the cross-section, the spreading grounds are located downgradient of the Pipes Barrier (a significant barrier to groundwater flow) and significant storage capacity (greater than 200 feet) exists beneath and adjacent to the proposed spreading grounds.

3. AQUIFER TESTING

Aquifer pumping tests, including a step-drawdown test and constant-discharge test, were performed on HDWD 24 to confirm aquifer hydraulic parameters. These parameters were used to estimate the travel time and ultimate fate of recharged SWP water through the saturated zone (see Section 4 Groundwater Flow Analysis). Although a constant-discharge pumping test conducted for HDWD 24 in 1988 provided some useful information on well specific capacity, time-drawdown data were of poor quality and consequently did not allow for reliable estimation of aquifer parameters. The installation of BDVWA MW2 close to HDWD 24 and subsequent observation of water level drawdown in BDVWA MW2 during the constant-discharge pumping test allowed for a more reliable estimation of aquifer hydraulic parameters.

3.1 Technical Approach

Pumping tests were conducted on HDWD 24 using the existing well pump, wellhead appurtenances, and water conveyance system features. The water generated during the pumping tests was discharged to HDWD's existing conveyance system. Discharge rates were controlled with an in-line gate valve, while discharge measurements were recorded with an in-line totalizing flow meter down-stream from the gate value. A pressure gauge was installed upstream from the gate value to evaluate pump back-pressure during restricted and reduced flows. The flow meter provided both an odometer (cumulative volume) and instantaneous discharge reading from 0 to 3,000 gpm in 50 gpm increments.

Water level measurements on the pumping well and observation well were made before during and after the pumping tests. Water levels were recorded manually in HDWD 24 with an airline installed to a depth of 438 feet (as reported by HDWD). An example of how airline water level measurements are computed follows: a measurement of 62.5 psi represents a water column of 144 feet (62.5 psi x 2.31 feet/psi) above the bottom (438 feet) of the airline tubing and corresponds to a water level depth of 294 feet (438 feet - 144 feet).The airline measurements could not be calibrated since direct water level measurements with an electric sounder was not possible. The airline pressure gauge was divided into increments of one pound per square inch (psi) from 0 to 300 psi; the gauge accuracy is +/- 0.5 psi, or 1.15 feet. Compressed nitrogen gas was used to pressurize the airline.

The water level in BDVWA MW2 was monitored continuously using a Level TROLL 700, 30 psi gauge pressure transducer and data logger (In-Situ, Inc., Fort Collins, CO). Transducer accuracy was confirmed with an electric sounder.

HDWD was requested not to operate HDWD 24 for at least 72 hours prior to testing. On the morning of October 4, 2010, the static water level in HDWD 24 was 294 feet below the top of the pressure gauge. The static water level for BDVWA MW2 was 287.63 feet below the top of

the PVC well casing. The difference in height between the pressure gauge at HDWD 24 and the top of the casing at BDVWA MW2 was approximately 6 feet.

3.2 Well Construction of HDWD 24

HDWD 24 was installed in 1988 by Hacker Drilling, Inc., Hemet, California. A 30-inch diameter surface casing was installed to 50 feet, cemented in place, and serves as the sanitary well seal (DWR Water Well Completion Report No. 192872). A 24-inch diameter boring was drilled to 604 feet by reverse rotary drilling methods. Geophysical logging was conducted on the boring, but the logs are not available. The 14-inch diameter well was constructed with 360 feet (between 220 and 580 feet) of louver-type perforations with 3/32-inch aperture size or slots (GSI/Water, November 30, 2000). The non-pumping or static water level at the time of well construction was about 252 feet below ground surface. Based on the static water level measurement of 294 feet on October 4, 2010, the saturated thickness of the alluvial aquifer adjacent to HDWD 24 is about 290 feet. Other single well pumping tests have been conducted on HDWD 24 but have not generated sufficient information on the well and aquifer parameters (see GSI/Water, November 30, 2000).

BDVWA MW2 is located about 38 feet from HDWD 24. BDVWA MW2 is screened between 298 and 348 feet bgs (50 feet in length) and overlaps about 17 percent of the submerged screened interval of HDWD 24.

3.3 Step-Drawdown Pumping Test Details

On October 4, 2010, a step-drawdown test was performed, during which the well was pumped at rates of between 600 and 800 gallons per minute (gpm). The pump was turned on at 11:51AM PST with the discharge valve wide open. The pumping rate was about 800 gpm. The pumping water level (PWL) in HDWD 24 stabilized at about 302 feet corresponding to a water level drawdown of 8 feet (302 feet - 294 feet). The control valve was throttled down to about 600 gpm, resulting in substantial back-pressure. The pumping water level in HDWD 24 at this reduced rate was about 299 feet, equivalent to about 5 feet of drawdown. The pump was turned off at 2:30 PM. The elapsed time of pumping was 159 minutes. The average pumping rate during the step-drawdown test was 671 gpm. The maximum drawdown observed in BDVWA MW2 during the step-drawdown test was 1.62 feet.

3.4 Constant-Discharge Pumping Test

A 24-hour constant-discharge pumping test was performed on HDWD 24 between 8:00 AM October 5, 2010 and 8:00 AM October 6, 2010. Prior to the test, static water levels in HDWD 24 and BDVWA MW2 were measured at 293 feet and 287.60 feet, respectively. The average discharge rate during the test was 759 gpm. Water level recovery measurements were collected in HDWD 24 and BDVWA MW2 for four hours after the pump was turned off. Water levels in the

pumping well were periodically measured with the airline during the pumping test but were not very useful in estimating well or aquifer parameters. The maximum drawdown in the pumping well was 11 feet at 469 minutes (the accuracy of airline measurements in the pumping well was insufficient to measure water level changes after 469 minutes), and the specific capacity (SC) was 69 gallons per minute per foot of water level drawdown (gpm/ft of dd) after about 8 hours of pumping. The SC provides a normalized measurement of the productivity of a pumping well and is calculated by dividing the discharge in gpm by the feet of drawdown. The SC varies with time and discharge. In general, the greater the elapsed time of pumping the smaller the SC and similarly, the greater the discharge the smaller the SC.

The SC is also related to the aquifer transmissivity and the well efficiency. The transmissivity can be estimated by multiplying the SC at 24-hours by 1,500 for an unconfined aquifer or 2,000 for a confined aquifer (Driscoll, 1986). Estimated transmissivities based on a SC of 69 gpm/ft of dd range between 103,500 and 138,000 gallons per day per foot (gpd/ft), or 13,800 to 18,500 square feet per day (ft^2/day). These values suggest a very productive and prolific aquifer. Using these transmissivities and a saturated thickness of 290 feet, the estimated aquifer hydraulic conductivity ranges between 48 and 64 feet per day (ft/day).

3.5 Results

Plots of drawdown and recovery over time in BDVWA MW2 are presented on Figures 12 through 14. The aquifer test data were analyzed using well hydraulic equations, and estimates were computed for the transmissivity and hydraulic conductivity. Pumping test results also provided an indication of the overall well efficiency of HDWD 24 and distance to hydraulic boundaries.

Figure 12 shows an arithmetic plot of drawdown in observation well BDVWA MW2 during the constant-discharge pumping and recovery test. The test is divided into two parts, the pumping period from 0 to 1,440 minutes and the recovery period between 1,440 minutes and 1,680 minutes. The manually measured data (red) are super-imposed on the continuous transducer/data logger measurements (black). Note that within the first 30 seconds of pumping the water level in BDVWA MW2 declined by one foot. In addition (because of the lack of a foot valve in the pump column), the water in the pump column discharged into the well resulting in a rapid rise of the water level when the pump was turned off. These higher water levels during the recovery period equilibrated quickly to resume the expected recovery trend. Typically, the shape of the pumping period curve is a mirror image of the recovery period curve. The maximum drawdown in BDVWA MW2 during the constant discharge test was about 2.76 feet. After four hours of recovery, the water level had recovered to within 0.87 feet from the initial static water level, or 68 percent recovery.

The drawdown and recovery data for BDVWA MW2 are plotted on semi-logarithmic charts as shown in Figures 13 and 14, respectively. The data were used to estimate aquifer hydraulic

properties using the modified non-equilibrium equation referred to as the Cooper-Jacob method (Driscoll, 1986). Figure 13 shows drawdown during the pumping period. The figure shows that instead of the linear relationship expected for a homogeneous aquifer of infinite lateral extent, the drawdown curve continues to steepen with time. This steepening suggests that the cone of depression has encountered multiple barrier boundaries. The barrier boundaries define the areal extent of the aquifer. This response is consistent with the hydrogeologic conceptual model of this area of the Reche Subbasin, where the alluvial aquifer is unsaturated (i.e., no-flow boundary) both southeast of HDWD 24 beneath the Mesa and to the east, where bedrock is encountered. Casing storage (Schafer, 1978 and Driscoll, 1986) of the pumping well can affect observation well data and was estimated to occur prior to 5 minutes. In addition, the pumping discharge fluctuated during the first few minutes of pumping due to the reduced pressure in the conveyance system. Because of these limitations, early time-drawdown data prior to 10 minutes was not used in the pumping test analysis.

A relatively short and linear segment between 10 and 100 minutes of pumping suggests that the transmissivity is 489,000 gpd/ft, or 65,400 ft^2/day (Figure 13). The period between 40 and 400 minutes indicates a transmissivity of 334,000 gpd/ft, or 44,700 ft^2/day. Using these transmissivities and a saturated thickness of 290 feet, the hydraulic conductivity ranges from 154 to 226 ft/day. The Theis method analysis of the pumping period data indicates that the transmissivity is 300,000 gpd/ft, or 40,100 ft^2/day. Based on the transmissivity estimated using the Theis method and a saturated thickness of 290 feet, the hydraulic conductivity is 138 ft/day.

Analysis of recovery period data (Figure 14) plotted as elapsed time since pumping began divided by the elapsed time since pumping stopped suggests a similar transmissivity of 466,000 gpd/ft or 62,300 ft^2/day. Using this transmissivity and a saturated thickness of 290 feet, the hydraulic conductivity is 215 ft/day. Note that the early recovery data (right side of Figure 14), after the pump was turned off, shows the systematic effect of the water released from the pump column due to the lack an effective foot valve; this recovery anomaly lasted for about 10 minutes.

The well efficiency of the pumping well can be estimated by dividing the transmissivity derived from the actual SC of the pumping well (13,800 to 18,500 ft^2/day) by the transmissivity derived from time-drawdown analysis methods (40,100 ft^2/day [Theis method] to 65,400 ft^2/day [Cooper-Jacob method]). Comparison of the estimated transmissivity suggests that HDWD 24 is between 30 and 50 percent efficient. However, it is noted that well efficiencies are probably underestimated due to the influence of the hydraulic barriers on actual SC data.

Note that a reliable storage coefficient could not be estimated from this pumping test because of the early time- drawdown limitations and boundary conditions encountered. The aquifer tapped by HDWD 24 is probably unconfined with a specific yield between 10 and 15 percent.

4. GROUNDWATER MODELING AND ANALYSIS

A water balance and numerical groundwater flow model was constructed and used to assist in characterization of groundwater flow conditions and recharge basin feasibility. The analysis was conducted using the MODFLOW and MODPATH models. The objectives of the modeling were to evaluate hydraulic impacts associated with future operation of the Reche Spreading Grounds, including prediction of water table mounding beneath the recharge site and groundwater flow paths from the site to downgradient discharge locations.

Complete documentation of the model input, construction, calibration process, and results is included in Appendix E. The model area is shown on Figure 7. The model area includes key portions of the Pipes and Reche groundwater subbasins encompassing the spreading grounds, and active water supply wells, including HDWD Well 24, BDVWA Wells 2, 3, 4, 6, 7, 8, and 9, and CSA 70 W-1 Wells 1, 2, and 3. Aquifer properties including heterogeneous aquifer permeability, thickness, and storage coefficients were simulated appropriately across the model area, and appropriate boundary conditions were also developed. The model was calibrated to observed water levels between 1995 and 2009. Once calibrated, planned recharge operations were simulated using the flow model. Water table mounding heights over time and flow paths and travel times between the recharge site and wells were simulated using anticipated recharge and pumping rates and schedules.

4.1 Spreading Basin Size and Capacity

The infiltration rate needed to accept 1,500 AF over a six-month recharge period via a surface spreading grounds area of five acres was compared with the estimated vertical hydraulic conductivity of selected vadose zone soil samples. For a five-acre spreading basin area recharging 1,500 AF/six months, the estimated infiltration rate is 1.64 feet/day. Hydraulic conductivities of the vadose zone soil samples averaged 4.13 feet/day (Table 2). Under a hydraulic gradient of 1 (which is likely to occur for ponded water conditions), the infiltration capacity is equivalent to the hydraulic conductivity. Therefore, the infiltration capacity of the soil materials beneath the proposed recharge site exceeds the planned operational infiltration rate of the five-acre recharge site, and the site is capable of accepting 1,500 AF over a period of six months.

4.2 Flow Modeling Results

Details of the construction, calibration, and results of the Pipes and Reche groundwater basin MODFLOW model are presented in Appendix E. The final model was developed after preliminary and intermediate calibration runs, based on the initial results and modified based on observed model response to input parameter changes. In summary, good calibration quality was achieved with relatively small differences between observed and simulated heads in space

and time. The final calibrated steady state models simulate flows within and between the Pipes and Reche subbasins, which are consistent with observed conditions.

The model was subsequently used to predict the mound heights, flow paths, and travel times of recharged water under a 1,500 AF/six month operational scenario. A five-acre recharge area was simulated in Pipes Wash, and transient flow was simulated in response to multiple recharge events. The initial operational scenario simulated was four 1,500 AF/six-month recharge events over alternate years. Groundwater elevations and flowpaths were simulated over time and used to assess performance of the recharge facility and groundwater basin response.

4.3 Groundwater Mounding

For a surface recharge project, water levels rise beneath the recharge area creating a groundwater mound. The height and extent of this mound varies over time with hydraulic properties of the aquifer and the amount of water being recharged. The development of a groundwater mound beneath the spreading grounds was evaluated using the MODFLOW model. The model estimates the groundwater elevations and corresponding height of the groundwater recharge mound as a function of time and distance from the recharge area.

The calculated heights and distribution of the mound at the end of the first six-month recharge period is illustrated on Figure 15. The mound height over time directly beneath the spreading basin is illustrated on Figure 16. As shown on the figures, the maximum mound height beneath the spreading basin is approximately 19 feet after the first six-month recharge period, 20 feet after the second six-month recharge period, and 22 feet after the third six-month recharge period. Groundwater levels are expected to increase 1 foot or more up to 8,000 feet to the northwest of the spreading grounds. As shown on Figure 15, water levels contours stack up against Pipes Barrier due to the low permeability of the fault zone. The predicted maximum groundwater level rise is approximately 5 feet at HDWD 24 (4,300 feet from the center of the spreading grounds).

4.4 Groundwater Flowpaths

Figure 17 shows the simulated groundwater flowpaths from the Reche Spreading Grounds during and after three 6-month recharge events. As shown on the figure, recharge water diverges radially away from the recharge area before trending northeast in the general direction of HDWD 24. The travel time between the recharge site and HDWD 24 is approximately 2 to 3 years.

5. WATER QUALITY EVALUATION

Potential impacts to groundwater quality from proposed recharge of SWP water at the Reche Spreading Grounds were evaluated for this Study. The process of mixing imported SWP water with native groundwater could potentially impact groundwater quality in the Reche Subbasin by introducing contaminants in SWP water to groundwater and/or inducing geochemical reactions in the subsurface that precipitate or dissolve minerals present in the aquifer formation, groundwater, or recharge water. In addition, as imported SWP water percolates through the base of the spreading grounds, recharged SWP water may initially mobilize and transport any soluble salts and/or contaminants in the underlying unsaturated zone to the water table. Finally, as observed in the Warren Subbasin south of the Study Area (Nishikawa et al., 2003), rising groundwater due to enhanced recharge (groundwater mounding) can also entrain naturally occurring or anthropogenic contaminants in the unsaturated zone (e.g., nitrate) or cause migration of low quality water away from the spreading grounds.

This section presents the water quality results for samples collected from BDVWA MW1 and MW2 for this Study. These results, in combination water quality data for BDVWA MW1 and MW2 and major production wells in the Reche Subbasin, were used to evaluate each of the potential water quality impacts from recharging SWP water.

5.1 Water Quality Sampling and Analysis for BDVWA MW1 and MW2

After installation and development of the monitoring wells, groundwater quality samples were obtained from BDVWA MW1 and MW2 on September 23 and 24, 2010, respectively. The sample from monitoring well BDVWA MW1 was analyzed for the following water quality parameters:

- General Chemicals (inorganic parameters and major anions)
- Metals (heavy metals and major cations)
- Volatile Organic Compounds (VOCs)
- Semi-volatile Organic Compounds (SVOCs)
- Pesticides and Herbicides
- Radionuclide's including Gross Alpha and Beta Radiation, Uranium, Radium 226 and 228, Strontium, and Tritium

The sample from monitoring well BDVWA MW2 was analyzed for general chemicals, metals, and gross alpha radiation only. The water samples were transported under chain-of-custody to Clinical Laboratory San Bernardino (Grand Terrace, CA).

Table 4 summarizes the water quality sampling results for BDVWA MW1 and MW2; the Certified Analytical Laboratory Report is included as Attachment F. Ambient groundwater quality beneath the proposed spreading grounds as measured in the water quality samples from

BDVWA MW1 and MW2 is generally good, with relatively low TDS, nitrates, and heavy metals. TDS concentrations in BDVWA MW1 and MW2 are 270 and 320 milligrams per liter (mg/L), respectively. Low concentrations of two volatile organic compounds TCE and PCE were detected in the sample from BDVWA MW1 but the concentrations were below State and Federal MCLs. Detectable concentrations of uranium and gross alpha radiation were also measured in the water quality samples, but the concentrations were below State and Federal MCLs.

5.2 Impacts of Mixing SWP Water and Native Groundwater

The predominant beneficial use of groundwater in the Study Area is municipal water supply. Therefore, the significance of potential impacts is defined by drinking water standards, including maximum contaminant levels (MCLs) and health advisory levels. Primary MCLs are enforceable standards based on potential impacts to human health; secondary MCLs are associated with aesthetic impacts such as taste, color, or odor, but are not considered to be a risk to human health.

For an assessment of the potential groundwater quality impacts associated with mixing SWP water and native groundwater, SWP water quality data were obtained, evaluated, and compared to current groundwater quality in the Reche Subbasin.

5.2.1 SWP Water Quality

The quality of SWP water was evaluated using analytical results from discrete monthly grab samples and continuous automated station water quality data downloaded from the California Department of Water Resources Division of Operations and Maintenance State Water Project website. Based on communications with MWA, it was determined that the Check 41 water quality monitoring station located on the California Aqueduct is representative of current SWP water quality for the Morongo Basin Pipeline.

Inorganic and Physical Water Quality

Table 5 summarizes the inorganic water quality data for monthly grab water quality samples collected at SWP Check 41 from January 2008 through September 2009. As shown in the table, detected concentrations of constituents in SWP water analyzed at Check 41 are generally below their respective primary or secondary MCL. Manganese was detected in one month above its secondary MCL, but for the other 18 months was not detected above its reporting limit. In addition, turbidity in SWP water is consistently detected above the secondary MCL; however, turbidity is not expected to impact groundwater quality, as any suspended solids in SWP water will be filtered out by the aquifer formation prior to reaching the groundwater table. The average TDS concentration and specific conductance (or electrical conductivity (EC)) of SWP from

January 2008 to September 2009 was 286 milligrams per liter (mg/L) and 495 microSiemens per centimeter (μS/cm), respectively.

To characterize the inorganic water chemistry for SWP, major cation and anion data are plotted on a Trilinear Diagram, shown on Figure 18. Data from separate samples are grouped together in the yellow highlighted fields on the three portions of the plot. These data provide information on the general water chemistry of SWP and indicate that SWP water is generally neutral and can be categorized as sodium/chloride-type water.

In addition to monthly grab samples, DWR also continuously monitors for several physical properties in SWP water, including EC and pH. Using a conversion factor, EC values can also be used to estimate TDS, providing data to supplement the measured TDS concentrations in the monthly grab samples. Figure 6 shows the daily EC data and estimated TDS values for SWP water at Check 41 from January 2000 to December 2009. As shown on the figure, the EC varied during this period generally between 300 and 700 μS/cm, with an average of 452 μS/cm, similar to average EC in 2008 and 2009. The average EC value equates to a TDS concentration of 262 mg/L (based on the average conversion factor of 0.58 EC (μS/cm) = TDS (mg/L) derived from monthly grab sample data). The average pH value of SWP water at Check 41 from January 2000 to December 2009 was 8.05.

Organic Water Quality

DWR routinely monitors SWP water for over 150 organic compounds, including pesticides, herbicides, and volatile organic compounds (VOCs). Grab samples are collected and analyzed in March, June, and September of each year. Based on water quality results obtained from eight quarterly sampling events from March 2007 through September 2009, only two organic contaminants (the herbicide simazine and the pesticide diuron) were detected in four of the eight quarterly sampling events of SWP water at Check 41. Detected concentrations of simazine were 0.03, 0.05, 0.1, and 3.35 micrograms per liter (μg/L), which are below the MCL for simazine of 4 μg/L. Currently, no MCL has been established for diuron; detected concentrations of diuron in SWP water at Check 41 were 0.25, 0.99, 1.65 and 7.72 μg/L, which are below the USEPA maximum health advisory level of 10 μg/L.

5.2.2 Groundwater Quality in the Reche Subbasin

Groundwater quality in the Reche Subbasin was characterized from water quality samples collected from BDVWA MW1 and MW2 for this Study and from 2008 and 2009 groundwater quality data for the seven major water supply wells located in the subbasin. Water supply wells include those operated by BDVWA, CSA 70 W-1, and HDWD.

Inorganic and Physical Water Quality

Table 6 summarizes the most recent inorganic and physical water quality data from BDVWA MW1 and MW2 and for major production wells in the Reche Subbasin. The table shows that inorganic and physical water quality in BDVWA MW1 and MW2 and in major water supply wells in the Reche Subbasin are very similar. Overall, groundwater quality in the Reche Subbasin is high, with all constituents meeting primary and secondary drinking water standards. TDS concentrations in all wells range from 180 to 320 mg/L, with an average TDS concentration of 253 mg/L. Based on the comparison of TDS concentrations for SWP water in the Morongo Basin Pipeline (average TDS concentration of 262 mg/L since 2000) and native groundwater, recharge of SWP water is not expected to significantly increase the concentration of soluble salts in the Reche Subbasin. These findings are in agreement with a recent study completed by MWA (2007) that evaluated the effect of importing 1,000 AFY of SWP water on TDS concentrations in the Ames Valley Basin and found that there would be effectively no change in TDS concentrations in the Ames Valley Basin from importation of SWP water. In addition, the pH of native groundwater in the Reche Subbasin ranges from 7.8 to 8.1, similar to the average pH of SWP water (8.05). Therefore, recharge of SWP water is not expected to change the pH of native groundwater significantly.

Figure 18 shows the inorganic water quality data for production wells in the Reche Subbasin compared with SWP water on a Trilinear Diagram. The figure shows that although the inorganic composition of native groundwater and SWP water are slightly different, mixing of the two waters will result in a relatively neutral water type and, as such, is not expected to degrade groundwater quality in the Reche Subbasin (a neutral water type is indicated by water chemistry that plots in the central portion of the center diamond on Figure 18). Water chemistry resulting from the mixing of SWP water and local groundwater will plot along the mixing lines in between the two water signatures). Collectively, these data do not indicate a significant impact to groundwater quality from the mixing of SWP water in the Reche Subbasin.

Organic Water Quality

Based on results of 2008 and 2009 water quality results from major water supply wells, no organic compounds, including VOCs, pesticides, and herbicides, have been detected in groundwater. Low concentrations of two volatile organic compounds (TCE and PCE) were detected in the sample collected from BDVWA MW1, but concentrations are below State and Federal MCLs.

As described in Section 5.2.1, only two organic constituents (simazine and diuron) have been detected during four of last eight quarterly sampling events of SWP water at Check 41. However, in each case, detected concentrations are below respective MCL and health advisory levels and are not expected to significantly impact groundwater quality.

Radionuclide Water Quality

Detectable concentrations of uranium and gross alpha radiation were also measured in water quality samples from BDVWA MW1 and MW2, but concentrations are below State and Federal MCLs.

5.3 Impacts from Percolation of SWP Water

Previous studies have demonstrated that soils in environments with limited areal recharge like the High Desert may contain naturally elevated concentrations of salts (Graham et al., 2008, Izbicki, 2008). Naturally-occurring nitrate in soil is a concern in some High Desert environments. These constituents and others can be leached by artificially recharged water and transported to groundwater (Izbicki, 2008). Previous researchers have identified such conditions in areas capped by desert pavement (Graham et al., 2008) or where geomorphic process lead to channel abandonment and stranding of infiltrated water in the unsaturated zone (Izbicki, 2007). Although the possibility of naturally occurring salts including nitrate in the unsaturated zone beneath Pipes Wash is not precluded, desert pavement does not occur within Pipes Wash, and Pipes Wash is deeply incised through the landscape, indicating that the wash has not migrated significantly from its current position in a relatively long time. In addition, this leaching process is most likely to occur during the initial period (or first flush) of recharge water through the unsaturated zone and would not represent a sustained source of constituents, even if present. Monitoring wells BDVWA MW1 and MW2 have also been installed to monitor changes in groundwater quality in the future.

Previous studies have also found that concentrated anthropogenic contaminants in the unsaturated zone (e.g., septic tank return flows) can be leached by artificially recharged water to groundwater (Umari, et al., 1993). The potential for recharge water percolating through the unsaturated zone to leach anthropogenic contaminants, such as nitrate, beneath the proposed spreading basin is likely to be low, because there is no development within Pipes Wash. Results of queries from the State Water Resources Control Board (SWRCB) *Geotracker* and Department of Toxic Substances Control (DTSC) *Envirostor* databases also show that there are currently no active regulated environmental contamination facilities within the entire Ames Valley Groundwater Basin. Historically, there have been two minor soil contamination cases located more than 2 miles west of the proposed spreading grounds: 1) a diesel tank leak at Hero Market located at 1160 Old Woman Springs Road in 2004, and 2) a gasoline spill as a result of vandalism at the BDVWA maintenance yard in 2009. In both instances, contamination was limited to shallow soils and immediately remediated. Based on these findings, the potential for groundwater impacts related to mobilized subsurface contamination from industrial facilities is considered insignificant.

In addition to the potential leaching of constituents in the vadose zone, percolation of constituents in SWP water could result in higher dissolved organic carbon (DOC) in

groundwater. If sufficiently high, this condition could result in elevated trihalomethanes (TTHMs), a by-product of drinking water chlorination, once groundwater is extracted and treated. DOC values for SWP water are shown on Table 5 and average 2.3 mg/L, a value typical for surface waters. These concentrations are expected to decline prior to reaching groundwater due to bacterial assimilation of DOC in the relatively thick vadose zone. In addition, HDWD has been recharging SWP water in the nearby Warren Valley Subbasin since 1995, and TTHM concentrations in HDWD's water supply have always met drinking water standards (HDWD, 2009).

5.4 Impacts from Groundwater Mounding

Nishikawa et al. (2003) found that high nitrate concentrations in groundwater following recharge of SWP water through spreading basins in the Warren Subbasin were caused by the entrainment of septic tank return flows (septage) by a rising groundwater table. Groundwater elevations adjacent to spreading basins in the Warren Subbasin were found to have increased as much as 250 feet.

To evaluate the potential for such rising groundwater associated with recharge operations to entrain contaminants in the unsaturated zone, the MODFLOW model was used to predict the height of the groundwater mound over time, as described in Section 4.3. Conceptually, the imported SWP water percolates through the unsaturated zone to the water table, resulting in a rise in water levels beneath and in the vicinity of the spreading grounds, creating a groundwater mound. Once recharge is halted, the groundwater mound will dissipate. Based on the results of recharge model, only a few feet of mounding are predicted for recharge of 1,500 AF over six months. In comparison to observed groundwater level declines in some wells within the Reche Subbasin over the past 20 years (greater than 25 feet in some areas), recharge operations are not expected to raise groundwater levels even above historical elevations. As such, entrainment of constituents that have not been saturated in the past is not likely to occur.

A review of a recent aerial photograph of the Project area indicates less than about 10 parcels on the outer edge of the potential zone of influence that may have a septic tank. Additionally, as mentioned previously, there are no regulated environmental sites within the Ames Valley Groundwater Basin. Thus, the risk of industrial contamination becoming entrained or mobilized as a result of proposed recharge operations is judged to be insignificant. However, it may be prudent to conduct a septic tank survey in the immediate Project area to provide baseline conditions prior to recharge.

6. REGULATORY PERMIT REQUIREMENTS

6.1 Regulatory Agencies

Todd Engineers and Kennedy/Jenks contacted the local, State, and Federal Regulatory Agencies with oversight responsibilities for the Reche recharge project to inventory and itemize the permits from each Agency required to construct and operate the Reche Spreading Grounds. The following summarizes the required or potentially required permits by agency. Some of this information was previously provided to BDVWA in a Memorandum dated April 29, 2010 and subsequent emails.

County of San Bernardino

The County of San Bernardino has several agencies that may have regulatory oversight responsibilities for this project. If construction of a pipeline will be necessary along the right-of-way of any county dedicated road, then the County of San Bernardino, Public Works Department, Transportation Operations Division, Transportation Permit Section will be responsible for issuing a permit. However, in Township 2 N, Range 5 E, Section 24, the road identified as Winters Road, is not fully dedicated to the County of San Bernardino. This means that the County has only limited jurisdiction over this road. The letter requesting a "no objection permit" was submitted to the County.

The County of San Bernardino, Public Works Department, Transportation Operations Division, Flood Control District was contacted regarding any rights-of-way that might be impacted by the construction of an infiltration basin within Pipes Wash. The County Flood Control District does not have any rights-of-way in the Pipes Wash area and as such they do not require any permits for work within the Pipes Wash.

The County of San Bernardino, Planning Department, Land Development, was contacted. They indicated that they had no additional comments except to ensure that adequate provisions should be made to intercept and conduct the tributary off-site and on-site drainage flows around and though the site in a manner that will not adversely affect adjacent or downstream properties at the time the site is developed.

Mojave Desert Air Quality Management District

The Mojave Desert AQMD is responsible for any projects that may generate or control air pollutants. Since this project may generate dust during the construction of a surface impoundment, the District was contacted to see what requirements may be applicable. If the surface impoundment is greater than 100 acres, then a Dust Control Plan will be required for the project. Otherwise, the project is exempt from specific regulations although the construction may be subject to general best management practices to reduce air pollution affecting neighboring properties.

California Department of Public Health

This Agency regulates the treatment of drinking water once it is removed from the groundwater basin. It does not regulate the discharge into the groundwater recharge basin. No permits are required from the Department of Public Health to construct or operate the spreading grounds.

California Department of Fish and Game

This Agency regulates activities that may impact the fish and game resources of the State of California. As such, they will issue a "stream bed alteration" permit for any work in Pipes Wash, and potentially "take" permits for plants and desert tortoise, if required.

California Regional Water Quality Control Board (Region 7, Colorado River)

The Colorado River RWQCB will be responsible for issuing a permit to discharge water to either Pipes Wash or to the land. During the construction of monitoring wells, if any dewatering activities resulted in the discharge of well purge water to the land, a RWQCB permit would have been required. Such a discharge did not occur during well construction, as water was contained and discharged offsite, so no permit was needed. For future discharges into the Pipes Wash, the General Order No. R7-2009-0300 issued by the RWQCB may be applicable. The Mojave Water Agency may obtain a general permit on behalf of BDVWA for recharge operations.

U.S. Army Corps of Engineers (ACOE)

The ACOE suggested that a request be sent to them asking whether Pipes Wash lies within the "Jurisdictional Waters of the Corps" or whether they are "isolated waters". If Pipes Wash is subject to the Corps "Jurisdictional Waters", then any activity such as constructing an infiltration basin will be subject to the Corps Nationwide 404 permit. If Pipes Wash is determined to be an "isolated water", then the ACOE does not have any jurisdiction unless the project involves filling more than ½ acre of land. Then an individual 404 permit would be required.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service office responsible for the Study Area is the Ventura Office. They believe that the Desert Tortoise is the major endangered species that may be present in the area. Another threatened species is the Parish's Daisy, a plant that is associated with carbonate formation and that may be washed down the various washes. The Agency indicated that once the project is authorized to proceed, a formal request of the presence of Endangered and Threatened Species within the project area should be submitted to their office. If this project proceeds on BLM land, the BLM must request a Section 7 Consultation with the US Fish and Wildlife Service. One of their concerns will be with the potential impact to wildlife species from the construction of this project.

U.S. Bureau of Land Management

This agency was not contacted by Todd Engineers or Kennedy/Jenks because BVWDA directly communicated with the U.S. Bureau of Land Management. Todd Engineers did comply with the desert tortoise mitigation measures during field investigation activities as required by BLM.

6.2 Regulatory Permit Status

US Army Corps of Engineers

The US ACE has been requested to make a determination as to whether Pipes Wash is a "jurisdictional water" under the Corps authority. On November 5, 2010 ACOE staff indicated they would be providing a letter within 21 days indicating the area is "non jurisdictional".

U.S. Fish and Wildlife Service and U.S. Bureau of Land Management

A Federal Endangered Species "Take" permit (A Section 10 permit) is required for any activity that occurs on Federal Lands (e.g., Bureau of Land Management) and that involves the destruction or "taking" of an endangered or threatened species (Desert Tortoise, etc.). This permit is called a Consultation Permit. BDVWA is directly negotiating this permit with the Bureau of Land Management.

Final permits or confirmations that permits will not be required will be obtained from agencies after design specifications are completed.

7. CONCLUSIONS

The following conclusions can be made based on the assessment of soil and aquifer properties, evaluation of water quality, performance of a preliminary field investigation, development of a site conceptual model and numerical groundwater flow model, and analysis of available storage and groundwater mounding.

- The vadose (unsaturated) and saturated zones beneath the proposed Reche Spreading Grounds are comprised primarily of sand and sufficiently permeable to provide for surface recharge. No significant low-permeability layers appear to be present in the vadose zone that would impede the percolation of recharge water to the water table.
- The current thickness of the vadose zone (determined by depth to water) is about 230 feet beneath the recharge site, providing sufficient vadose zone capacity for recharge and increased water table elevations.
- Measured soil and aquifer hydraulic properties including porosity and hydraulic conductivity indicate that recharge of 1,500 AF over six months is feasible.
- Analyses of water table mounding using the MODFLOW model indicate that more than 1,500 AF could potentially be stored on a seasonal basis for recovery.
- Ambient groundwater quality beneath the proposed spreading grounds as measured in the water quality samples from BDVWA MW1 and MW2 is generally good, with relatively low TDS nitrates and heavy metals. Low concentrations of two volatile organic compounds TCE and PCE were detected in the sample from BDVWA MW1, but concentrations were below State and Federal MCLs. Detectable concentrations of uranium and gross alpha radiation were also measured in the water quality samples, but the concentrations were below State and Federal MCLs.
- Based on a water quality evaluation comparing native groundwater and SWP water quality and potential impacts associated with groundwater mounding, recharge of SWP water at the Reche Spreading Grounds is not expected to degrade groundwater quality in the Reche Subbasin.
- Local, state, and federal regulatory agencies were contacted to identify permitting requirements for construction and operation of the recharge project. The recharge facility is located on Federal land under BLM jurisdiction. Permits will not be required by local county regulatory agencies. A general discharge permit may be required by the RWQCB, and a consultation permit may be required by BLM. Final permits or confirmations that permits will not be required will be obtained from agencies after design specifications are completed.

8. REFERENCES

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Tables

Table 1
BDVWA MW1 Soil Sample Hydraulic Properties
Reche Spreading Grounds Recharge Feasibility Study
Bighorn Desert View Water Agency

Sample Depth feet	Lithology	Moisture Content %	Dry Density (pcf)	Total Porosity %	Effective Porosity %	Hydraulic Conductivity (cm/sec)	Hydraulic Conductivity (feet/day)
10.0 - 12.5	Well-Graded SAND (SW)	7.9	98.19	45	23	1.42E-03	4.03
25.0 - 27.5	Well-Graded SAND (SW)	7.8	101.88	43	22	1.43E-03	4.05
50.0 - 52.5	Well-Graded SAND (SW)	7.6	99.48	44	22	2.19E-03	6.21
100.0 - 102.5	Well-Graded SAND (SW)	9.8	104.36	41	22	1.76E-03	4.99
150.0 - 152.5	Well-Graded SAND (SW)	10.0	99.82	44	23	1.37E-03	3.88
242.5 - 245	Poorly-Graded SAND (SP)	10.4	103.12	42	23	5.63E-04	1.60
Average Value		8.9	101.14	43	23	1.46E-03	4.13

Samples analyzed by Keantan Testing Laboratories (Diamond Bar,California)

Table 2
Monitoring Well Construction Details
Reche Spreading Grounds Recharge Feasibility Study
Bighorn Desert View Water Agency

Well Name	UTM 83 Northing[1]	UTM 83 Easting[1]	Monitoring Well Casing Elevation[1]	Date Completed	Well Depth	Screen Interval	Filter Pack Interval	Seal Interval	Water Level Date	Depth to Groundwater	Groundwater Elevation
	feet	feet	feet msl		feet	feet	feet	feet		feet	feet msl
BDVWA MW1	553813	3788804	3240	9/11/2010	256.5	236 - 256	231 - 256.5	0 - 231	9/23/2010	236	3004
BDVWA MW2	554669	3789565	3282	9/16/2010	348.5	298 - 348	293 - 348.5	0 - 293	9/23/2010	298	2984

[1]Northing and easting coordinates and elevations were obtained from GPS and are approximate; survey to be perfromed in the future.

Table 3
HDWD Well No. 24 Aquifer Test Results
Reche Spreading Grounds Recharge Feasibility Study Report
Bighorn-Desert View Water Agency

HDWD 24 Constant-Rate Pumping Test	
Test Date	5-Oct-10
Test Duration	1440 minutes
Average Pumping Rate	759 gpm
Drawdown in Pumping Well	11 feet (approximate)
Specific Capacity	69 gpm/foot
Radial Distance to Observation Well BDVWA MW2	35 feet
Drawdown in Observation Well at end of test	2.76 feet
Aquifer Saturated Thickness	290 feet
Aquifer Transmissivity from Specific Capacity	13,800 to 18,500 $feet^2$/day
Hydraulic Conductivity from Specific Capacity	48 to 64 feet/day
Aquifer Transmissivity from Drawdown in BDVWA MW2	44,700 $feet^2$/day
Hydraulic Conductivity from Drawdown in BDVWA MW2	154 feet/day
Aquifer Transmissivity from Recovery in BDVWA MW2	62,300 $feet^2$/day
Hydraulic Conductivity from Recovery in BDVWA MW2	215 feet/day

Table 4
Groundwater Quality Sampling Results Summary
Reche Spreading Grounds Recharge Feasibility Study
Bighorn-Desert View Water Agency

Analyte	Test Method	Reporting Limit and Units[1]	BDVWA MW1 Result	BDVWA MW2 Result
General Chemical Analytes				
Alkalinity Total as CaCO3	SM2320 B	5.0 mg/L	190	170
Bicarbonate	SM2320 B	5.0 mg/L	230	210
Calcium	SM3500CaD	1.0 mg/L	49	43
Carbonate	SM 2320 B	5.0 mg/L	ND	ND
Chloride	EPA 300.0	1.0 mg/L	17	34
Langelier Index at Source Temp	SM 203	NA	0.11	NT
Langelier Index at 60 C	SM 203	NA	0.81	NT
Aggressive Index	SM 203	NA	12.06	NT
Cyanide	SM 4500 CNF	100 ug/L	ND	ND
Specific Conductance	SM 2510 B	2.0 umhos/cm	530	440
Fluoride	EPA 300.0	0.10 mg/L	0.83	1.1
Total Hardness as CaCO3	SM 2340 C	5.0 mg/L	140	130
Hydroxide	SM 2320 B	5.0 mg/L	ND	ND
MBAS	SM 5540 C	0.10 mg/L	ND	ND
Nitrate	EPA 353.2	2.0 mg/L	2.5	2.2
Nitrate + Nitrite as N	EPA 353.2	10,000 ug/L	580	500
Nitrite as N	EPA 353.2	1,000 ug/L	ND	ND
Perchlorate	EPA 314	4.0 ug/L	ND	ND
pH Lab	SM 4500HB	NA, pH units	7.7	7.9
Sulfate	EPA 300.0	0.50 mg/L	21	35
TFS/Total Dissolved Solids	SM5440 C	5.0 mg/L	270	320
Metals				
Aluminum	EPA 200.7	50 ug/L	400	610
Antimony	SM 3113 B	6.0 ug/L	ND	ND
Arsenic	SM 3113 B	2.0 ug/L	ND	ND
Barium	EPA 200.7	100 ug/L	ND	ND
Beryllium	SM 3113 B	1.0 ug/L	ND	ND
Boron	EPA 200.7	100 ug/L	180	160
Cadmium	SM 3113 B	1.0 ug/L	ND	ND
Chromium (Total)	SM 3113 B	10 ug/L	ND	ND
Copper	EPA 200.7	50 ug/L	ND	ND
Iron	EPA 200.7	100 ug/L	300	490
Lead	SM 3113 B	5.0 ug/L	ND	ND
Magnesium	EPA 200.7	1.0 mg/L	9.3	8.8
Manganese	EPA 200.7	20 ug/L	220	110
Mercury	EPA 245.1	1.0 ug/L	ND	ND
Nickel	SM 3113 B	10 ug/L	ND	ND
Potassium	EPA 200.7	1.0 mg/L	4.6	4.8
Selenium	SM 3113 B	5.0 ug/L	ND	ND
Silver	SM 3113 B	10 ug/L	ND	ND
Sodium	EPA 200.7	1.0 mg/L	63	45
Thallium	EPA 200.7	1.0 ug/L	ND	ND
Vanadium	EPA 200.7	3.0 ug/L	4.2	3.1
Zinc	EPA 200.7	50 ug/L	ND	ND
Radiochemistry				
Gross Alpha	EPA 900.0	3.0 pCi/L	11	7.3
Gross Alpha Counting Error	EPA 900.0	pCi/L	2.3	1.7
Gross Alpha Min Detection Activity	EPA 900.0	pCi/L	1.4	1.0
Gross Beta	EPA 900.0	4.0 pCi/L	ND	NA
Gross Beta Counting Error	EPA 900.0	pCi/L	1.5	NA
Gross Beta Min Detection Activity	EPA 900.0	pCi/L	1.3	NA
Uranium	EPA 900.0	1.0 pCi/L	14	NA
Uranium Counting Error	EPA 900.0	pCi/L	1.6	NA
Uranium Min Detection Activity	EPA 900.0	pCi/L	0.87	NA
Total Alpha Radium 226	EPA 903.0	0.549 pCi/L	0.000 +/- 0.340	NA
Radium 228	Ra - 05	0.279 pCi/L	0.000 +/- 0.653	NA
Strontium 90	EPA 905.0	1.06 pCi/L	1.33 +/- 0.747	NA
Tritium	EPA 906.0	386 pCi/L	0.000 +/- 222	NA

Table 4
Groundwater Quality Sampling Results Summary
Reche Spreading Grounds Recharge Feasibility Study
Bighorn-Desert View Water Agency

Analyte	Test Method	Reporting Limit and Units[1]	BDVWA MW1 Result	BDVWA MW2 Result
Volatile Organic Compounds				
Trichloroethene (TCE)	EPA 524.2	0.5 ug/L	0.57	NA
Tetrachloroethene (PCE)	EPA 524.2	0.5 ug/L	3.5	NA
All other EPA 524.2 analytes	EPA 524.2	0.5 - 5.0 ug/L	ND	NA
VOC Pesticides				
Ethylene Dibromide (EDB)	EPA 504.1	0.05 ug/L	ND	NA
Dibromochloropropane (DBCP)	EPA 504.1	0.2 ug/L	ND	NA
Semi-Volatile Organic Compounds				
All EPA 508.1 analytes	EPA 508.1	0.01 - 25 ug/L	ND	NA
Other Pesticides				
Endothall	EPA 548.1	45 ug/L	ND	NA
Diquat	EPA 549.2	4.0 ug/L	ND	NA
2,3,7,8-TCDD	EPA 1613 B	5.0 pg/L	ND	NA
Other Analytes				
Asbestos	EPA 600/R-94/134	0.19 million fibers/L	ND	NA

Explanations
NA - Not analyzed
ND - Not detected above reporting limit
mg/L - milligrams per liter
ug/L - micrograms per liter
pg/L - picograms per liter
MBAS - Methyl blue active substances
1 - Reporting Limit includes miniumum detectable activity for radionucleides

Table 5
SWP Water Quality Summary
Reche Spreading Grounds Recharge Feasibility Study
Bighorn-Desert View Water Agency

	Drinking Water Standards	SWP Water Quality Data		
		Mininum	Maximum	Average
	(all values in mg/L unless designated otherwise)			
MAJOR IONS				
Calcium		15	34	27
Magnesium		5	15	10
Potassium		--	--	--
Sodium		24	71	59
Bicarbonate[1]		64	111	96
Chloride	250[b]	28	100	74
Sulfate	250[b]	19	81	48
MINOR IONS				
Boron		0.1	0.3	0.2
Bromide		0.10	0.37	0.26
Iron	0.3[b]	ND	0.010	0.007
Manganese	0.050[b]	ND	0.067	ND
Nitrite and Nitrate, as N	10[a]	0.10	1.80	0.93
PHYSICAL PARAMETERS AND OTHER PROPERTIES				
Specific Conductance (uS/cm)	900[b]	233	600	495
Total Dissolved Solids (TDS)	500[b]	152	350	286
pH (units)		--	--	--
Alkalinity, as $CaCO_3$		52	91	78
Hardness, as $CaCO_3$		70	138	108
Turbidity (NTU)	5[b]	1	18	5
Organic Carbon, Dissolved		1.0	3.7	2.3
Organic Carbon, Total		1.0	3.9	2.5
Phosphate, Ortho, as P		0.01	0.10	0.04
Phosphorus, Total		0.02	0.15	0.06
TRACE METALS				
Aluminum	0.1[a]	--	--	--
Antimony	0.006[a]	--	--	--
Arsenic	0.010[a]	0.002	0.006	0.004
Barium	1[a]	--	--	--
Beryllium	0.004[a]	ND	ND	ND
Cadmium	0.005[a]	--	--	--
Chromium	0.050[a]	0.001	0.005	0.002
Copper	1[b]	0.001	0.003	0.002
Lead	0.015[a]	ND	ND	ND
Mercury	0.002[a]	--	--	--
Nickel	0.1[a]	--	--	--
Selenium	0.050[a]	0.001	0.002	0.001
Silver	0.1[b]	--	--	--
Thallium	0.002[a]	--	--	--
Zinc	5.0[b]	ND	ND	ND

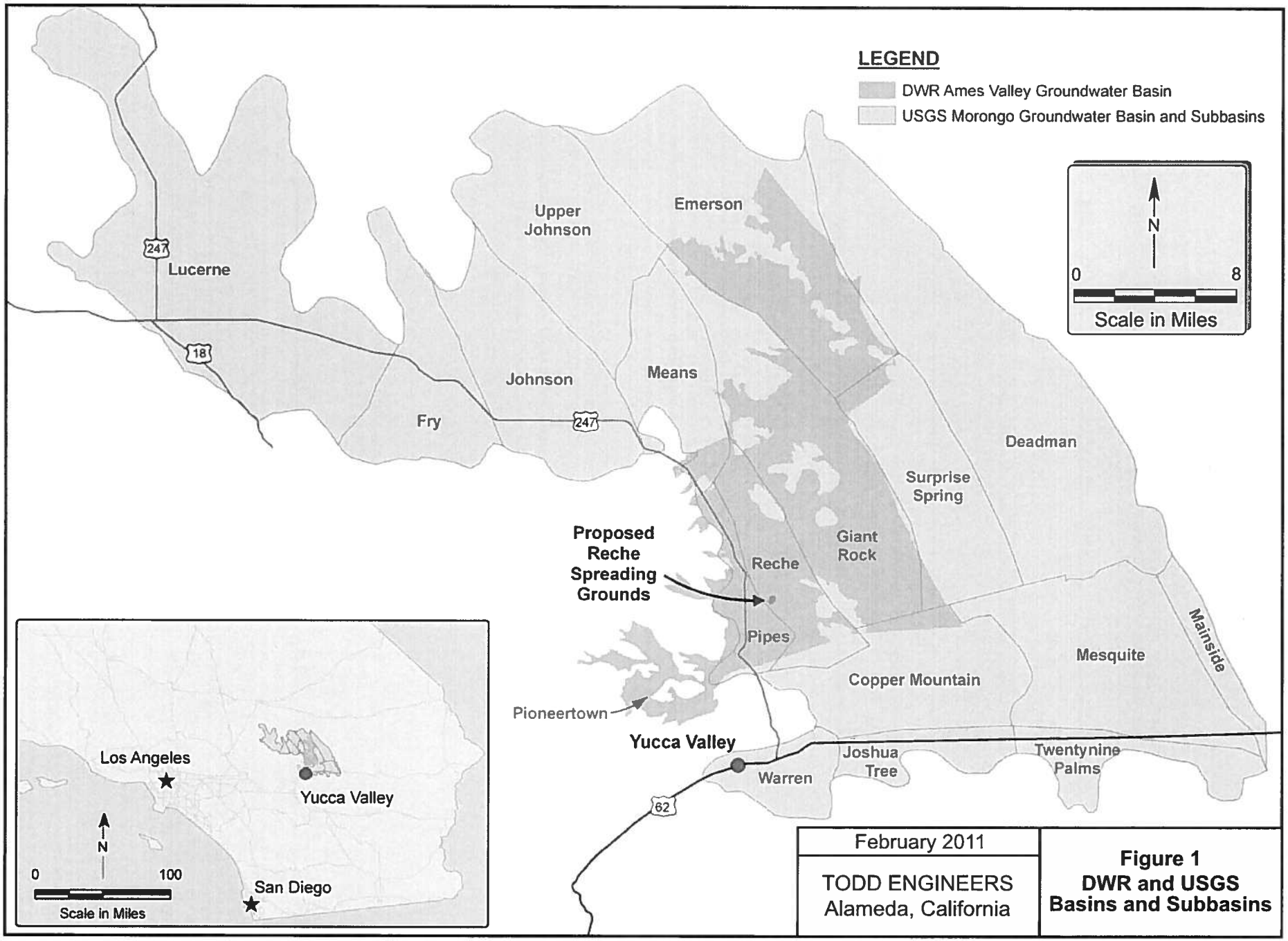
Notes:
mg/L = milligrams per liter
uS/cm = microSiemens per centimeter
NTU = nephelometric turbidity units
-- = Not Analyzed
ND = Not detected above reporting limit
[1] Calculated bicarbonate concentration: Alkalinity x 1.2192
[a] Primary Maximum Contaminant Level (MCL)
[b] Secondary MCL

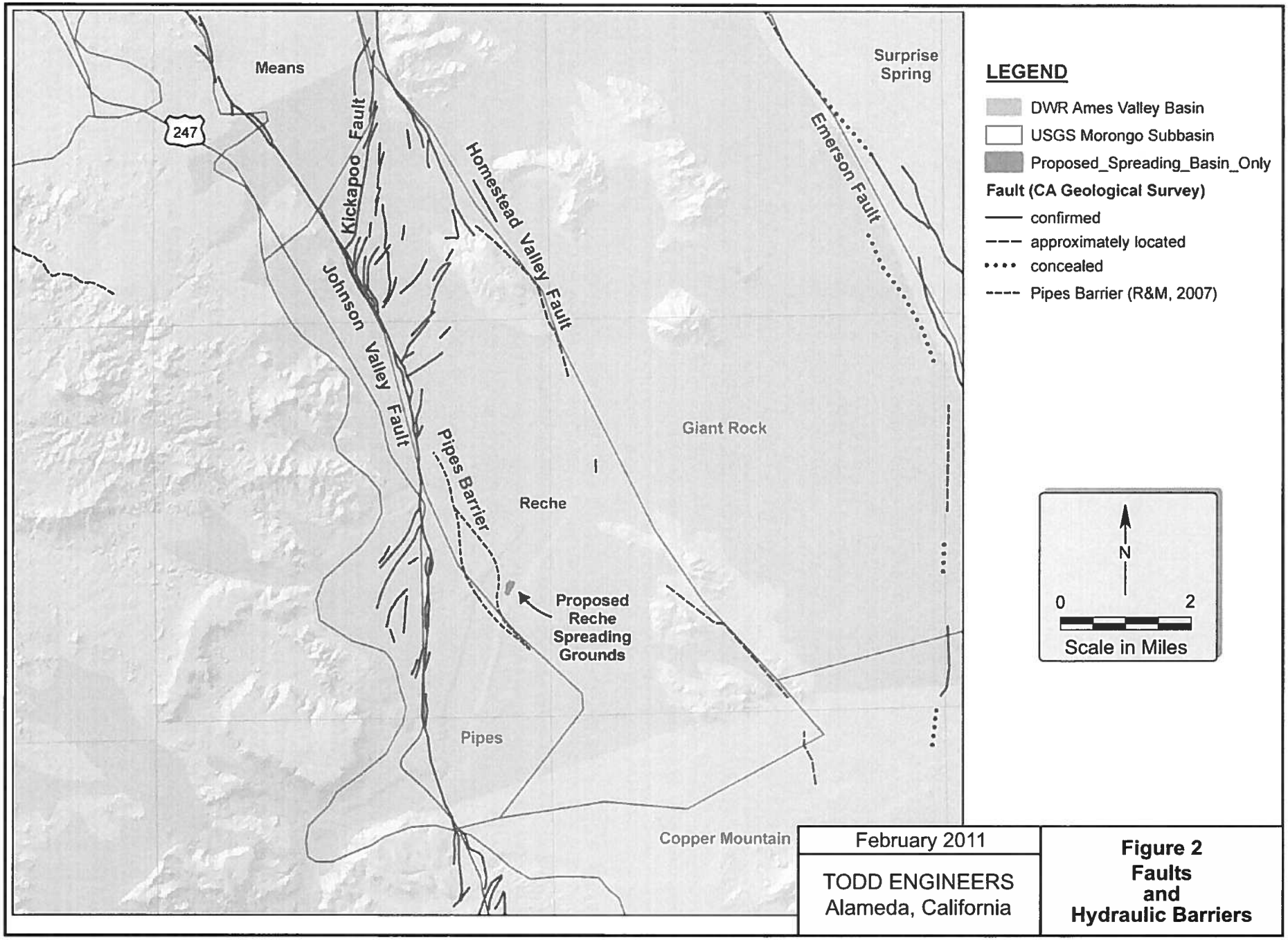
Table 6
Comparison of SWP and Groundwater Quality
Reche Spreading Grounds Recharge Feasibility Study
Bighorn-Desert View Water Agency

	Drinking Water Standards (MCLs)	MONITORING WELL		PRODUCTION WELL						
		BDVWA MW1	BDVWA MW2	BDVWA 6	BDVWA 7	BDVWA 9	HDWD 24	CSA W-70 1	CSA W-70 2	CSA W-70 3
		09/23/10	09/24/10	12/08/08	12/08/08	07/27/09	11/24/09	11/06/08	11/06/08	11/06/08
	(values in mg/L unless designated otherwise)									
MAJOR IONS										
Calcium		49	43	42	40	39	45	26	33	35
Magnesium		9	9	7	7	66	8	4	5	5
Potassium		5	5	3	3	3	2	2	2	3
Sodium		63	45	49	49	53	37	43	46	42
Bicarbonate[1]		230	210	190	200	170	210	140	160	170
Chloride	250[b]	17	34	18	18	24	12	18	20	17
Sulfate	250[b]	21	35	34	33	48	22	28	30	28
MINOR IONS										
Boron		0.18	0.16	0.15	0.13	0.12	--	ND	ND	0.15
Bromide		--	--	--	--	--	--	--	--	--
Iron	0.3[b]	0.3	0.5	ND	ND	ND	ND	ND	ND	ND
Manganese	0.050[b]	0.2	0.1	ND	ND	ND	ND	ND	ND	ND
Nitrite and Nitrate, as N	10[a]	0.6	0.5	1.5	1.6	2.3	1[c]	1.4	1.6	1.4
PHYSICAL PARAMETERS AND OTHER PROPERTIES										
Specific Conductance (mS/cm)	900[b]	530	440	440	450	480	440	350	390	390
Total Dissolved Solids (TDS)	500[b]	270	320	280	290	290	250	180	200	200
pH (units)	6.5-8.5[b]	7.7	7.9	7.9	7.9	8.1	7.8	8	8	7.9
Alkalinity, as $CaCO_3$		190	170	160	160	140	170	110	130	140
Hardness, as $CaCO_3$		140	130	130	130	120	150	80	110	110
Turbidity (NTU)	5[b]			0.1	0.3	ND	ND	ND	ND	ND
Organic Carbon, Dissolved		--	--	--	--	--	--	--	--	--
Organic Carbon, Total		--	--	--	--	--	--	--	--	--
Phosphate, Ortho, as P		--	--	--	--	--	--	--	--	--
Phosphorus, Total		--	--	--	--	--	--	--	--	--
TRACE METALS										
Aluminum	0.1[a]	0.4	0.61	ND	ND	ND	ND	ND	ND	ND
Antimony	0.006[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	0.010[a]	ND	ND	ND	ND	ND	0.0034	0.0041	0.0041	0.039
Barium	1[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Beryllium	0.004[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Cadmium	0.005[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chromium (total)	0.050[a]	ND	ND	ND	ND	ND	0.0068	ND	ND	ND
Copper	1[b]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Lead	0.015[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Mercury	0.002[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	0.1[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Selenium	0.050[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Silver	0.1[b]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Thallium	0.002[a]	ND	ND	ND	ND	ND	ND	ND	ND	ND
Zinc	5.0[b]	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:
Data are from most recent water quality sample available for each well
mg/L = milligrams per liter
mS/cm = microSiemens per centimeter
NTU = nephelometric turbidity units
-- = Not Analyzed
ND = Not detected above reporting limit
[1] Calculated bicarbonate concentration: Alkalinity x 1.2192
[a] Primary Maximum Contaminant Level (MCL)
[b] Secondary MCL
[c] Calculated from nitrate (as NO_3) result

Figures


LEGEND
DWR Ames Valley Groundwater Basin
USGS Morongo Groundwater Basin and Subbasins
N
0
8
Scale in Miles
Upper Johnson
Emerson
Lucerne
247
18
Johnson
Means
Fry
247
Deadman
Surprise Spring
Giant Rock
Proposed Reche Spreading Grounds
Reche
Pipes
Mainside
Mesquite
Copper Mountain
Pioneertown
Yucca Valley
Joshua Tree
Twentynine Palms
Warren
62
Los Angeles
Yucca Valley
San Diego
N
0
100
Scale in Miles
February 2011
TODD ENGINEERS
Alameda, California
Figure 1
DWR and USGS
Basins and Subbasins



February 2011

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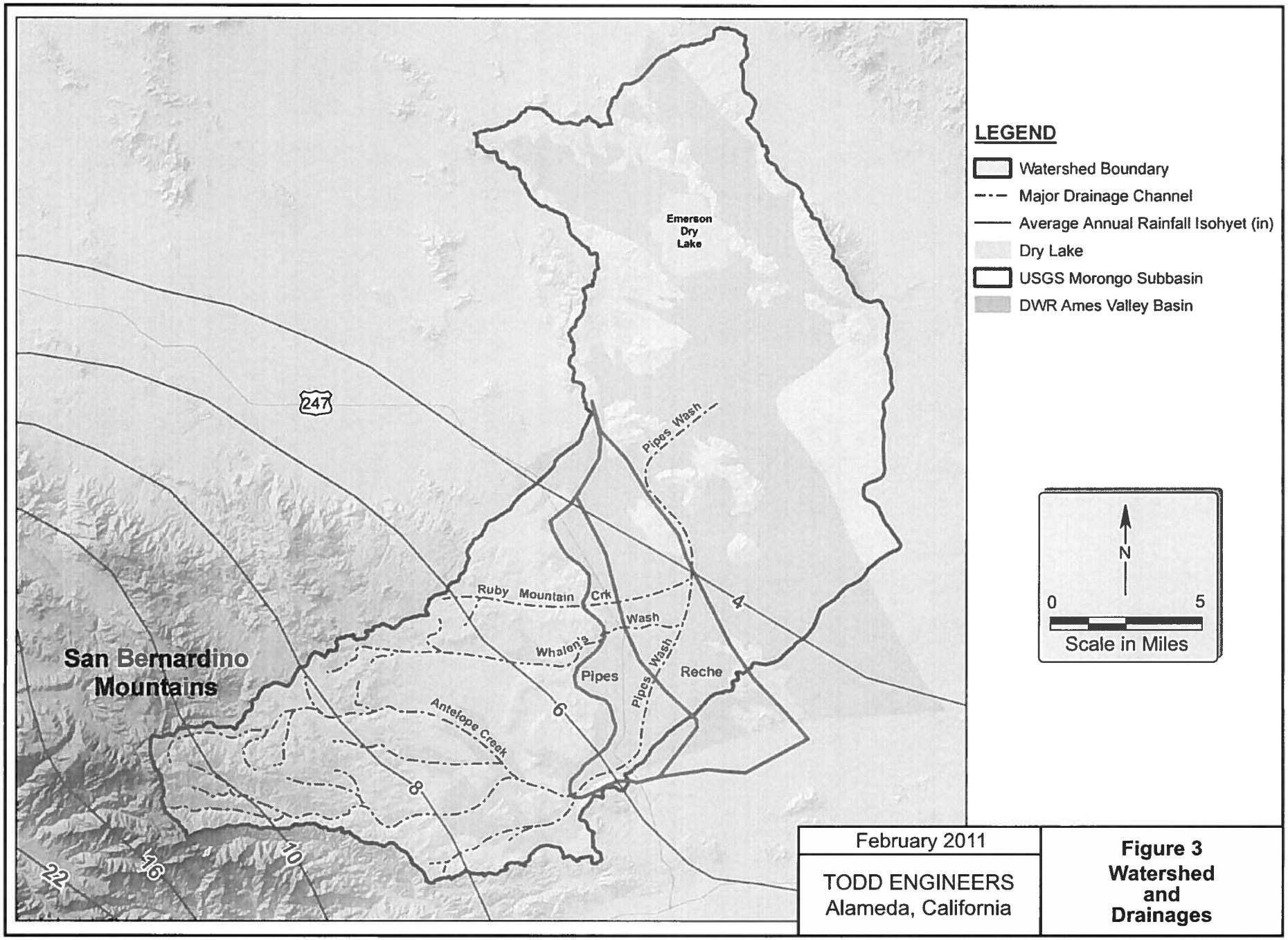
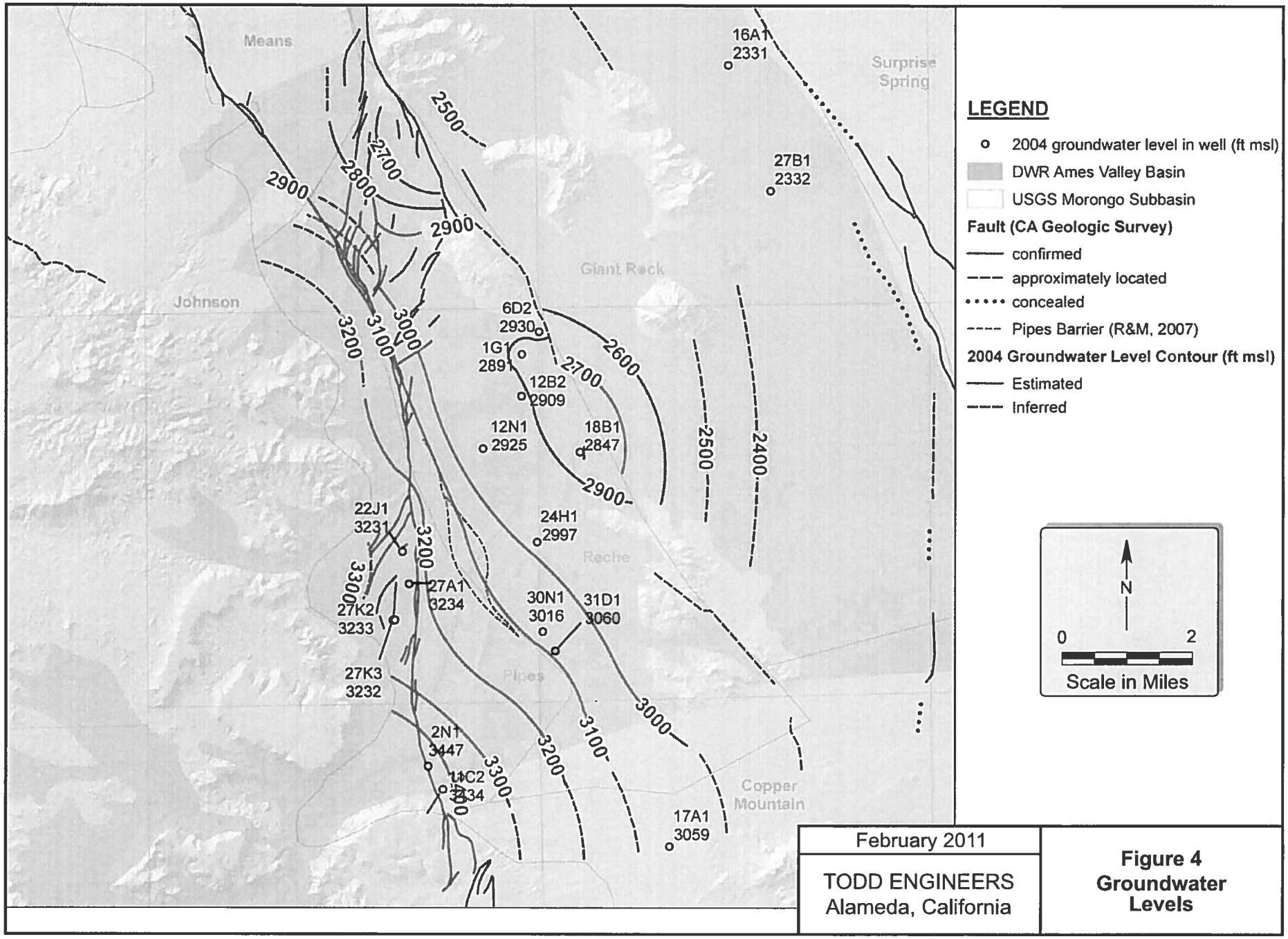
Alameda, California

Figure 2
Faults and Hydraulic Barriers



February 2011	**Figure 3 Watershed and Drainages**
TODD ENGINEERS Alameda, California	



February 2011

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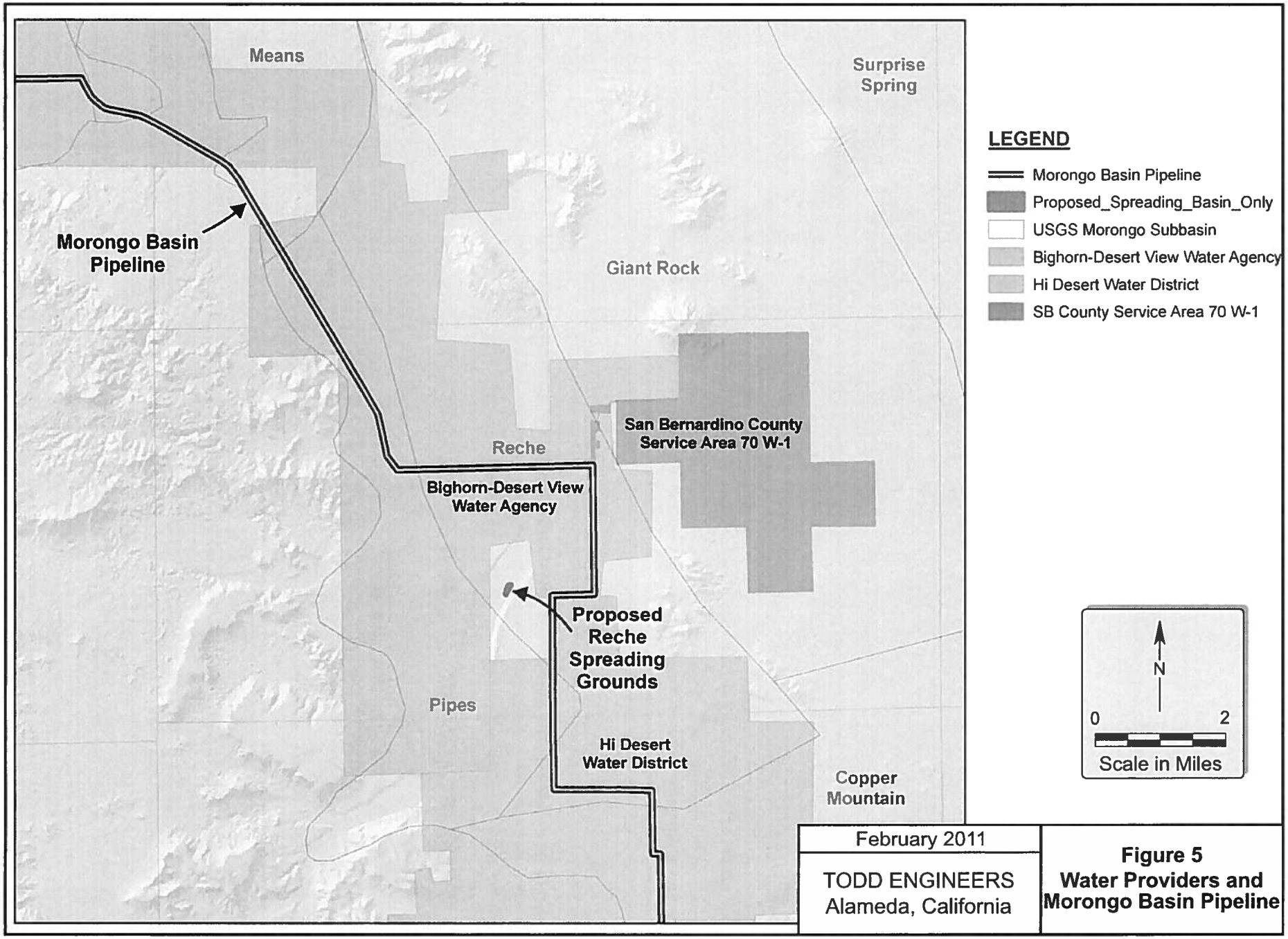
Alameda, California

Figure 4
Groundwater Levels



February 2011

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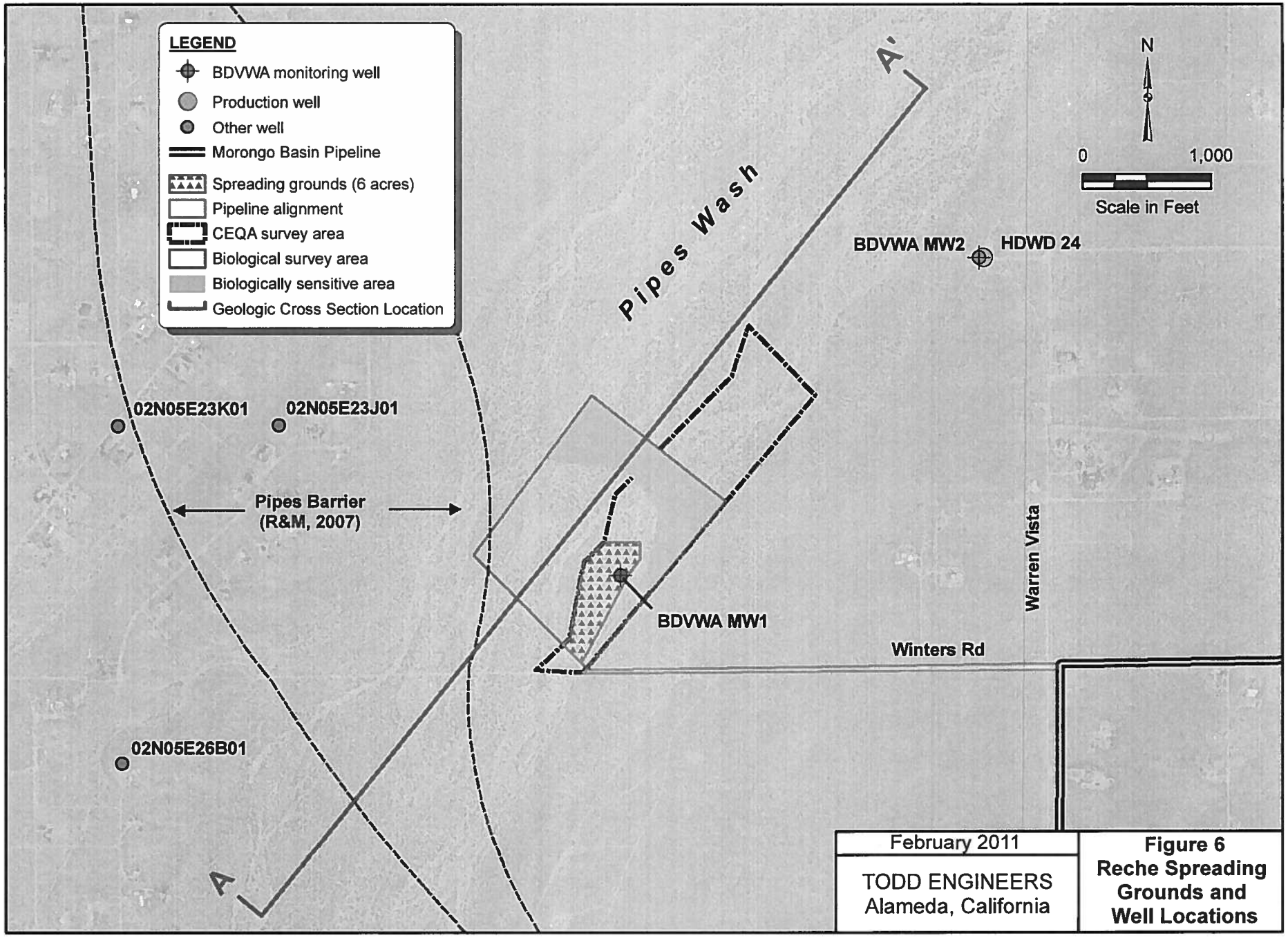
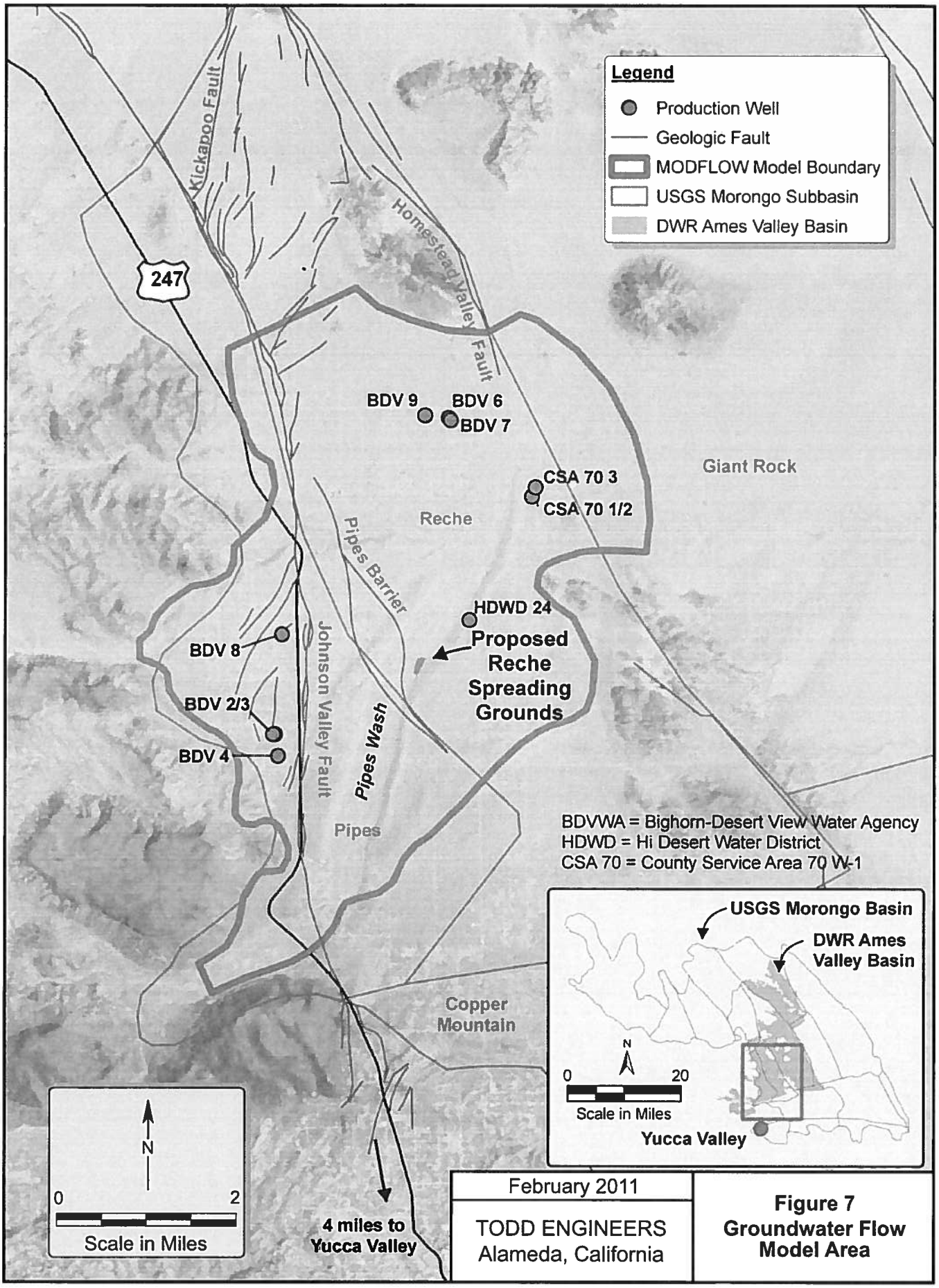
Figure 5
Water Providers and Morongo Basin Pipeline



February 2011	**Figure 6**
TODD ENGINEERS Alameda, California	**Reche Spreading Grounds and Well Locations**


Legend
Production Well
Geologic Fault
MODFLOW Model Boundary
USGS Morongo Subbasin
DWR Ames Valley Basin
Kickapoo Fault
Homestead Valley Fault
247
BDV 9
BDV 6
BDV 7
CSA 70 3
CSA 70 1/2
Giant Rock
Reche
Pipes Barrier
HDWD 24
Proposed Reche Spreading Grounds
BDV 8
BDV 2/3
BDV 4
Johnson Valley Fault
Pipes Wash
Pipes
BDVWA = Bighorn-Desert View Water Agency
HDWD = Hi Desert Water District
CSA 70 = County Service Area 70 W-1
USGS Morongo Basin
DWR Ames Valley Basin
N
0
20
Scale in Miles
Yucca Valley
Copper Mountain
N
0
2
Scale in Miles
4 miles to Yucca Valley
February 2011
TODD ENGINEERS
Alameda, California
Figure 7
Groundwater Flow Model Area

BIGHORN DESERT VIEW WATER AGENCY
AGENDA ITEM SUBMITTAL

Meeting Date: July 24, 2012

To: Board of Directors

Budgeted: Yes
Budgeted Amount: $4,200/yr. per Director
Cost Est: $300
Funding Source: Budget Line - 56002

From: Marina D. West

General Counsel Approval: N/A
CEQA Compliance: N/A

Subject: Consider Authorizing Attendance to the 6th Annual San Bernardino County Water Conference August 10, 2012 at a Maximum Estimated Cost of $300 per Director

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SUMMARY

The 6th Annual San Bernardino County Water Conference will be held on Friday, August 10, 2012 from 8:00 am until noon in Ontario, CA. The Agency is a named "host" for this event. The maximum estimated cost is $300 per Director.

Staff recommends all interested Directors attend the 2012 Water Conference.

RECOMMENDATION

That the Board considers taking the following action(s):

1. Authorize attendance to the 6th Annual San Bernardino Water Conference August 10, 2012 at a maximum estimated cost of $300 per director.

BACKGOUND/ANALYSIS

The 6th Annual San Bernardino County Water Conference will be held on Friday, August 10, 2012 from 8:00 am until noon in Ontario, CA. The maximum estimated cost is $300 per Director.

This year the group will hear from Ms. Pat Mulroy who leads both the Las Vegas Valley Water District and the Southern Nevada Water Authority. There will be also be an update on the Countywide Vision Water Taskforce and panel discussions regarding water supply and economic development as well as the impact of conservation on water rates. The full agenda and speaker biographies are attached.

The breakdown in costs for the event is as follows:

1. Registration fee: $85
2. Director Per Diem: $100
3. Lunch (not incl. in reg.): $20
4. Mileage: $96 (Agency vehicle will be available for carpooling)

$301

Staff recommends the Board approve Director attendance at the 6th Annual San Bernardino County Water Conference.

PRIOR RELEVANT BOARD ACTION(S)

7/26/2011 Motion No. 11-043 Approve the Board's attendance at the Fifth Annual San Bernardino County Water Conference to be held on August 26, 2011, costing a maximum of $300.00 per Director.

6th Annual San Bernardino County Water Conference

Friday, August 10th | 8:00 AM - 12:00 PM
Location | DoubleTree Hotel
222 North Vineyard Ave | Ontario 91764

Submit by Email

Print Form

Instruction: FILL out form and HIT submit by email button to send data file or print & fax to 909.795.7762
Questions? Ask Nicole Desmond | O: 909.795.7760 | Email: nicole@dandlpr.com
RSVP DEADLINE by August 3rd | No credit will be issued for no-shows.

Company _____ Date of Registration _____

Contact Person _____ Phone _____

Email to Confirm Registration ***REQUIRED*** _____

ATTENDEE (S) NAME

1.) _____ 6.) _____
2.) _____ 7.) _____
3.) _____ 8.) _____
4.) _____ 9.) _____
5.) _____ 10.) _____

PRICE | Indicate number for each price point

$20,000 | PRESENTING SPONSOR _____ $10,000 | PLATINUM SPONSOR _____
$7,000| GOLD SPONSOR _____ $5,000 | SILVER SPONSOR _____
$2,500 | BRONZE SPONSOR _____ $500 | BOOTH SPONSOR _____
$850 | TABLE OF 10 _____ $85 | INDIVIDUAL TICKET _____
$500 | FULL PAGE AD _____ $250 | 1/2 PAGE AD _____ $125 | 1/4 PAGE AD _____

PAYMENT INFO | Registration DEADLINE August 3rd

☐ **VISA** ☐ **MC** ☐ **AMEX** ☐ **2011 PARTNERSHIP** **TOTAL AMOUNT: $** _____

☐ **CHECK IN MAIL | Make payable to: BIA Baldy View | 8711 Monroe Court, Ste. B, Rancho Cucamonga, CA 91730**

CREDIT CARD INFO | Provide Info

☐ Check Here to Authorize Credit Card Use | **NAME on CREDIT CARD** _____

Credit Card # _____ Expiration Date _____ CVS # _____

Credit Card | Billing Street Address _____

City _____ State _____ Zip Code _____

Schedule of Activities

PROGRAM OVERVIEW

8:00 a.m.	**WELCOME**
8:05 a.m.	**OPENING REMARKS**
8:15 a.m.	**LAS VEGAS WATER DISTRICT CASE STUDY INFRASTRUCTURE, LEGISLATION & CONSERVATION**
8:35 a.m.	**BREAK AND VENDOR SHOWCASE**
9:15 a.m.	**PANEL 1A – COUNTYWIDE VISION WATER TASKFORCE** **As part of the Countywide Vision, the Water Taskforce is a cross section of stakeholders to identify major regional issues and needs specific to elements of a complete community, and discuss how those needs could be addressed through collaboration and collective community action. The panel will give a Taskforce update, highlight inter-agency cooperation, implementing IWMPs and UWMPs, and touch on Delta interruptions.**
9:15 a.m.	**PANEL 1B – IMPACT OF CONSERVATION ON WATER RATES** **This panel will discuss how to balance conservation and fixed costs, water budgets, and alternate solutions.**
10:00 a.m.	**BREAK**
10:10 a.m.	**PANEL 2A - WATER SUPPLY & ECONOMIC DEVELOPMENT** **This panel will focus on our regional water supply and the effect it has on economic development including reliability, cost, and availability.**
10:10 a.m.	**PANEL 2B – VALUE OF WATER/INVESTING IN OUR FUTURE WATER SUPPLY** **This is a panel discussion on the value of water. Specifically, communication between utilities and customers, the Delta fix's impact on water rates and financing the Delta conveyance, should we invest in new infrastructure or repair existing, and sustainable communities strategies.**
10:55 a.m.	**BREAK AND VENDOR SHOWCASE**
11:30 a.m.	**IE H2O HERO AWARDS** **These awards will be given to people/businesses that are not tied directly to the water industry, are working to conserve water on a large scale and their efforts are unique.**
11:40 a.m.	**KEYNOTE SPEAKER**
12:10 p.m.	**CLOSING REMARKS**

Speakers

Patricia Mulroy

General Manager •

Las Vegas Valley Water District

Biography:

Pat Mulroy oversees the operations of the Las Vegas Valley Water District, which serves more than 340,000 customers, and the Southern Nevada Water Authority, which is responsible for acquiring, treating and delivering water to local agencies that collectively serve 2 million residents and nearly 40 million annual visitors. Mulroy joined the District more than 20 years ago and began serving as its general manager in 1989. She was a principal architect of the Authority, which has served as a model for other Western water agencies since its creation in 1991.

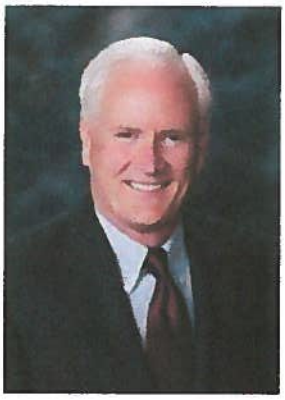
As general manager of one of the country's most progressive water agencies, Mulroy is exceptionally active in regional and national water issues. She serves as President of the Association of Metropolitan Water Agencies, and is on the Board of Trustees of the Water Research Foundation, the Board of Directors of the National Water Resources Association, and is a member of the American Water Works Association. Additionally, she was the original chairperson of the Western Urban Water Coalition and served on the Colorado River Water Users Association's board of directors.

Richard Atwater

Executive Director •

Southern California Water Committee

Biography:



Richard Atwater was recently appointed as the Executive Director of the Southern California Water Committee (August 2010). He previously was the CEO/GM of Inland Empire Utilities Agency (1999-2010), President of Bookman-Edmonston Engineering (1996-1999), GM of West Basin and Central Basin MWDs (1990-1996).

Mr. Atwater has over thirty-five years experience in water resources management and development in the western U.S. He has pioneered many award-winning water projects and implemented numerous innovative water resource management programs that meet today's high standards for quality, reliability and cost-effectiveness. Mr. Atwater has testified extensively before the U.S. Congress and the California Legislature on water policy issues. In 1994 Secretary of the Interior, Bruce Babbitt awarded Mr. Atwater the Conservation Service Award, the highest citizen award for resources management. And has received from three separate Governors the Economic and Environmental Balance Award (Wilson, Davis and Schwarzenager). Mr. Atwater was a member of the California Water Commission, the 2001 Drought Task Force, 2003 Water Recycling Task Force and the 2006 Desalination Task Force.

Mr. Atwater has participated in policy formulation workshops and expert panels for the National Academy of Sciences, Western Governors Association, Western Water States Council, and the National Water Research Institute. In addition, Mr. Atwater has served on the Board of Directors of the Association of California Water Agencies, Urban Water Institute, WateReuse Association (President 2007-2009), Southern California Alliance of Publically Owned Treatment Works (SCAP, President 2007-2010) and the Western Urban Water Coalition.

Kirby Brill

General Manager •

Mojave Water Agency

Biography:

Kirby Brill has served as the General Manager at Mojave Water Agency since October 2000. Mr. Brill has worked in the public and private sectors during his 20 plus years of experience in Water Resources management. Prior to his employment at Mojave Water Agency, Mr. Brill was the Executive Director at San Gabriel Basin Water Quality Authority and also worked for the Orange County Water District. Mr. Brill received his Bachelor of Science degree in Civil Engineering with a minor in Geology, and he also holds a Master of Business Administration. He is a licensed Professional Engineer in the State of California.

Celeste Cantu

General Manager •

Santa Ana Watershed Project Authority

Biography:

Celeste Cantú joined the Santa Ana Watershed Project Authority (SAWPA) five years ago and has been working on the crest-to-coast, corner-to- corner Integrated Regional Watershed Management Plan called, One Water One Watershed (OWOW) that addresses all water-related issues, joins all entities and hundreds of stakeholders seeking to create a new vision of sustainability for the Santa Ana River Watershed.

SAWPA owns the Inland Empire Brine Line, a utility that collects salt from the upper watershed groundwater to improve water quality in the Santa Ana River and benefits the lower watershed.

Celeste served as the Executive Director for the California State Water Resources Control Board, which is responsible for water rights and water quality for the State.

Martha Davis

Executive Manager for Policy Development •

Inland Empire Utilities Agency

Biography:

Ms. Martha Davis is Executive Manager for Policy Development and oversees the Planning and Water Resources Department at the Inland Empire Utilities Agency (IEUA), a municipal water district serving 800,000 people in the western portion of San Bernardino County. IEUA provides regional sewage treatment services, distributes imported water and recycled water supplies, and provides other utility services for the Chino Basin. Previously, Ms. Davis served as the Executive Director for Californians and the Land (1998-2000) and for the Mono Lake Committee (1984-1996). Ms. Davis graduated from Stanford University *cum laude* with a degree in human biology and received her master's degree from the Yale School of Forestry and Environmental Studies. She is the recipient of an honorary PhD in Public Policy from the Kennedy College.

Dr. Mark Grey

Director of Environmental Affairs •

Building Industry Association of Southern California

Biography:

Mark Grey is the Director of Environmental Affairs for the Building Industry Association of Southern California (BIA/SC) and the Technical Director for the Construction Industry Coalition on Water Quality (CICWQ). In these roles, Dr. Grey directs education, research and advocacy programs on behalf of the building industry

in California, primarily focusing on water quality. He brings a wealth of knowledge to BIA/SC and CICWQ in the fields of water and air quality protection, having worked on projects for the past 24 years in the Pacific Northwest and California. In February 2008, Dr. Grey was appointed to the state of California's Storm Water Advisory Task Force that advises the State Water Board on program priorities, funding criteria, project selection, and interagency coordination of state programs that address storm water management. Dr. Grey is a trustee of the Southern California Water Committee and serves as a governing board member for the Los Angeles Council on Watershed Health.

Douglas Headrick

General Manager •

San Bernardino Valley Municipal Water District

Biography:

Mr. Headrick has been involved in California water for over 20 years starting with the Santa Ana Watershed Project Authority where he administered a variety of regional water supply and computerized mapping projects. He has also managed a regional groundwater recharge operation and provided the primary technical support for the Big Bear Watermaster and San Bernardino Valley Engineering Investigation. In addition, Mr. Headrick managed the Water and Wastewater Divisions for the City of Redlands for 7 years prior to coming to Valley District. This experience included the administration and operation of two surface water treatment plants and a state-of-the-art recycled water plant, which is the largest of its kind in the Western United States.

For Valley District, he is in responsible charge for the overall administration of the District overseeing an annual budget of over $75 million. He also represents the District on the State Water Contractors Association and is a Board member on the State Water Project Contractors Authority and the Southern California Water Committee.

Mary Jane Olhasso

Economic Development Agency Administrator •

County of San Bernardino

Biography:

Mary Jane Olhasso is the Economic Development Agency Administrator for the County of San Bernardino and a recognized leader in economic development.

As Economic Development Agency Administrator, Olhasso oversees three key County departments encompassing more than 200 employees. The Agency departments include: Workforce Development, Community Development and Economic Development.

Olhasso was Director of Economic Development for the City of Ontario for 12 years prior to her move to the County, where she worked with city leaders to put policies in place that have generated approximately 4,000 new jobs and close to $135 million in total wages.