On February 28, 2015, Director Steiner hosted an event to promote rain harvesting systems, which help reduce water use during our current drought. For more information about water conservation, visit www.watersmartsd.org
NOTICE TO THE PUBLIC

BOARD OF DIRECTORS’ AND STANDING COMMITTEES’
REGULAR MEETING
MARCH 26, 2015
BOARD ROOM
WATER AUTHORITY HEADQUARTERS BUILDING
4677 OVERLAND AVENUE, SAN DIEGO, CALIFORNIA

1. **UNIFIED AGENDA:** This unified agenda provides a brief description of each item to be considered by the Board and its Administrative and Finance, Engineering and Operations, Imported Water, Legislation, Conservation and Outreach, and Water Planning Committees. For convenience, the agenda for each of the Committees and for the formal Board meeting are stated separately; however, all agendas shall be considered as a single agenda and any item listed on the agenda of any Committee may be acted upon by the Board. All items on the agenda of any Committee, including information items, may be deliberated and become subject to action by the Board.

2. **DOCUMENTS:** Staff reports and any other public information provided to the Board or Committee before the meeting relating to items on the agenda are available for public review at the San Diego County Water Authority 4677 Overland Avenue San Diego, CA 92123 during normal business hours. Additional documents may be distributed at the meeting. Copies of individual items, including the background information, are available through the Clerk of the Board at (858) 522-6614.

3. **MEETING TIMES:** The morning session of Standing Committees will commence at 9:00 a.m. on March 26, 2015; the afternoon session of Standing Committees will commence at 1:00 p.m. Please see the meeting schedule. The full Board may begin as early as 3:00 p.m. or as soon thereafter as the last Committee meeting is completed.

4. **ACTION AT COMMITTEE MEETINGS:** Committee meetings are also noticed as meetings of the Board because a quorum of the Board may be present. Members of the Board who are not members of the Committee may participate in the meeting, but only members of the Committee may make, second or vote on any motion or other action of the Committee unless the Board determines to convene for consideration of action on an item or items on the Committee agenda. If a quorum of the Board is present during a Committee meeting, upon approval of a motion by any Board member to convene for consideration of action on an item or items on the Committee agenda, the Board may take action on that item or items. If the Board takes action on an item during a Committee meeting, the matter will not be subject to further action at the Formal Board meeting unless a motion to reconsider is approved according to the provisions of the Water Authority Administrative Code. Persons interested in an item and wishing to hear the staff report, present oral or written comments and hear the deliberations should attend the Committee meeting. Closed Sessions also occur at Committee meetings and may not be repeated at the formal Board meeting.
5. **CONSENT CALENDAR**: The agenda contains items listed on a consent calendar which is for matters considered routine or otherwise not requiring further deliberation. A committee or the Board will take action as recommended by one motion. There will be no individual discussion on such items prior to the vote unless an item is removed for discussion. If a member of the public wishes to talk about a consent calendar item, please notify the Chair before the calendar is called. Persons who wish to be heard on an item are encouraged to speak before the assigned committee.

6. **PUBLIC HEARINGS**: It is not necessary to notify the Chair if a member of the public wishes to speak on items listed on the agenda as public hearings. Public hearings will begin at the time stated in the notice, or as soon thereafter as the matter can be heard. When the Chair opens the hearing, upon invitation of the Chair, step to the podium and begin by giving your name and address for the record. Each speaker has 3 minutes to address the Board.

7. **PUBLIC COMMENT ON MATTERS NOT ON THE AGENDA**: The agenda provides an opportunity for members of the public to address the Committees and Board on matters of interest within the jurisdiction of the Committee or Board that are not listed on the agenda. The Brown Act does not allow any discussion or action by the Board or staff on matters raised during public comment except: 1) to briefly respond to statements made or questions posed; 2) ask a question for clarification; 3) receive and file the matter; 4) if it is within staff's authority, refer it to them for a reply; or, 5) direct that it be placed on a future board agenda for a report or action.

A reasonable amount of time will be allocated by the Chair for public comment. Persons wishing to speak should notify the Chair before the meeting by filling out a "Speaker Request Form" and give it to the secretary. Individual speakers are requested to be as brief as possible and are encouraged to address the appropriate committee who is best able to respond. When the Chair calls, please immediately step to the podium and begin by giving your name and address for the record. Each speaker has 3 minutes to address the Board.

8. **PUBLIC COMMENT ON AGENDA ITEMS**: Persons wishing to speak to an item that is listed on the agenda should notify the Chair before the meeting by filling out a speaker request form and giving it to the secretary. Step to the lectern when asked to do so by the Chair and begin by giving your name and address for the record. Remarks should be limited to three minutes.

9. **INFORMATION ITEMS**: Items are listed on the agenda as information based on staff's judgment. Circumstances or the committee's or Board's judgments may require deliberation or, if necessary, action on these items. Any member of the public with an interest in one of these items should review the background material and request information on the possible action that could be taken.

10. **ASSISTANCE FOR THE DISABLED**: If you are disabled in any way and need accommodation to participate in the Board meeting, please call the Clerk of the Board at (858) 522-6614 for assistance at least three (3) working days prior to the meeting so the necessary arrangements can be made.

11. **RULES GOVERNING MEETINGS**: The Water Authority’s Administrative Code Chapter 2.00 governs conduct of meetings of the Board and the Committees. The Administrative Code is available on line at [www.sdcwa.org](http://www.sdcwa.org) or at the Water Authority Headquarters.
MEETING SCHEDULE
MARCH 26, 2015

MORNING SESSION
Administrative & Finance Committee
Water Planning Committee
Engineering & Operations Committee
9:00 a.m. to 12:00 p.m.
Estimated time: 55 minutes
Estimated time: 50 minutes
Estimated time: 1 hour 5 minutes

LUNCHEON FOR DIRECTORS
12:00 p.m. to 1:00 p.m.

AFTERNOON SESSION
Imported Water Committee
Legislation, Conservation & Outreach
1:00 p.m. to 3:00 p.m.
Estimated time: 1 hour 15 minutes
Estimated time: 35 minutes

FORMAL BOARD MEETING
3:00 p.m.

*Time estimates are for convenience only and do not constitute part of the schedule. The first morning session will commence at 9:00 a.m., and the following morning sessions may start at any time after 9:00 a.m. The first afternoon session will commence at 1:00 p.m., and the following afternoon sessions may start at any time after 1:00 p.m. The Board meeting will start no earlier than 3:00 p.m., or following the conclusion of the last committee meeting.
ADMINISTRATIVE AND FINANCE COMMITTEE

AGENDA FOR

MARCH 26, 2015

Gary Arant – Chair     DeAna Verbeke
Doug Wilson – Vice Chair    Ron Watkins
Halla Razak – Vice Chair    Mark Watton
Ed Gallo    Mark Weston
Frank Hilliker    Ken Williams
Tom Kennedy    Tom Wornham
Keith Lewinger
Mark Muir

1. Roll call – determination of quorum.

2. Additions to agenda (Government Code Section 54954.2(b)).

3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.

   4-A Directors’ comments.

I. CONSENT CALENDAR

1. Treasurer’s Report.
   Staff recommendation: Note and file the monthly Treasurer’s report.
   (Action)
   Lisa Marie Harris

2. Adopt an ordinance amending chapter 2.08 of the Administrative Code.
   Board Officers recommendation: Adopt Ordinance No. 2015-___, an ordinance of the board of directors of the San Diego County Water Authority amending chapter 2.08 of the Administrative Code relating to the office of the General Counsel.
   (Action)
II. ACTION/DISCUSSION


   Committee Chair and Vice Chairs’ Recommendation:
   Adopt the Administrative and Finance Committee Work Plan for Calendar Years 2015 and 2016. (Action)

III. INFORMATION


2. Board Calendar.

IV. CLOSED SESSION

1. CLOSED SESSION:

   Conference with Labor Negotiator
   Government Code §54957.6
   Agency Designated Representatives: Frank Belock, Sandra Kerl, Gretchen Spaniol, Lisa Celaya, Rick Bolanos
   Employee Negotiator: Teamsters Local 911

V. ADJOURNMENT

Kelly L. Walker
Deputy Clerk of the Board

NOTE: This meeting is called as an Administrative and Finance Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.
March 18, 2015

Attention: Administrative and Finance Committee

Treasurer’s Report

Attached for review by the Administrative and Finance Committee and the Board of Directors is the Treasurer’s Report as of February 28, 2015. The reports are formatted to provide information as required by the California Government Code and the San Diego County Water Authority’s Annual Statement of Investment Policy, which was last adopted by the Board on January 22, 2015. A brief description of each report follows:

Portfolio Master Summary: This one page report summarizes all cash and investments held by the Water Authority.

Portfolio Characteristics: This one page snapshot shows the Water Authority’s portfolio holdings by type and percentage; the maturity distribution of the portfolio; the portfolio yield for the past twelve months, with and without bond-related funds, compared to a rolling average yield of the Board adopted benchmark; the credit quality of the portfolio’s holdings; the cash flow projections for the next six months; and relevant market information.

Chandler Portfolio Summary: This one page snapshot shows the Chandler Asset portfolio holdings including average duration, coupon, yield and ratings; account summary; top issuers; issuer allocation; maturity distribution; and the managed portfolio yield compared to the benchmark.

Portfolio Details - Investments: This report takes the summary information listed in the Portfolio Master Summary and provides details of active investments.

Activity Summary: This one page report produces a thirteen-month rolling summary of portfolio investment activity.

The Water Authority’s portfolio is diversified among investment types, with a current concentration toward short-term maturities. This concentration is the result of cash flow needs, as well as the current historic low interest rate environment. The portfolio is comprised of high quality investments, with 78 percent currently invested in AAA rated or AAA/AA+ split-rated securities. In February 2015 the Water Authority’s overall portfolio yield increased to 0.61 percent and continues to exceed the investment benchmark of 0.41 percent. Bond Fund proceeds are expected to fund Capital Improvement Program expenditures for the next several years.

All investments have been made in accordance with the San Diego County Water Authority Statement of Investment Policy. This report provides documentation that the Water Authority has sufficient funds to meet the financial obligations for the next six months. The market value information is provided by Bloomberg L.P. and is as of the report date.

Lisa Marie Harris, Director of Finance/Treasurer
## PORTFOLIO MASTER SUMMARY
as of February 28, 2015

### PORTFOLIO PERCENTAGES

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Permitted By</th>
<th>Portfolio Percentage</th>
<th>Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Agency Investment Fund (LAIF)</td>
<td>$50 Million</td>
<td>12.67%</td>
<td>$ 49,645,770</td>
</tr>
<tr>
<td>Banker's Acceptances</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Treasury Securities</td>
<td>15% - Minimum</td>
<td>17.07%</td>
<td>66,890,550</td>
</tr>
<tr>
<td>Agency Securities</td>
<td>85%</td>
<td>59.27%</td>
<td>232,174,480</td>
</tr>
<tr>
<td>Supranational Securities</td>
<td>10%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Reverse Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Placement Service Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Negotiable Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>25%</td>
<td>8.08%</td>
<td>31,664,481</td>
</tr>
<tr>
<td>Medium Term Notes/Corporates</td>
<td>30%</td>
<td>1.02%</td>
<td>3,998,543</td>
</tr>
<tr>
<td>Municipal Securities</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
<td>25%</td>
<td>1.76%</td>
<td>6,873,271</td>
</tr>
<tr>
<td>Money Market Funds</td>
<td>15%</td>
<td>0.13%</td>
<td>503,296</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>100.00%</td>
</tr>
<tr>
<td>Accrued Interest (unavailable for investing)</td>
<td></td>
<td></td>
<td>36,634</td>
</tr>
<tr>
<td>Checking/Petty Cash/Available Funds (unavailable for investing)</td>
<td></td>
<td></td>
<td>67,537</td>
</tr>
<tr>
<td><strong>Subtotal for Pooled Funds:</strong></td>
<td></td>
<td></td>
<td>$ 391,854,562</td>
</tr>
<tr>
<td>Bond/CP Fund Excluded from Portfolio Percentages:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treasury Securities</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Agency Securities</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Placement Service Certificates of Deposit</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Commercial Paper</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Local Agency Investment Fund (LAIF)</td>
<td></td>
<td>105,429,900</td>
<td></td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
<td></td>
<td>2,314,565</td>
<td></td>
</tr>
<tr>
<td>Money Market Funds and Cash</td>
<td></td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Accrued Interest (unavailable for investing)</td>
<td></td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal for Bond/CP Fund (available for CIP expenditures):</strong></td>
<td></td>
<td></td>
<td>$ 107,744,468</td>
</tr>
<tr>
<td>Debt Service Reserve (DSR) Funds Excluded from Portfolio Percentages:</td>
<td></td>
<td></td>
<td>12,240,775</td>
</tr>
<tr>
<td>Trinity Plus - Reserve (GIC) - Series 1998A COPs</td>
<td></td>
<td>12,240,775</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal for Debt Service Reserve Funds (unavailable for CIP expenditures):</strong></td>
<td></td>
<td></td>
<td>$ 12,240,775</td>
</tr>
<tr>
<td>Total Cash and Investments</td>
<td></td>
<td>$ 511,839,805</td>
<td></td>
</tr>
</tbody>
</table>

### PORTFOLIO INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Pooled Funds **</th>
<th>Bond/CP Fund</th>
<th>Debt Service Reserve</th>
<th>Total *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Yield to Maturity - 365 Days</td>
<td>0.55%</td>
<td>0.26%</td>
<td>5.55%</td>
<td>0.61%</td>
</tr>
<tr>
<td>Average Term</td>
<td>850</td>
<td>1</td>
<td>1</td>
<td>651</td>
</tr>
<tr>
<td>Average Days to Maturity (730 Days Maximum)</td>
<td>373</td>
<td>1</td>
<td>1</td>
<td>286</td>
</tr>
</tbody>
</table>

* "The weighted average days to maturity of the total portfolio shall not exceed 730 days (two years) to maturity" per SDCWA Investment Policy.

** Pooled Funds include Operating, Pay Go, RSF, Equipment and Stored Water funds.
On January 28th, the FOMC maintained the target for the federal funds rate at a range of 0-25 basis points. The next meeting is March 18th.

Projected Cash Flows (in Millions) *

<table>
<thead>
<tr>
<th>Month End</th>
<th>Investment Maturities</th>
<th>Projected Receipts</th>
<th>Projected Disbursements</th>
<th>Reinvestment/ (Use) of Liquid Funds</th>
<th>Projected Cash &amp; Investments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pooled Funds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 15</td>
<td>-</td>
<td>42.62</td>
<td>32.74</td>
<td>9.88</td>
<td>401.74</td>
</tr>
<tr>
<td>Apr 15</td>
<td>86.70</td>
<td>51.46</td>
<td>113.19</td>
<td>24.97</td>
<td>340.00</td>
</tr>
<tr>
<td>May 15</td>
<td>-</td>
<td>49.78</td>
<td>34.67</td>
<td>15.11</td>
<td>355.12</td>
</tr>
<tr>
<td>Jun 15</td>
<td>1.59</td>
<td>52.67</td>
<td>44.84</td>
<td>9.41</td>
<td>362.94</td>
</tr>
<tr>
<td>Jul 15</td>
<td>-</td>
<td>64.35</td>
<td>47.46</td>
<td>16.89</td>
<td>379.84</td>
</tr>
<tr>
<td>Aug 15</td>
<td>-</td>
<td>62.14</td>
<td>48.25</td>
<td>13.89</td>
<td>393.73</td>
</tr>
<tr>
<td>Bond/CP Fund</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar 15</td>
<td>-</td>
<td>0.02</td>
<td>4.80</td>
<td>(4.78)</td>
<td>102.97</td>
</tr>
<tr>
<td>Apr 15</td>
<td>-</td>
<td>0.02</td>
<td>5.37</td>
<td>(5.35)</td>
<td>97.62</td>
</tr>
<tr>
<td>May 15</td>
<td>-</td>
<td>0.02</td>
<td>4.79</td>
<td>(4.77)</td>
<td>92.85</td>
</tr>
<tr>
<td>Jun 15</td>
<td>-</td>
<td>0.02</td>
<td>3.78</td>
<td>(3.76)</td>
<td>89.09</td>
</tr>
<tr>
<td>Jul 15</td>
<td>-</td>
<td>0.02</td>
<td>3.43</td>
<td>(3.41)</td>
<td>85.68</td>
</tr>
<tr>
<td>Aug 15</td>
<td>-</td>
<td>0.02</td>
<td>3.24</td>
<td>(3.23)</td>
<td>82.45</td>
</tr>
</tbody>
</table>

* Numbers may not foot due to rounding

Credit Quality

<table>
<thead>
<tr>
<th></th>
<th>% of Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Treasury (AAA/AA+)</td>
<td>17.1%</td>
</tr>
<tr>
<td>Agency (AAA/AA+)</td>
<td>59.2%</td>
</tr>
<tr>
<td>Other (AAA)*</td>
<td>1.9%</td>
</tr>
<tr>
<td>AA**</td>
<td>9.1%</td>
</tr>
<tr>
<td>not rated ***</td>
<td>12.7%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

* Includes money market funds & JPA pools (CAMP)

** Includes commercial paper and medium term notes/corporates; the Water Authority's Investment Policy does not permit investments with a rating below A-

*** Includes LAIF, which is part of the state investment pool, and is not rated

U.S. Treasury Yield Curve
## Portfolio Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Duration</td>
<td>3.55</td>
</tr>
<tr>
<td>Average Coupon</td>
<td>1.91%</td>
</tr>
<tr>
<td>Average Purchase YTM</td>
<td>1.58%</td>
</tr>
<tr>
<td>Average Market YTM</td>
<td>1.51%</td>
</tr>
<tr>
<td>Average S&amp;P/Moody Rating</td>
<td>AA/Aa1</td>
</tr>
<tr>
<td>Average Final Maturity</td>
<td>3.75 yrs</td>
</tr>
<tr>
<td>Average Life</td>
<td>3.71 yrs</td>
</tr>
</tbody>
</table>

## Account Summary

<table>
<thead>
<tr>
<th></th>
<th>Beg. Values as of 1/31/15</th>
<th>End Values as of 2/28/15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Value</td>
<td>4,007,577</td>
<td>4,027,053</td>
</tr>
<tr>
<td>Accrued Interest</td>
<td>0</td>
<td>19,476</td>
</tr>
<tr>
<td>Total Market Value</td>
<td></td>
<td>4,027,053</td>
</tr>
<tr>
<td>Income Earned</td>
<td></td>
<td>2,492</td>
</tr>
<tr>
<td>Cont/WD</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Par</td>
<td></td>
<td>3,950,000</td>
</tr>
<tr>
<td>Book Value</td>
<td></td>
<td>3,998,543</td>
</tr>
<tr>
<td>Cost Value</td>
<td></td>
<td>3,998,543</td>
</tr>
</tbody>
</table>

## Top Issuers

<table>
<thead>
<tr>
<th>Issuer</th>
<th>% Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>ChevronTexaco Corp</td>
<td>50.3%</td>
</tr>
<tr>
<td>Apple Inc</td>
<td>49.7%</td>
</tr>
</tbody>
</table>

## Issuer Allocation

- Apple Inc: 49.70%
- ChevronTexaco Corp: 50.30%
## Portfolio Details - Investments

February 28, 2015

### Managed Pool Accounts

<table>
<thead>
<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer</th>
<th>Average Balance</th>
<th>Purchase Date</th>
<th>Par Value</th>
<th>Market Value</th>
<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P</th>
<th>YTM</th>
<th>Days to Maturity</th>
<th>Maturity Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH35</td>
<td>73</td>
<td>CAMP - OPERATING/POOLED</td>
<td>6,873,271.26</td>
<td>6,873,271.26</td>
<td>6,873,271.26</td>
<td>0.060</td>
<td>AAA</td>
<td>0.060</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASH45</td>
<td>4004</td>
<td>CAMP - 2010B BONDS-BABS</td>
<td>2,314,564.50</td>
<td>2,314,564.50</td>
<td>2,314,564.50</td>
<td>0.060</td>
<td>AAA</td>
<td>0.060</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASH43</td>
<td>4001</td>
<td>GOLDMAN - 2010B BONDS-BABS</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.010</td>
<td>AAA</td>
<td>0.010</td>
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<td></td>
<td></td>
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Subtotal and Average: 177,007,577.41

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Subtotal and Average: 31,664,480.84

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Subtotal and Average: 31,664,480.84

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Subtotal and Average: 31,664,480.84
SDCWA - Fiscal Year 2015
Portfolio Management

Page 2

Portfolio Details - Investments
February 28, 2015
CUSIP

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Average
Balance

Purchase
Date

Par Value

Market Value

Book Value

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10/28/2014
12/18/2014
07/19/2012
07/25/2012
08/16/2012
09/18/2012
10/17/2012
01/17/2013
02/20/2013
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09/17/2013
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12/19/2013
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04/15/2014
04/15/2014
04/15/2014
09/19/2014
12/18/2014

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S&P

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365 Maturity

Maturity
Date

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FEDERAL HOME LOAN BANK
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04/20/2017

Portfolio CWA2
CC
Run Date: 03/03/2015 - 11:17

Page 12 of 276

PM (PRF_PM2) 7.3.0


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Subtotal and Average 66,900,550.25 66,000,000.00 66,188,368.00 66,900,550.25 0.553 456

Total and Average 522,644,347.09 502,295,577.41 506,280,248.83 511,772,265.16 0.609 286
## Portfolio Details - Cash

**February 28, 2015**

### Passbook/Checking Accounts

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<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer</th>
<th>Average Balance</th>
<th>Purchase Date</th>
<th>Par Value</th>
<th>Market Value</th>
<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P</th>
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### Total Cash and Investments

- **Average Balance:** 0.00
- **Days to Maturity:** 1

- **Total Cash and Investments:**
  - **Passbook/Checking Accounts:** 522,644,347.09
  - **Wells Fargo - Operating/Pool:** 502,363,117.64
  - **Wells Fargo - Payroll ZBA:** 506,347,789.06
  - **Wells Fargo - 2010B BONDS-BABS:** 511,839,805.39

- **Stated Rate:** 0.609
- **Days to Maturity:** 286

---

**Run Date:** 03/03/2015 - 11:17

**Page 14 of 276**
### SDCWA - Fiscal Year 2015
#### Portfolio Management
##### Activity Summary

**February 2014 through February 2015**

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>Number of Securities</th>
<th>Total Invested</th>
<th>Yield to Maturity</th>
<th>Managed Pool Rate</th>
<th>Number of Investments Purchased</th>
<th>Number of Investments Redeemed</th>
<th>Average Term</th>
<th>Average Days to Maturity</th>
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**Average**

|     | 80   | 564,502,153.90 | 0.547% | 0.554% | 0.558 | 3 | 3 | 611 | 314 |

Run Date: 03/03/2015 - 11:17
Page 15 of 276
March 18, 2015

Attention: Administrative and Finance Committee

Adopt an ordinance amending chapter 2.08 of the Administrative Code (Action)

Purpose
This action will make amendments to chapter 2.08 of the Administrative Code relating to the office of the General Counsel.

Board Officers recommendation
Adopt Ordinance No. 2015-___, an ordinance of the board of directors of the San Diego County Water Authority amending chapter 2.08 of the Administrative Code relating to the office of the General Counsel.

Alternative
Do not adopt the ordinance.

Fiscal impact
Adoption of the ordinance has no identified fiscal impact.

Background
The Administrative Code establishes the offices and describes the duties of the General Manager and General Counsel. The Board Officers have reviewed the duties of the General Counsel and have determined that certain amendments to the Administrative Code are appropriate to more closely reflect actual responsibilities and practices.

Discussion
The Board Officers and a task force appointed by former Chair Wornham have reviewed the duties and responsibilities of the office of the General Counsel. Following that review it is recommended that the Administrative Code be amended as shown in the attached ordinance to more closely reflect the actual responsibilities of the General Counsel and practices relating to the retention and management of special counsel.

Prepared by: Mark Weston, Chair

Attachment: Ordinance No. 2015-___
ORDINANCE NO. 2015-__

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE SAN DIEGO COUNTY WATER AUTHORITY AMENDING CHAPTER 2.08 OF THE ADMINISTRATIVE CODE RELATING TO THE OFFICE OF THE GENERAL COUNSEL

The Board of Directors of the San Diego County Water Authority does ordain as follows:

1. Article 2, chapter 2.08 of the Administrative Code is amended by the amendment of section 2.08.050 to read as follows:

Section 2.08.050 Authority and Duties

The General Counsel is responsible for the efficient and effective administration of all legal affairs of the Authority the responsibility for which is not otherwise delegated to a special counsel appointed directly by the Board, or is reserved to the Board. In addition to the general powers as chief legal officer of the Authority, and not as a limitation thereon, the General Counsel shall:

(1) Advise the Board, its officers and committees and the General Manager upon all legal questions arising in the conduct of Authority business;

(2) Make recommendations for ordinances, resolutions or other documents or procedures affecting the legal position of the Authority;

(3) Give an opinion upon any legal matter or question submitted by the Board or the General Manager;

(4) Attend all Board meetings and Board Committee meetings;

(5) Attend such other meetings of the Authority as deemed necessary and proper or as the Board may direct;

(6) Prepare for execution, or approve as to form and legality, all contracts and documents to which the Authority is a party, and approve as to form and for filing all bonds and insurance policies submitted to the Authority;

(7) Report on the outcome of any litigation or other legal proceeding in which the Authority has an interest to the General Manager and the Board;

(8) Prepare or revise ordinance or resolutions upon request of the Board or the General Manager;
(9) Enforce Authority ordinances and regulations;

(91) Supervise the representation of the Authority in judicial, administrative and legislative proceedings subject to the oversight and case management responsibilities established under section 2.08.070, subdivision (b);

(11) Protect the Authority’s legal position and perform such other duties as may be imposed by statute, this Code or other action of the Board;

(12) Deliver all records, documents and property of every description belonging to the office or to the Authority to any successor in office;

(13) Manage the office consistent with the budget adopted pursuant to section 2.04.050, subdivision (b), paragraph 3, and report to the Board expenditures for litigation and other legal services;

(14) Represent the Authority on other legal matters as directed by the Board.

2. Article 2, chapter 2.08 of the Administrative Code is amended by the amendment of section 2.08.070 to read as follows:

Section 2.08.070 Employment of Special Counsel

(a) The Board is the awarding authority for contracts for special counsel services with an attorney fee amount of more than $50,000. The General Counsel may award contracts for special counsel services with an attorney fee contract in amounts of $50,000 or less for special counsel and other services as the General Counsel determines are necessary or convenient for management of the Authority’s legal affairs to the extent budgeted funds are available. In addition, the Board may delegate to the General Counsel the authority to select and retain special counsel notwithstanding the provisions of this section on a case-by-case basis.

(b) The Board may establish the level of Board oversight and responsibilities of the General Counsel and special counsel at the time of execution of a contract for special counsel services and may amend the same at any time. The Board Officers may establish protocols for the management and supervision of litigation on a case-by-case basis, employ special counsel upon such terms and conditions as the Board deems appropriate.

(c) The Board may delegate to the General Counsel the authority to select and retain special counsel.

The General Counsel shall incorporate these changes into the Administrative Code. The highlighting of text in this ordinance is for convenience and will not be incorporated into the codified text.

4. This ordinance shall be effective upon adoption.

5. The Clerk of the Board shall publish this ordinance or a summary prepared by the General Counsel pursuant to Section 1.00.040 of the Administrative Code.
PASSED, APPROVED AND ADOPTED, this ___ day of __________, 2015.

AYES:

NOES:

ABSTAIN:

ABSENT:

__________________________________
Mark Weston, Chair

ATTEST:

___________________________________
Jim Madaffer, Secretary

I, Melinda Cogle, Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Ordinance No. 2015-__ was duly adopted at the meeting of the Board of Directors on the date stated above.

___________________________________
Melinda Cogle, Clerk of the Board
March 18, 2015

Attention: Administrative and Finance Committee

Administrative and Finance Committee Work Plan for calendar years 2015 and 2016.

(Action)

Administrative and Finance Committee Chair and Vice Chairs’ recommendation

Adopt the Administrative and Finance Committee Work Plan for calendar years 2015 and 2016.

Alternative

Modify the recommended goals.

Background

The Administrative and Finance Committee is responsible for administrative and finance matters including rates, fees, charges, and other sources of revenue; budget; audit; investments; human resources; employer-employee relations; information technology; insurance; risk management; and other matters of general business operations. During the next two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

Discussion

Attached for your approval is the Administrative and Finance Committee Work Plan for calendar years 2015 and 2016. The work plan was prepared under the direction of the Administrative and Finance Committee Chair and Vice Chairs and was provided for committee review at the February 26, 2015 committee meeting. The adopted work plan will be formally reviewed at the end of each calendar year to measure progress.

Prepared by: Lisa Marie Harris, Director of Finance/Treasurer
Matthew S. Brown, Director of Administrative Services

Reviewed by: Gary Arant, Chair, Administrative and Finance Committee

Attachment: Administrative and Finance Committee Work Plan for calendar years 2015 and 2016
Business Plan Items

Financial Planning

1. Fiscal Sustainability Discussions – Complete the fiscal sustainability discussions which include evaluating options to enhance fixed charges, the allocation of non-commodity revenue to the Melded Treatment Rate, the consideration of a new Supply Reliability Charge, and the future of the Transitional Special Agricultural Water Rate Program, and provide direction regarding the design of related rates and charges. (December 2016 – Goal #11)

2. Budget – Review the multi-year budget for fiscal years 2016 and 2017 and provide direction. (June 2015 – Goal #6)

3. Liquidity Facility – Address expiring liquidity facilities for the Water Authority’s Commercial Paper Programs. (July 2015 – Goal #5)


6. Rate Model Upgrade Assessment – Consider authorizing a rate model upgrade assessment to enable staff to implement recommended changes to enhance scenario analysis capabilities. (December 2016 – Goal #13)

Information Technology

1. PeopleSoft Upgrade – Consider authorizing an upgrade of the PeopleSoft system. (December 2017 – Goal #6)

2. Cyber Security Assessment – Consider authorizing an assessment of security vulnerabilities to enable staff to develop and implement a corrective action plan. (August 2016 – Goal #8)

Workforce Management

1. Memoranda of Understanding – Consider ratifying and approving the Memoranda of Understanding with represented employee bargaining groups. (June 2015 – Goal #1)

Other Items


2. Conservation Database development – Oversee the development of a centralized database to support the conservation program. (July 2016)
March 18, 2015

Attention: Administrative and Finance Committee

Controller’s Report on Monthly Financial Reports. (Information)

Financial Reports
Attached for review by the Administrative and Finance Committee and the Board of Directors are the following financial reports:

Attachment A: Water Sales Volumes, in acre-feet
Attachment B: Water Sales Revenues, in millions
Attachment C: Water Purchases and Treatment Costs, in millions
Attachment D: Multi-Year Budget Status Report
Attachment E: Operating Departments Expenditures, in millions
Attachment F: Schedule of Cash and Investments

The Multi-Year Budget Status Report (Attachment D) compares actual revenues and expenditures, on a budgetary basis, for the nineteen-month period of July 1, 2013 through January 31, 2015, to the adopted budget, as amended by the Board. Budgeted amounts for the nineteen-month period are presented on a straight-line basis unless noted herein. Water sales and purchases are budgeted based on projected monthly volume in acre-feet. In addition, period-to-date budgeted amounts are presented to reflect the expected timing of certain revenue and expenditure categories. These include infrastructure access charges, property taxes and in-lieu charges, hydroelectric revenue, capacity charges, water standby availability charges, contributions in aid of capital improvement program (CIP), stored water purchases, debt service, QSA mitigation, annual insurance premiums, and contributions to the Six Agency Fund.

Net Water Sales Revenue
Net Water Sales Revenue is the Water Authority’s principal source of operating income. It is the difference between water sales revenue and cost of water sold. Water sales revenue includes variable volumetric charges for supply, treatment and transportation, and fixed charges for customer service and storage. Cost of water sold includes payments to water suppliers such as Metropolitan Water District (MWD) and Imperial Irrigation District (IID).

Net Water Sales Revenue for the nineteen-month period ended January 31, 2015 was $270.4 million, 11% higher than the budgeted amount of $242.9 million (Attachment D). Detailed information on Net Water Sales Revenue, shown on Attachments A, B, and C, is provided below.

---

1 All information regarding water sales volumes, revenues and costs are based on the adopted fiscal years 2014 and 2015 multi-year budget.
Budgeted water sales volume in acre-feet (AF) for the nineteen-month period ended January 31, 2015 was 772,812 AF. The actual water sales volume was 829,683 AF, 7% higher than budgeted (Attachment A). The variance is the cumulative effect of the severe drought condition since the late summer in 2013. Fiscal year 2014 concluded with the actual water sales volume approximately 51,000 AF higher than budgeted. Through the first five months of fiscal year 2015, the actual water sales volume was approximately 11,500 AF higher than budgeted. In December 2014 and January 2015, the actual sales volume was 54,945 AF, 5,585 AF lower than the 60,530 AF budgeted and 21.5% decrease from the actual sales volume for the same period a year ago. Through the first seven months of FY 2015, the actual sales volume represents a 2% decrease from the same seven-month period in FY 2014.

Cumulatively, total actual Water Sales revenue for the nineteen-month period ended January 31, 2015 was $946.7 million, 7% higher than the budgeted amount of $888.6 million for the same period (Attachment B).

Total Water Purchases and Treatment costs were budgeted at $645.7 million and the actual costs were $676.3 million, 5% over budget for the nineteen-month period ended January 31, 2015. Total Water Purchases and Treatment costs included $91.6 million for the 158,333 AF of water purchased from IID, and $128.2 million for MWD’s conveyance charges to transfer 285,983 AF of the water purchased from IID and conserved through the Coachella Canal and All-American Canal lining projects.

In summary, water sales volumes, Water Sales revenues, and Water Purchases and Treatment costs were 7%, 7%, and 5%, respectively, above the nineteen-month period-to-date budgets. This resulted in Net Water Sales Revenue to exceed the budget by 11%, or $27.5 million.

**Revenues and Other Income**

As shown in Attachment D, Total Revenues and Other Income were budgeted at $152.7 million for the nineteen-month period ended January 31, 2015. Actual revenues were $153.4 million, $0.7 million higher than budgeted. The variance is explained in detail below.

Categories of revenues in which actual revenues exceeded the nineteen-month period-to-date budgeted amounts included Contributions in Aid of CIP, Hydroelectric Revenue, Capacity Charges, Infrastructure Access Charges, and Property Taxes and In-Lieu Charges. In October 2014, $3.9 million in donated assets were received from Olivenhain Municipal Water District and recognized as Contributions in Aid of CIP. Actual Hydroelectric Revenue from the Rancho Penasquitos Pressure Control and Hydroelectric Facility (Rancho Hydro) and the Lake Hodges Pumped Storage Facility (Hodges Hydro) exceeded the period-to-date budget by $2.3 million. Actual Capacity Charges revenue was $1.0 million higher than budgeted primarily due to the $3.4 million received from Rincon Del Diablo Municipal Water District for a large developer project in September 2014. Actual Infrastructure Access Charges and Property Taxes and In-Lieu Charges revenues were higher than budget by $0.8 million and $0.3 million, respectively.

Categories of revenues in which actual revenues were lower than the nineteen-month period-to-date budgeted amounts included Grant Reimbursements, Investment Income, and Build America
Bonds Subsidy. Grant Reimbursements revenue for Integrated Regional Water Management (IRWM) Grants was $5.7 million below budget, the result of both lower-than-projected activity levels by grant recipients and the timing delay in reimbursement receipt and revenue recognition. Investment Income was $3.5 million lower than budgeted. The variance was attributed to lower-than-budgeted rates of return on investments. The actual Build America Bonds Subsidy was $16.4 million, $1.5 million lower than budgeted. Semi-annual subsidy payments from the United States Treasury were reduced following the Congressionally-mandated sequestration in 2013.

Expenditures
As shown in Attachment D, Total Expenditures were budgeted at $315.9 million for the nineteen-month period ended January 31, 2015. Actual expenditures were $288.1 million, $27.8 million lower than budgeted. The variance is explained in detail below.

Overall Operating Department expenditures were trending less than budgeted. This resulted mainly from personnel cost savings from unfilled vacancies throughout the period and the timing delay between cost incurrence and expense recognition.

Debt Service expenditures totaled $194.2 million for the nineteen-month period ended January 31, 2015, $7.6 million lower than budgeted. The variance was attributed to both the cash flow savings from FY 2013 refunding transaction and lower interest rates from the FY 2014 commercial paper program restructuring. Total actual Grant Expenditures were $8.1 million, or $8.4 million below the period-to-date budget. The variance resulted from the lower-than-projected activity levels and the timing delay in expenditure recognition of pass-through IRWM grants. Actual Hodges Pumped Storage and Equipment Replacement expenditures were lower than budget by $0.6 million and $0.1 million, respectively.

CIP Expenditures
Attachment D shows that CIP Expenditures were budgeted at $162.7 million for the nineteen-month period ended January 31, 2015. Actual expenditures were $150.6 million, $12.1 million, or 7%, lower than the period-to-date budgeted amount.

Actual CIP expenditures funded by Pay As You Go Fund and CIP/Bond Construction Funds for the nineteen-month period ended January 31, 2015 were $67.6 million and $83.0 million, respectively.

Cash and Investments
As of January 31, 2015 and December 31, 2014, the overall balance in the Water Authority’s cash and investments was $559.7 million and $544.4 million, respectively (Attachment F). Of the January 31, 2015 overall cash and investments balance, approximately 44% of funds were unrestricted with the remaining 56% of funds restricted for specific purposes. To maximize investment returns, the Water Authority pools the cash of the Pay As You Go Fund with unrestricted funds. As of January 31, 2015, the Rate Stabilization Fund was funded at $86.6 million, approximately 79% of the maximum approved level of $109.0 million.
*Budgeted amounts are based on the adopted two year budget, and do not reflect any projected revisions that may have previously been communicated to the Board.

### Fiscal Year 2014 Cumulative Water Sales (AF)

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<th>Sep-14</th>
<th>Oct-14</th>
<th>Nov-14</th>
<th>Dec-14</th>
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<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget (a)</td>
<td>55,314</td>
<td>110,634</td>
<td>160,795</td>
<td>204,198</td>
<td>238,398</td>
<td>269,960</td>
<td>298,321</td>
<td>322,118</td>
<td>349,402</td>
<td>384,217</td>
<td>423,881</td>
<td>471,509</td>
</tr>
<tr>
<td>Actual</td>
<td>49,314</td>
<td>100,674</td>
<td>158,363</td>
<td>206,462</td>
<td>241,948</td>
<td>273,250</td>
<td>311,940</td>
<td>341,823</td>
<td>373,484</td>
<td>416,706</td>
<td>470,879</td>
<td>522,453</td>
</tr>
<tr>
<td>AF Difference (b)</td>
<td>(6,000)</td>
<td>(9,960)</td>
<td>(2,432)</td>
<td>2,264</td>
<td>3,559</td>
<td>3,290</td>
<td>13,619</td>
<td>19,705</td>
<td>24,082</td>
<td>32,489</td>
<td>46,998</td>
<td>50,944</td>
</tr>
<tr>
<td>Cum. Actual AF</td>
<td>-11%</td>
<td>-9%</td>
<td>-2%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>11%</td>
<td>11%</td>
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</tbody>
</table>

### Fiscal Year 2015 Cumulative Water Sales (AF)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Budget (a)</td>
<td>55,867</td>
<td>111,740</td>
<td>162,403</td>
<td>206,240</td>
<td>240,773</td>
<td>272,659</td>
<td>301,303</td>
<td>325,338</td>
<td>352,895</td>
<td>388,059</td>
<td>428,120</td>
<td>476,226</td>
</tr>
<tr>
<td>Actual</td>
<td>56,177</td>
<td>109,718</td>
<td>161,732</td>
<td>209,002</td>
<td>252,285</td>
<td>277,465</td>
<td>307,230</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AF Difference (b)</td>
<td>310</td>
<td>(2,022)</td>
<td>(2,432)</td>
<td>2,264</td>
<td>3,559</td>
<td>3,290</td>
<td>13,619</td>
<td>19,705</td>
<td>24,082</td>
<td>32,489</td>
<td>46,998</td>
<td>50,944</td>
</tr>
<tr>
<td>Cum. Actual AF</td>
<td>1%</td>
<td>-2%</td>
<td>0%</td>
<td>1%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Fiscal Year 2014 through Jan-15 Total

- **Budget**: 471,509
- **Actual**: 522,453
- **Difference**: 50,944
- **% Difference**: 11%

### Fiscal Year 2015 Total

- **Budget**: 772,812
- **Actual**: 829,683
- **Difference**: 56,871
- **% Difference**: 7%
*Budgeted amounts are based on the adopted two year budget, and do not reflect any projected revisions that may have previously been communicated to the Board.

Fiscal Year 2014 Cumulative Water Sales (in Millions $)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Budget (a)</td>
<td>59.0</td>
<td>118.0</td>
<td>172.3</td>
<td>220.2</td>
<td>259.9</td>
<td>296.6</td>
<td>332.2</td>
<td>363.6</td>
<td>398.8</td>
<td>441.1</td>
<td>488.4</td>
<td>542.8</td>
</tr>
<tr>
<td>Actual</td>
<td>54.7</td>
<td>110.6</td>
<td>171.6</td>
<td>223.3</td>
<td>264.8</td>
<td>302.6</td>
<td>348.9</td>
<td>386.9</td>
<td>425.6</td>
<td>475.6</td>
<td>535.9</td>
<td>593.7</td>
</tr>
<tr>
<td>Difference (b)</td>
<td>(4.3)</td>
<td>(7.4)</td>
<td>(0.7)</td>
<td>3.1</td>
<td>4.9</td>
<td>6.0</td>
<td>16.7</td>
<td>23.3</td>
<td>26.8</td>
<td>34.5</td>
<td>47.5</td>
<td>50.9</td>
</tr>
<tr>
<td>Cum. Actual</td>
<td>-7%</td>
<td>-6%</td>
<td>0%</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>10%</td>
<td>9%</td>
</tr>
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Fiscal Year 2015 Cumulative Water Sales (in Millions $)

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>*Budget (a)</td>
<td>61.5</td>
<td>122.9</td>
<td>179.5</td>
<td>229.5</td>
<td>270.8</td>
<td>309.0</td>
<td>345.8</td>
<td>378.3</td>
<td>414.7</td>
<td>458.5</td>
<td>507.4</td>
<td>563.8</td>
</tr>
<tr>
<td>Actual</td>
<td>61.6</td>
<td>121.2</td>
<td>179.0</td>
<td>232.9</td>
<td>281.7</td>
<td>314.8</td>
<td>353.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Difference (b)</td>
<td>0.1</td>
<td>(1.7)</td>
<td>(0.5)</td>
<td>3.4</td>
<td>10.9</td>
<td>5.8</td>
<td>7.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cum. Actual</td>
<td>0%</td>
<td>-1%</td>
<td>0%</td>
<td>1%</td>
<td>4%</td>
<td>4%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
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<td>2%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>FY14</th>
<th>FY15 through Jan-15</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>542.8</td>
<td>345.8</td>
<td>888.6</td>
</tr>
<tr>
<td>Actual</td>
<td>593.7</td>
<td>353.0</td>
<td>946.7</td>
</tr>
<tr>
<td>Difference</td>
<td>50.9</td>
<td>7.2</td>
<td>58.1</td>
</tr>
<tr>
<td>% Difference</td>
<td>9%</td>
<td>2%</td>
<td>7%</td>
</tr>
</tbody>
</table>
**Budgeted amounts are based on the adopted two year budget, as amended by the Board.**

**Fiscal Year 2014 Cumulative Cost of Water Purchases and Treatment (in Millions $)**

<table>
<thead>
<tr>
<th>Months</th>
<th>Jul-14</th>
<th>Aug-14</th>
<th>Sep-14</th>
<th>Oct-14</th>
<th>Nov-14</th>
<th>Dec-14</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>399.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Actual</td>
<td></td>
<td>246.6</td>
<td></td>
<td></td>
<td>645.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference</td>
<td>23.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cum. Actual</td>
<td>422.7</td>
<td>253.6</td>
<td>676.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**% Difference**

- Budget: 6%
- Actual: 3%
- Total: 5%

**Fiscal Year 2015 Cumulative Cost of Water Purchases and Treatment (in Millions $)**

<table>
<thead>
<tr>
<th>Months</th>
<th>Jul-14</th>
<th>Aug-14</th>
<th>Sep-14</th>
<th>Oct-14</th>
<th>Nov-14</th>
<th>Dec-14</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>44.3</td>
<td>88.4</td>
<td>128.9</td>
<td>164.5</td>
<td>193.8</td>
<td>220.4</td>
<td>246.6</td>
<td>269.2</td>
<td>326.1</td>
<td>361.3</td>
<td>361.3</td>
<td>401.9</td>
</tr>
<tr>
<td>Actual</td>
<td>45.3</td>
<td>89.1</td>
<td>130.4</td>
<td>166.1</td>
<td>196.9</td>
<td>225.9</td>
<td>253.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Difference</td>
<td>1.0</td>
<td>0.7</td>
<td>1.5</td>
<td>1.6</td>
<td>3.1</td>
<td>5.5</td>
<td>7.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cum. Actual</td>
<td>45.3</td>
<td>95.1</td>
<td>141.9</td>
<td>172.1</td>
<td>200.0</td>
<td>225.9</td>
<td>253.6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
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</table>

**% Difference**

- Budget: 2%
- Actual: 1%
- Total: 3%

**Fiscal Year 2014 and 2015**

<table>
<thead>
<tr>
<th></th>
<th>FY14</th>
<th>FY15 through Jan-15</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget</td>
<td>399.1</td>
<td>246.6</td>
<td>645.7</td>
</tr>
<tr>
<td>Actual</td>
<td>422.7</td>
<td>253.6</td>
<td>676.3</td>
</tr>
<tr>
<td>Difference</td>
<td>23.6</td>
<td>7.0</td>
<td>30.6</td>
</tr>
<tr>
<td>% Difference</td>
<td>6%</td>
<td>3%</td>
<td>5%</td>
</tr>
</tbody>
</table>
## San Diego County Water Authority

### Fiscal Years 2014 and 2015 Budget Status Report

For the 19 Months Ended January 31, 2015

### Net Water Sales Revenue

<table>
<thead>
<tr>
<th></th>
<th>FY 14 &amp; 15 Amended Budget</th>
<th>FY 14 &amp; 15 Budget (79%)</th>
<th>FY 14 &amp; 15 Actual Amended Period-to-Date</th>
<th>Variance with Actual/Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Water Sales Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Sales</td>
<td>$1,106,663</td>
<td>$888,612,696</td>
<td>$946,696,456</td>
<td>$58,083,760</td>
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<tr>
<td>Water Purchases &amp; Treatment</td>
<td>800,949,019</td>
<td>645,689,409</td>
<td>676,297,068</td>
<td>(30,607,659)</td>
</tr>
<tr>
<td>Total Net Water Sales Revenue</td>
<td>$305,714,700</td>
<td>$242,923,287</td>
<td>$270,399,388</td>
<td>$27,476,101</td>
</tr>
</tbody>
</table>

### Revenues and Other Income

| Item                                              | Revenues = [B + C] Expenditures = [B - C] Variance with Actual/Amended Budget |
|---------------------------------------------------|-------------------------------|---------------------------------|
| Infrastructure Access Charges                     | 59,054,000                    | 45,647,920                      | 948,412                          | 79%                               |
| Property Taxes and In-Lieu Charges                | 22,320,000                    | 17,647,329                      | 6,967,050                        | 79%                               |
| Investment Income                                 | 12,715,000                    | 10,044,850                      | 2,460,150                        | 69%                               |
| Hydroelectric Revenue                             | 5,440,000                     | 3,946,849                       | 1,553,151                        | 52%                               |
| Grant Reimbursements                              | 20,900,406                    | 16,511,321                      | 4,389,085                        | 52%                               |
| Build America Bonds Subsidy                       | 22,605,916                    | 17,858,674                      | 4,747,242                        | 84%                               |
| Other Income                                       | -                             | -                               | -                               | -                                 |
| Capital Contributions:                            |                               |                                 |                                 |                                   |
| Capacity Charges                                  | 29,784,000                    | 23,032,835                      | 6,751,165                        | 81%                               |
| Water Standby Availability Charges                | 22,549,000                    | 17,443,413                      | 5,068,387                        | 72%                               |
| Contributions in Aid of Capital Improvement Program (CIP) | 15,860,000                     | 600,400                         | 15,259,600                       | 78%                               |
| Total Revenues and Other Income                   | $211,228,322                  | $152,733,591                    | $153,395,454                     | $661,863                          | 73%                               |

### Net Water Sales Revenue and Revenues and Other Income, net

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 14 &amp; 15 Amended Budget</th>
<th>FY 14 &amp; 15 (79%)</th>
<th>FY 14 &amp; 15 Actual</th>
<th>Variance with Actual/Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues and Other Income, net</td>
<td>$516,943,022</td>
<td>$395,656,878</td>
<td>$423,794,842</td>
<td>$28,137,964</td>
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### Expenditures

<table>
<thead>
<tr>
<th>Item</th>
<th>Expenditures = [B - C]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stored Water Purchases</td>
<td>30,090,000</td>
</tr>
<tr>
<td>Debt Service</td>
<td>281,531,000</td>
</tr>
<tr>
<td>QSA Mitigation</td>
<td>18,417,000</td>
</tr>
<tr>
<td>Hodges Pumped Storage</td>
<td>4,133,000</td>
</tr>
<tr>
<td>Equipment Replacement</td>
<td>3,353,000</td>
</tr>
<tr>
<td>Grant Expenditures</td>
<td>20,900,406</td>
</tr>
<tr>
<td>Other Expenditures</td>
<td>-</td>
</tr>
<tr>
<td>Operating Departments (see detail below)</td>
<td>98,563,969</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$456,988,375</td>
</tr>
</tbody>
</table>

### Net Revenues Before CIP

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 14 &amp; 15 Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues and Other Income, net</td>
<td>$59,954,647</td>
</tr>
<tr>
<td>Pay As You Go Fund</td>
<td>$67,599,302</td>
</tr>
<tr>
<td>CIP/Bond Construction Funds</td>
<td>83,025,837</td>
</tr>
<tr>
<td>Total CIP Expenditures by Funding Source</td>
<td>$206,002,357</td>
</tr>
</tbody>
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### CIP Expenditures

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 14 &amp; 15 Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Services</td>
<td>$14,430,172</td>
</tr>
<tr>
<td>Colorado River Program</td>
<td>2,822,421</td>
</tr>
<tr>
<td>Engineering</td>
<td>7,488,364</td>
</tr>
<tr>
<td>Finance</td>
<td>4,802,577</td>
</tr>
<tr>
<td>General Counsel</td>
<td>14,927,219</td>
</tr>
<tr>
<td>General Manager &amp; Board of Directors</td>
<td>5,350,948</td>
</tr>
<tr>
<td>MWD Program</td>
<td>3,568,954</td>
</tr>
<tr>
<td>Operations &amp; Maintenance</td>
<td>30,458,234</td>
</tr>
<tr>
<td>Public Outreach and Conservation</td>
<td>7,357,143</td>
</tr>
<tr>
<td>Water Resources</td>
<td>7,357,937</td>
</tr>
<tr>
<td>Total Operating Departments</td>
<td>$98,563,969</td>
</tr>
</tbody>
</table>

### CIP Expenditures by Funding Source

<table>
<thead>
<tr>
<th>Item</th>
<th>FY 14 &amp; 15 Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Services</td>
<td>$11,734,865</td>
</tr>
<tr>
<td>Colorado River Program</td>
<td>2,302,233</td>
</tr>
<tr>
<td>Engineering</td>
<td>5,915,808</td>
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<tr>
<td>Finance</td>
<td>3,794,036</td>
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<td>General Counsel</td>
<td>11,792,503</td>
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<td>General Manager &amp; Board of Directors</td>
<td>4,227,249</td>
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<tr>
<td>MWD Program</td>
<td>2,819,474</td>
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<td>Operations &amp; Maintenance</td>
<td>24,062,005</td>
</tr>
<tr>
<td>Public Outreach and Conservation</td>
<td>5,812,143</td>
</tr>
<tr>
<td>Water Resources</td>
<td>5,812,770</td>
</tr>
<tr>
<td>Total Operating Departments</td>
<td>$78,273,086</td>
</tr>
</tbody>
</table>
Notes to the Budget Status Report:

a) Period-to-date budgeted amounts are 19/24ths (79%) of fiscal years 2014 and 2015 amended budget unless noted.
b) Water sales and water purchases period-to-date budgeted amounts are based on projected acre-feet calculated per month.
c) Property taxes are primarily received in December and April. In-lieu charges in the amount of $438,701 for fiscal year 2014 and $474,475 for fiscal year 2015 are received quarterly from the City of San Diego.
d) Investment income excludes unrealized gains or losses, which are non-cash transactions.
e) Hydroelectric revenue budget amount includes Rancho Penasquitos Pressure Control and Hydroelectric Facility (Rancho Hydro) and Lake Hodges Pumped Storage Facility (Hodges Hydro). Power generating from both locations are sold to San Diego Gas and Electric.
f) Capacity charges are primarily received in July, October, January and April, after the quarterly period ends, and accrued revenue are recorded for the quarter ending June.
g) Water standby availability charges are primarily received in January and May.
h) Contributions in aid of capital improvement program include planned reimbursements for the Second Aqueduct Pipeline - Caltrans Highway 76 Realignment CIP Project and other miscellaneous projects.
i) Bonds and Certificates of Participation debt service payments due semi-annually on November 1 and May 1. Subordinate Lien Water Revenue Refunding Bonds, Series 2011S-1 debt service payments due semi-annually on July 1 and January 1. Debt Service includes principal, interest expense, and debt service fees. Amortization expense relating to long-term debt, such as discounts, premiums, and deferred loss on refunding are excluded because they are non-cash transactions.
k) Amounts include capital equipment purchases.
l) Stored water purchases budgeted to purchase 50,000 acre-feet to begin the filling of San Vicente Dam upon significant completion of the Dam Raise project.
m) Period-to-date budgeted amounts adjusted based on items occurring on a periodic basis.
n) Fiscal Year 2014 actual amounts for Public Outreach and Conservation excludes expenses of $71,548 funded by the approved prior year carryover of funds.
o) The Board amended the current Capital Improvement Program two-year appropriation and lifetime budget for the Carlsbad Desalination Project by $124,300 in September 2013 and by $220,000 in April 2014, for a total of $344,300.
p) In March 2014, the Board amended the two-year operating department budget by $6,090,000 for services related to rate litigation.
q) In April 2014, Other Income increased $1 million due to the Lake Hodges Settlement Agreement.
r) In June 2014, the Board approved the mid-term budget adjustments.
s) The semi-annual subsidy payments from the United States Treasury equal to 35 percent of the interest payable on the Series 2010B Bonds were reduced under Congressionally-mandated sequestration; $898,585 for Fiscal Year 2014 and $412,558 for Fiscal Year 2015.
San Diego County Water Authority
Comparison of Amended Budget and Period-to-Date Amended Budget (79% Overall)
to Actual Operating Expenditures by Departments
For the 19 Months Ended January 31, 2015

Actual Operating Expenditures to Amended Budget in Percentages (%)

- Two-Year Amended Budget $98.6 Million
- Period-To-Date Amended Budget $78.3 Million
- Period-to-Date Actual Operating Expenditures $65.9 Million
San Diego County Water Authority  
Schedule of Cash and Investments  
As of January 31, 2015 and December 31, 2014

<table>
<thead>
<tr>
<th></th>
<th>January</th>
<th>December</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Fund</td>
<td>$68,902,253</td>
<td>$52,723,010</td>
<td>$68,900,000</td>
</tr>
<tr>
<td>Stored Water Fund</td>
<td>86,324,309</td>
<td>86,316,566</td>
<td></td>
</tr>
<tr>
<td>Equipment Replacement Fund</td>
<td>5,394,146</td>
<td>5,405,494</td>
<td></td>
</tr>
<tr>
<td>Rate Stabilization Fund</td>
<td>86,567,947</td>
<td>86,560,183</td>
<td>66,200,000</td>
</tr>
<tr>
<td><strong>Total Unrestricted Funds</strong></td>
<td><strong>44%</strong> 247,188,655</td>
<td><strong>231,005,253</strong></td>
<td></td>
</tr>
<tr>
<td>Pay As You Go Fund</td>
<td>186,581,320</td>
<td>181,348,583</td>
<td></td>
</tr>
<tr>
<td>CIP/Bond Construction Funds</td>
<td>109,658,502</td>
<td>115,293,142</td>
<td></td>
</tr>
<tr>
<td>Debt Service Reserve Funds</td>
<td>16,293,138</td>
<td>16,733,039</td>
<td></td>
</tr>
<tr>
<td><strong>Total Restricted Funds</strong></td>
<td><strong>56%</strong> 312,532,960</td>
<td>313,374,764</td>
<td></td>
</tr>
<tr>
<td><strong>Total Cash and Investments</strong></td>
<td><strong>$559,721,615</strong></td>
<td><strong>$544,380,017</strong></td>
<td></td>
</tr>
</tbody>
</table>

Notes:

1. Total Unrestricted Funds and the Pay As You Go Fund represent the Pooled Funds in the Treasurer's Report.

2. The Operating Fund target/maximum balance is set to equal 45-days of operating expenditures.

3. In 2006, the Board adopted a policy governing the Rate Stabilization Fund (RSF). The policy created a target and a maximum RSF balance. The target balance is set equal to the negative financial impact of 2.5 years of extremely wet weather and the RSF maximum balance is set equal to the negative financial impact of 3.5 years of extremely wet weather. Wet weather adversely impacts the Water Authority by reducing water sales and net water sales revenue. The balance in this fund represents approximately 131% of the targeted value of $66,200,000 and 79% of the maximum balance of $109,000,000.
APRIL 2015
• 08 MWD Delegates - 11:00 a.m.
• 09 No Special Board Meeting this month.
• 23 Committee begin at 9:00 a.m.
   Formal Board meeting begins at 3:00 p.m.

MAY 2015
• 04 MWD Delegates – 3:30 p.m.
• 14 No Special Board Meeting this month.
• 28 Committees begin at 9:00 a.m.
   Formal Board meeting begins at 3:00 p.m.

JUNE 2015
• 01 MWD Delegates – 11:00 a.m.
• 02 SCOOP Committee Meeting – 10:30 a.m.
• 09 Special Administrative and Finance Committee Meeting – Budget Workshop – 1:30 p.m. – 4:30 p.m.
• 11 Special Administrative and Finance Committee Meeting – Budget Workshop – 1:30 p.m. – 4:30 p.m.
• 25 Committees begin at 9:00 a.m.
   Formal Board meeting begins at 3:00 p.m.
March 18, 2015

Attention: Administrative and Finance Committee

CLOSED SESSION:
Conference with Labor Negotiator
Government Code §54957.6

Agency Designated Representatives: Frank Belock, Sandra Kerl, Gretchen Spaniol, Lisa Celaya, Rick Bolanos

Employee Negotiator: Teamsters Local 911

Purpose
The General Manager has asked that the above-referenced closed session be scheduled for the Administrative and Finance Committee at the March 26, 2015 meeting.

A closed session has also been included on the agenda of the formal Board of Directors’ meeting. Unless the Board desires additional discussion, it is not staff’s intention to ask for a closed session with the full Board at that time, but staff may request action to confirm directions given or action recommended by the committee.

Prepared by: Daniel S. Hentschke, General Counsel
WATER PLANNING COMMITTEE

AGENDA FOR

MARCH 26, 2015

Yen Tu – Chair
Betty Evans – Vice Chair
Brian Brady – Vice Chair
Jimmy Ayala
Brian Boyle
Matt Hall
Tom Kennedy
Keith Lewinger
John Linden
Marty Miller
Jim Murtland
Jose Preciado
John Simpson
Tom Wornham

1. Roll call – determination of quorum.

2. Additions to agenda (Government Code Section 54954.2(b)).

3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.

4. Chair’s report.
   4-A Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

   Water Planning Committee Chair and Vice Chairs’ Recommendation: Adopt the Water Planning Work Plan for calendar years 2015 and 2016. (Action)
   Chair Tu

2. PUBLIC HEARING: Draft Mitigated Negative Declaration for the Application of Copper-Based Algaecides at Five Drinking Water Reservoirs in San Diego County.
   Mark Tegio
3. Update on Water Supply Conditions and Drought Response Activities. (Discussion) Dana Friehauf

   Staff Recommendation:
   1. Approve Camp Pendleton Intake Testing Program and accept
      grant funding for up to $1.4 million from the California Department
      of Water Resources and the U. S. Bureau of Reclamation to conduct
      an intake testing program.
   2. Approve a $1.25 million project budget transfer from the Carlsbad
      Desalination Project to the Camp Pendleton Desalination project.
      (Action)

III. INFORMATION


IV. CLOSED SESSION

V. ADJOURNMENT

Kelly L. Walker
Deputy Clerk of the Board

NOTE: This meeting is called as a Water Planning Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.
March 18, 2015

Attention: Water Planning Committee

Water Planning Committee Work Plan for calendar years 2015 and 2016. (Action)

Water Planning Committee Chair and Vice Chairs’ recommendation
Adopt the Water Planning Committee Work Plan for calendar years 2015 and 2016.

Alternative
Modify the recommended goals.

Background
The Water Planning Committee is responsible for developing policies relative to long range water resources planning and local supply development including: the Urban Water Management Plan; Integrated Regional Water Management Plan; and Regional Water Facilities Optimization and Master Plan. It also provides policy guidance to staff on: regional and member agency sponsored local water supply development; water shortage and drought management planning; annexation; regulatory advocacy; environmental compliance interests of the Water Authority; and overseeing the implementation of those policies. During the next two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

Discussion
Attached for your approval is the Water Planning Committee Work Plan for calendar years 2015 and 2016. The work plan was prepared under the direction of the Water Planning Committee Chair and Vice Chairs and was provided for committee review at the February 26, 2015 committee meeting. The adopted work plan will be formally reviewed at the end of each calendar year to measure progress.

Prepared by: Ken Weinberg, Director of Water Resources
Reviewed by: Yen Tu, Chair, Water Planning Committee

Attachment: Water Planning Committee Work Plan for calendar years 2015 and 2016
Water Planning Committee Work Plan
for calendar years 2015 and 2016

Business Plan Items

Environmental Management

1. Review, convene a public hearing, and consider certification of California Environmental Quality Act/National Environmental Policy Act document for Carlsbad Seawater Desalination Plant intake modifications. (September 2015 – Goal #3)

2. Review, convene a public hearing, and consider adoption of California Environmental Quality Act document for use by the Water Authority and multiple member agencies to obtain Aquatic Weed Control Pesticide Permits. (August 2016 – Goal #5)

3. Review, convene a public hearing, and consider certification of California Environmental Quality Act document for Kendall wetlands mitigation site. (December 2016 – Goal #6)

IRWM and Grants Administration

1. Consider and approve an extension of the memorandum of understanding for the Tri-County Funding Area Coordinating Committee to incorporate the proportional division of Proposition 1 funding among the San Diego, South Orange County and Upper Santa Margarita planning regions. (January 2016 – Goal #1)

2. Consider and approve a new memorandum of understanding for the Water Authority, City of San Diego, and County of San Diego to continue the San Diego Regional Water Management Group. (March 2016 – Goal #3)

3. Consider and approve an application for the San Diego IRWM planning region’s remaining share of IRWM grant funding from the Department of Water Resources’ Proposition 84 program. (August 2016 – Goal #4)

Member Agency Local Supply

1. Consider a plan for surface water storage and groundwater banking that addresses seasonal operations and carryover storage needs as part of the 2015 UWMP. (June 2016 – Goal #2)

2. Support member agencies’ efforts to secure funding for development and implementation of local water supply projects through the Integrated Regional Water Management Program and other funding sources. (December 2019 – Goal #4)

3. Support member agencies in achieving an annual distribution and beneficial reuse of approximately 39,000 acre-feet of recycled water. (December 2019 – Goal #5)
4. Support member agencies in achieving an annual production of approximately 11,000 acre-feet of water from brackish groundwater desalination. (December 2019 – Goal #6)

**Potable Reuse**

1. Provide input and support for implementation of member agencies’ potable reuse projects through strategies that encourage public acceptance of potable reuse. (June 2015 – Goal #1)

2. Provide policy level guidance and support to the Water Authority and Potable Reuse Coordinating Committee’s regional strategies to engage with regulatory agencies to develop potable reuse criteria that support member agency projects. (June 2015 – Goal #2)

**Regulatory Policy Support**

1. Support regional requests for Water Board Basin Plan amendments to support Water Authority and member agency interests. (December 2015 – Goal #2)

2. Provide policy input to Water Authority staff on issues with the California Public Utilities Commission related to the Water-Energy Nexus Proceeding, and on the Long-Term Procurement Plan proceeding to support a pathway for large-scale hydro pumped storage procurement. This could include support or sponsoring of legislation. (March 2016 – Goals #3 & #4)

3. Provide policy input and support Water Authority and member agency efforts to engage with the Regional Water Board, funding agencies and stakeholders to encourage broad investments and solutions that will result improvements in water quality in the Hodges Reservoir using an Integrated Regional Water Management approach. (December 2016 – Goal #6)

**Seawater Desalination**

1. Consider approval of member agency purchase contracts with City of Carlsbad and Vallecitos Water District. (February 2015 – Goal #1)

2. Review and consider support for reasonable California Ocean Plan amendments for desalination intake and discharge. (July 2015 – Goal #2)

3. Review facility planning for the Carlsbad Desalination Project intake/discharge system upgrade. (September 2015 – Goal #3)

4. Consider approval of site preservation agreement with MCB Camp Pendleton for a potential future Camp Pendleton Desalination Project. (June 2015 – Goal #4)

5. Review annual supply and demand commitments/targets for the Carlsbad Desalination Project per the Water Purchase Agreement. (June 2015 – Goal #5)
6. Review progress and consider support for Otay Water District efforts to work with the federal government to authorize the construction, connection, operation, and maintenance of a United States and Mexico cross-border pipeline facility for the importation of desalinated water from the proposed Rosarito desalination facility. (June 2016 – Goal #7)

**Water Resources Planning**

1. Review and provide input on the water demand forecast model update, taking into account potential climate change impacts. (June 2016 – Goal #3)

2. Consider and approve the 2015 Urban Water Management Plan to comply with California Water Code Sections 10610 – 10656 (June 2016 – Goal #4)

**Water Shortage & Drought Response Management**

1. Review reports on current water supply, storage and demand conditions along with other drought activities. (June 2016 – Goal #5)

2. Provide direction, review work in progress, and consider and approve shortage management actions under the Water Shortage and Drought Response Plan based on water supply and demand conditions. (May 2015 – Goal #1)

3. Consider and approve member agency supply allocations, if necessary. (June 2015 – Goal #2)

**Other Items**

**Water Resources Planning**

1. Consider requests for annexations in a manner consistent with Board adopted policies and taking into account current water supply constraints. (Ongoing)

**Environmental Management**

1. Review, convene a public hearing, and consider certification of California Environmental Quality Act document for Pipeline 3 Relining Project (Lake Murray to Sweetwater Reservoir Segment). (September 2016)

2. Review, convene a public hearing, and consider adoption of California Environmental Quality Act document for Pipeline 4 Relining Project (Lake Murray Segment). (November 2015)

**IRWM and Grants Administration**

1. Support Water Authority coordination with Department of Water Resources and Tribes to meet CEQA requirements for funding. (Ongoing)
March 18, 2015

Attention: Water Planning Committee

Update on water supply conditions and drought response activities. (Discussion)

Purpose
To monitor water supply, demand and storage conditions, and to provide an update on drought management activities in accordance with the Water Authority’s Water Shortage and Drought Response Plan.

Background
California is in its fourth year of a significant statewide drought resulting in severe impacts to California’s water supplies and its ability to meet all of the water demands in the state. Due to the critically dry conditions and resulting low storage levels, the Department of Water Resources (DWR) took the unprecedented action of allocating only five percent of the State Water Contractors delivery requests in 2014. In July 2014, the State Water Resources Control Board (SWRCB) took action to adopt emergency regulations for statewide urban water conservation to help preserve the state’s supplies throughout the continuing drought.

On July 24, 2014, the Board notified the member agencies of a Drought Alert condition, which includes mandatory water use restrictions; and declared implementation of Supply Enhancement Stage of the Water Authority’s Water Shortage and Drought Response Plan. The actions were based on the need to increase conservation efforts in order to preserve water supplies in storage and assist member agencies in compliance with the SWRCB emergency regulations.

Discussion
State Water Project (SWP)
On March 2, 2015, after a large storm in February and the resulting runoff, DWR announced a revised SWP allocation of 20 percent. The new 20 percent allocation replaces the allocation of 15 percent announced on January 15. The initial allocation of 10 percent was announced on December 1, 2014. Initial SWP allocations tend to be conservative estimates that are adjusted upward as hydrologic conditions develop throughout the winter.

DWR conducted its third manual snow survey for the season on March 3, 2015. The state’s snowpack’s water content was only 19 percent of average for that date. This was down from the previous measurements taken for Water Year 2015 on December 30, 2014 and January 29, 2015, which had registered at 50 percent of average, and 25 percent of average, respectively, for those dates. Despite storms in December and February, the absence of precipitation in January, normally California’s wettest month, combined with warmer-than-average temperatures, has resulted in a snow water equivalent statewide that remains far below average. Only in 1991 was the snowpack lower for the early-March average, at 18 percent of average. DWR will conduct its final manual survey for the year around April 1, 2015.
As of March 11, 2015, the northern California snow water equivalent was 15 percent of normal. Precipitation at the Northern Sierra 8-station index measured 31.0 inches, or 83 percent of seasonal average to date. While storage levels have improved since last year, key reservoir storage on the State Water Project remains below average, as shown in Table 1.

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Storage in MAF</th>
<th>Percent of Capacity</th>
<th>Percent of Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oroville</td>
<td>1.77</td>
<td>50%</td>
<td>69%</td>
</tr>
<tr>
<td>San Luis*</td>
<td>1.36</td>
<td>67%</td>
<td>77%</td>
</tr>
<tr>
<td>Combined</td>
<td>3.13</td>
<td>56%</td>
<td>72%</td>
</tr>
</tbody>
</table>

*San Luis storage includes SWP and Central Valley Project. SWP share in San Luis was approximately 936 TAF.

Colorado River
On the Upper Colorado River Basin, precipitation for water year 2015 through March 8, 2015 is approximately 83 percent of average, and the basin snowpack is at 87 percent of average. With the past 11 out of 15 years dry on the Colorado River Basin, reservoir storage in Lake Mead and Lake Powell remains low, as shown in Table 2. Taking into account current conditions, a shortage declaration is not expected on the Colorado River for 2015. There is however a 21 percent probability of a shortage declaration in 2016.

<table>
<thead>
<tr>
<th>Reservoir</th>
<th>Storage in MAF</th>
<th>Percent of Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Powell</td>
<td>11.0</td>
<td>45%</td>
</tr>
<tr>
<td>Lake Mead</td>
<td>10.6</td>
<td>41%</td>
</tr>
<tr>
<td>Combined</td>
<td>21.6</td>
<td>43%</td>
</tr>
</tbody>
</table>

Local Supply and Demand Conditions
Locally, precipitation in San Diego County for water year 2015 is below average. Following above average precipitation in December, dry conditions returned in January and February. Some relief was provided by a storm system in early March that produced approximately 50 percent of the normal precipitation for the month within a couple of days. Accumulated total precipitation for two stations in San Diego County is shown in Table 3.

<table>
<thead>
<tr>
<th>Station</th>
<th>Inches</th>
<th>Percent Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindberg Field</td>
<td>6.50</td>
<td>80%</td>
</tr>
<tr>
<td>Ramona Airport</td>
<td>7.44</td>
<td>61%</td>
</tr>
</tbody>
</table>
Total local reservoir storage on February 28, 2015 was approximately 239,738 AF (41 percent of capacity). In addition, the Water Authority’s Semitropic groundwater storage bank has 16,100 AF in storage.

**Total Potable Water Use**

Figure 1 shows a comparison of Water Authority member agencies’ total monthly water use, excluding recycled water use, for FY 2014 and FY 2015. Member agencies’ total potable use in February 2015 was approximately 33,146 AF. This represents a 4 percent decrease from the same period a year ago. As shown in Figure 2, the average daily maximum temperature in February 2015 was 5.4 degrees above normal, compared with 3.0 degrees above normal in February 2014. Temperatures have been above normal in San Diego for 16 months straight, since November 2013.
SWRCB Emergency Water Conservation Regulations

The SWRCB emergency conservation regulations are set to expire April 25, 2014. At its March 17, 2015 meeting, the SWRCB approved extending the current regulations and added the following regulations:

- Three additional statewide prohibitions, including:
  - Potable water shall not be applied to outdoor landscapes during and up to 48 hours following measurable rainfall
  - Drinking water shall not be served other than upon request in eating or drinking establishments
  - Hotels and motels shall provide guests with the option of choosing to not have towels and linens laundered daily

- Mandatory actions required of water suppliers; each urban water supplier shall:
  - Implement stage of its water shortage contingency plan that includes mandatory restrictions on the number or days that outdoor irrigation of ornamental landscapes or turf with potable water is allowed
  - Provide prompt notice to a customer whenever the supplier obtains information that indicates a leak may exist within the end-users exclusive control
  - Include in its monthly monitoring report to the SWRCB, descriptive statistics on water conservation compliance and enforcement efforts, and the number of days that outdoor irrigation is allowed

The emergency regulations become effective upon approval by the Office of Administrative Law. The SWRCB expects the regulations to become effective by the end of the month. Urban water agencies will have 45 days after the regulations go into effect to adopt any necessary revisions to their ordinances to comply.

Metropolitan Water District of Southern California (MWD)

At the March 9, 2015 MWD Water Planning & Stewardship Committee, MWD staff provided an oral update on current water supply conditions and presented various water management scenarios for 2015 and 2016. MWD staff also mentioned that the MWD Board is still expected to consider possible supply allocations at its April 14, 2015 meeting. If allocations are enacted, cutbacks would take effect July 1, 2015.

As part of the supply conditions update at the March 9 meeting, MWD staff provided updated forecasts for 2015 SWP allocations from DWR’s February 23, 2015 Operations Study Update. Under projected dry conditions, DWR is forecasting a 25 percent SWP allocation, and under projected median conditions, a 35 percent allocation. MWD staff presented water management scenarios under a 25 and 35 percent SWP allocation, taking into account various storage withdrawal options. The analysis assumed a Water Supply Allocation Plan (WSAP) baseline demand of 2.2 million acre-feet, 1.2 million acre-feet storage reserves, Colorado River base supplies of about 925,000 acre-feet, as well as 165,000 acre-feet of transfer and exchange supplies for 2015. In its analysis, MWD staff identified the storage withdrawal capacity and projected 2015 WSAP level. Table 4 summarizes the results of the analysis for 2015 under a 25 percent and 35 percent SWP allocation.
Table 4. Summary of Potential 2015 Allocation Scenarios

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>535</td>
<td>532</td>
<td>668</td>
<td>No allocation/ Level 1 (5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>439</td>
<td>761</td>
<td>Level 2 (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>341</td>
<td>859</td>
<td>Level 3 (15%)</td>
</tr>
<tr>
<td>35%</td>
<td>577</td>
<td>341</td>
<td>859</td>
<td>No allocation/ Level 1 (5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>248</td>
<td>952</td>
<td>Level 2 (10%)</td>
</tr>
</tbody>
</table>

Detailed information on MWD’s storage reserves and use is contained in a staff report, “Metropolitan Water District Storage Programs Update”, included on the March 2015 Imported Water Committee agenda.

**Water Authority Water Shortage & Drought Response Plan (WSDRP) Allocation Methodology**

It is critical that the Water Authority be prepared to allocate supplies to its member agencies should MWD implement supply cutbacks in 2015. The staff is developing recommended allocations consistent with the methodology contained in the WSDRP and Board Resolution 2008-11, which establishes procedures and policies for administration of the allocation methodology. Working with the member agencies, staff has collected the necessary data to initially populate the allocation model. A critical remaining piece to finalizing the recommended supply allocations will be the cutback level from MWD and the Water Authority’s volumetric allocation for the FY 2016 allocation period.

**Outlook**

The National Weather Service’s Climate Prediction Center (CPC) has predicted above average temperatures to continue in March through May for the western states, based on its most recent forecast. Figure 3 depicts all of California projected to have above-normal temperatures, indicated with the “A” symbol and corresponding shaded area (the deeper shading indicates an increased probability over those areas with lighter color shading). Figure 4 shows the three-month outlook for precipitation. All but the northernmost portion of California is shown under the “equal chance” category, meaning there is not a strong enough climate signal at this time to make a prediction.
The National Weather Service’s U.S. Seasonal Drought Outlook (covering the period of mid-February through May 2015) favors the persistence of drought in California. Drought is now expected to persist or intensify in all but a very small portion of the state.

Staff will continue to closely track hydrologic conditions, and will monitor and regularly report to the Board on supply, demand and storage levels.
March 18, 2015

Attention: Water Planning Committee

Intake Testing Program for a Proposed Camp Pendleton Desalination Project (Action)

Staff recommendation
1. Approve Camp Pendleton Intake Testing Program and accept grant funding for up to $1.4 million from the California Department of Water Resources and the U. S. Bureau of Reclamation to conduct an intake testing program.
2. Approve a $1.25 million project budget transfer from the Carlsbad Desalination Project to the Camp Pendleton Desalination Project.

Alternatives
Do not approve the Camp Pendleton Intake Testing Program and proposed budget transfer and reject the grant funding.

Fiscal Impact
There are sufficient funds to support the staff recommendation as a result of bid savings within the Carlsbad Desalination Project. The staff recommendation will not increase the overall Water Authority CIP budget or the Fiscal Years 2014 and 2015 CIP appropriation. The related rate category is customer service.

Background
Camp Pendleton offers a potential, unique, long-term opportunity to develop a phased, large-scale desalination project at a single, coastal location, positioned at the top of the Water Authority’s regional aqueduct system.

In 2009, the Water Authority, in collaboration with the Marine Corps Base Camp Pendleton (MCBCP), completed a feasibility study for a 50 to 150 million gallon per day (56,000 – 168,000 acre-feet per year) seawater desalination project at Camp Pendleton focusing on two possible seawater desalination plant sites in the southwest corner of the base near the mouth of the Santa Margarita River. Major project components include new ocean intake and discharge facilities, the seawater desalination production plant, a new conveyance system that would connect to the Water Authority’s aqueducts, and power facilities to run all operations. In June 2009, the Board also approved a new CIP project with a total budget of $5.7 million to fund additional technical and environmental studies to further planning efforts for the project.

In April 2010, a Memorandum of Understanding (MOU) between the Water Authority and MCBCP was executed to establish the framework for cooperation between the two parties during the performance of these additional planning studies and to ensure that the activities do not conflict, impede, or interfere with MCBCP’s primary mission of training its operational force. The MOU did not commit either party to advance the project beyond the planning studies contemplated in the MOU.
In October 2013, these additional planning-level studies and field investigations were finalized to further define project requirements, including the feasibility of subsurface and screened open ocean intake alternatives, brine discharge methods, treatment processes and plant configurations, power supply requirements, alternative conveyance alignments, the integration of new supplies into the regional aqueduct system, and impacts to MCBCP operations. The results further validated overall project feasibility, including the viability of both the screened open ocean and subsurface intakes, and the practicality of a diffuser type brine discharge system. The studies also confirmed that desalinated product water could be efficiently conveyed through a 19-mile conveyance system consisting of pipelines and pumping stations integrated into the Water Authority’s Second Aqueduct for distribution.

Unlike the Carlsbad Desalination Project, where existing power plant intake and discharge infrastructure is being utilized, a Camp Pendleton Desalination Project would require all new ocean intake and discharge infrastructure. Given the focus on desalination intakes and discharges as a key permitting issue – as demonstrated by the permitting of the Carlsbad Desalination Project, and more recently with the release of the draft California Ocean Plan amendment by the State Water Resources Control Board last July – it is essential that the planning for a potential Camp Pendleton project thoroughly evaluate different intake and discharge configurations, including subsurface intake and multi-port diffuser discharge technologies, identified by regulators as preferred technologies.

The Camp Pendleton Desalination Project was also considered in the 2013 Regional Water Facilities Optimization and Master Plan Update as a new supply alternative (“Supply from the West” option) capable of addressing the region’s long-term need for new supply development. As noted in the 2013 Master Plan Update, the need for new regional supply development will increase in the years beyond 2025 in correlation with projected population increases. The Master Plan Update recommended an adaptive management approach for a future Camp Pendleton project whereby future major decisions affecting project implementation would need to consider, among other factors, the implementation of the City of San Diego’s Pure Water Program, the progress of the Bay Delta Conservation Program, and other local reuse and desalination supplies currently in development, along with future changes to imported supply reliability.

The 2013 Master Plan Update further noted that timely regulatory review and successful permitting may hinge on the viability of the open-ocean or subsurface intake options to provide feedwater for the reverse osmosis membranes, and that as an initial incremental development step, intake studies be performed to physically demonstrate the two seawater intake technologies.

**Discussion**

An intake testing program has been proposed to address important project development and future permitting issues related to the viability of subsurface and screened open-ocean intake systems. The intake testing program would evaluate, optimize, and demonstrate the efficiency of the necessary pretreatment processes for each intake system that are crucial for operation of a reverse osmosis desalination plant. Each intake and pretreatment system has associated capital and operating costs and performance variables that have significant impacts to the cost and performance of a full-scale facility. The proposed intake testing program would therefore consist...
of a side-by-side evaluation of both open-ocean and subsurface intake technologies, with program goals addressing the following areas of concern:

- Minimizing adverse environmental impacts to marine life organisms from the intake of ocean water
- Determining long term variability in water quality from the intake locations to provide baseline data for treatment plant design optimization
- Determining and optimizing process configuration to address seasonal water quality changes and storm or algae bloom impacts on intake water quality
- Determining and evaluating optimal pre-treatment systems for effective reverse osmosis performance, including implications for capital and operating costs of a full-scale facility

**Awarded Grant Funding and Project Budgeting**

Unique to the proposed intake testing program is the ability to conduct a side-by-side evaluation of subsurface and open-ocean intake systems. Based on this side-by-side testing plan, staff pursued and was subsequently awarded two separate grants that will significantly reduce the cost of the intake testing program. Details on the two grants are shown in the table below. Grant duration is approximately two years with term extensions considered based on progress in achieving the objectives of the pilot testing program. The two-year duration of the grant funding matches the estimated time frame for the project and includes time for planning, design, procurement, installation, and one year of intake operation, demobilization and data reporting.

<table>
<thead>
<tr>
<th>Award Amount</th>
<th>Dept. of Water Resources Proposition 50, Round 3 Desalination Grant Funding</th>
<th>Bureau of Reclamation Desalination and Water Purification Research Program</th>
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</thead>
<tbody>
<tr>
<td>Award Date</td>
<td>Aug 14, 2014</td>
<td>Sept 23, 2014</td>
</tr>
<tr>
<td>Matching Fund Requirement</td>
<td>50 percent</td>
<td>75 percent</td>
</tr>
<tr>
<td>Required Funding Parameter</td>
<td>Evaluate/compare open ocean and subsurface intakes</td>
<td>Evaluate/compare open ocean and subsurface intakes</td>
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</tbody>
</table>

The total cost for the proposed intake testing program is estimated at $4.37 million. After accounting for the available grant funding ($1.4 million, which will be included in the project budget as part of the Recommended Budget for Fiscal Years 2016 and 2017) and the remaining available Camp Pendleton CIP budget ($1.72 million), a budget transfer of $1.25 million would be needed to fully fund the testing program.

Given the long lead time to develop a seawater desalination project in California, as evidenced by the Carlsbad Desalination Project, incremental project development activities such as the proposed intake testing program will help maintain a future Camp Pendleton project as a viable contingency for the region and maintain the region’s flexibility to pursue multiple paths to reliability in the face of continued water supply uncertainty. As noted above, this testing program will take approximately 2 years to complete. Should the Board choose to move forward
with a full-scale project after that, project development, permitting and implementation would likely take until approximately 2030 to complete.

In recognition of these issues, and given the availability of substantial grant funds, staff recommends approval of the Camp Pendleton Intake Testing Program and acceptance of the grant funds. Staff also recommends that $1.25 million be transferred from the Carlsbad Desalination Project CIP budget, derived from bid savings from the Pipeline 3 Relining component of the Carlsbad Desalination Project, to fully fund the estimated cost of the intake testing program.

While the intake testing program has been developed in coordination with MCB Camp Pendleton, a new agreement between the Water Authority and Camp Pendleton will be required in order to operate the test unit on the base. Should the Board approve the intake testing program, staff would return to the Board over the next few months seeking approval of a new agreement with MCB Camp Pendleton for operation of the test unit.

Prepared by: Robert Yamada, Water Resources Manager
Reviewed by: Ken Weinberg, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager
March 18, 2015

Attention: Water Planning Committee

Water Resources Report

Purpose
This report includes the following exhibits for February 2015:

- Rainfall totals for the month and water year to date
- Deliveries to Member Agencies (Exhibit A)
- Water Use by Member Agencies (Exhibit B)
- Storage Available to Member Agencies (Exhibit C)
- Firm Water Deliveries to Member Agencies (Exhibit D)
- Summary of Water Authority Member Agency Operations (Exhibit E)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Normal</td>
</tr>
<tr>
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<tr>
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<td>6.52</td>
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<tr>
<td>Lake Henshaw (Vista I.D.)</td>
<td>1.90</td>
<td>5.64</td>
</tr>
</tbody>
</table>

Sources: National Weather Service, Helix Water District, Vista Irrigation District.
## MONTHLY WATER RESOURCES REPORT
### Water Deliveries to Member Agencies (acre-feet)

#### FEBRUARY 2015

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
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<td></td>
<td>February</td>
<td></td>
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<td>2014</td>
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<td>18,273.4</td>
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<td>63.5</td>
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<td>23,171.3</td>
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<td>733.1</td>
<td>12,615.1</td>
<td>12,688.7</td>
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<td>33,038.1</td>
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<tr>
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<td>224.5</td>
<td>3,321.1</td>
<td>3,672.7</td>
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<td>203.7</td>
<td>3,311.6</td>
<td>1,792.0</td>
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</tr>
<tr>
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<td>1,426.1</td>
<td>24,497.6</td>
<td>24,783.4</td>
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</tr>
<tr>
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<td>21,808.0</td>
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<td>1,982.0</td>
<td>32,375.8</td>
<td>33,042.7</td>
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<tr>
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<td>685.8</td>
<td>11,297.9</td>
<td>11,989.1</td>
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<td>3.2</td>
<td>56.9</td>
<td>43.1</td>
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<td>585.0</td>
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<td>12,752.3</td>
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<td>1,304.0</td>
<td>21,551.1</td>
<td>23,188.4</td>
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<tr>
<td>Ramona M.W.D.</td>
<td>333.3</td>
<td>366.3</td>
<td>6,837.0</td>
<td>7,006.9</td>
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</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>348.4</td>
<td>377.0</td>
<td>6,321.8</td>
<td>7,053.6</td>
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</tr>
<tr>
<td>San Diego, City of</td>
<td>14,048.3</td>
<td>9,939.1</td>
<td>248,132.9</td>
<td>187,700.7</td>
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<td>331.2</td>
<td>5,785.4</td>
<td>4,965.3</td>
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<td>574.8</td>
<td>10,684.0</td>
<td>9,729.3</td>
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<td>844.3</td>
<td>11,996.8</td>
<td>5,400.7</td>
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<td>1,045.8</td>
<td>16,658.8</td>
<td>17,953.8</td>
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<td>1,719.5</td>
<td>27,749.2</td>
<td>29,773.7</td>
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<tr>
<td>Vista I.D.</td>
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<td>1,184.3</td>
<td>17,660.3</td>
<td>17,826.4</td>
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<tr>
<td>Yuima M.W.D.</td>
<td>227.3</td>
<td>190.7</td>
<td>4,785.7</td>
<td>3,706.1</td>
<td></td>
</tr>
<tr>
<td>Deliveries To SDCWA Agencies</td>
<td>32,842.9</td>
<td>30,037.7</td>
<td>572,497.0</td>
<td>514,327.1</td>
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</tr>
<tr>
<td>Less: Deliveries to SDCWA Storage (^1)</td>
<td>777.3</td>
<td>154.7</td>
<td>52,571.3</td>
<td>2,904.5</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL MEMBER AGENCY DELIVERIES</strong></td>
<td><strong>32,065.6</strong></td>
<td><strong>29,883.0</strong></td>
<td><strong>519,925.7</strong></td>
<td><strong>511,422.6</strong></td>
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<tr>
<td>Deliveries to South Coast Water District</td>
<td>9.6</td>
<td>9.1</td>
<td>167.9</td>
<td>305.9</td>
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<tr>
<td>Deliveries From SDCWA Storage</td>
<td>6,254.2</td>
<td>-</td>
<td>11,319.4</td>
<td>6,691.5</td>
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</table>

\(^1\) February 2015 storage account deliveries totaled 50 AF and 728 AF to City of San Diego Lower Otay and San Vicente Reservoirs, respectively.
## MONTHLY WATER RESOURCES REPORT

### Estimated Water Use by Member Agency (acre-feet)

#### FEBRUARY 2015

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>Imported Source</th>
<th>Local Sources</th>
<th>February Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>1,094.1</td>
<td>1,426.4</td>
<td>-</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>68.5</td>
<td>63.5</td>
<td>-</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>1,246.0</td>
<td>1,521.8</td>
<td>220.6</td>
</tr>
<tr>
<td>Fallbrook P.U.D. ¹</td>
<td>689.7</td>
<td>733.1</td>
<td>-</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>2,077.0</td>
<td>2,211.3</td>
<td>12.4</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
<td>177.5</td>
<td>224.5</td>
<td>-</td>
</tr>
<tr>
<td>National City, City of ²</td>
<td>95.5</td>
<td>195.9</td>
<td>-</td>
</tr>
<tr>
<td>Oceanside, City of ²</td>
<td>1,453.9</td>
<td>1,426.1</td>
<td>-</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>1,222.7</td>
<td>1,175.9</td>
<td>-</td>
</tr>
<tr>
<td>Otay W.D.</td>
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<td>1,980.2</td>
<td>-</td>
</tr>
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<td>669.9</td>
<td>708.9</td>
<td>-</td>
</tr>
<tr>
<td>Pendleton M.C.B. ³</td>
<td>12.3</td>
<td>12.3</td>
<td>-</td>
</tr>
<tr>
<td>Poway, City of ⁴</td>
<td>617.0</td>
<td>629.1</td>
<td>5.0</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>1,233.3</td>
<td>1,312.0</td>
<td>-</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>365.1</td>
<td>312.8</td>
<td>-</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
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<td>377.0</td>
<td>-</td>
</tr>
<tr>
<td>San Diego, City of</td>
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<td>9,991.2</td>
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<td>San Dieguito W.D.</td>
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<td>136.4</td>
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<td>569.9</td>
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<td>796.8</td>
<td>811.8</td>
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<tr>
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<td>1,022.7</td>
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<td>1,541.4</td>
<td>1,719.5</td>
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<td>Vista I.D.</td>
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<td>1,184.3</td>
<td>27.9</td>
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<td>227.3</td>
<td>190.7</td>
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<td><strong>TOTAL USE</strong></td>
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<td><strong>PERCENT CHANGE</strong></td>
<td>4%</td>
<td>-80%</td>
<td>3%</td>
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</table>

¹ De Luz figures included in Fallbrook P.U.D. total.
² Brackish groundwater use included in groundwater totals.
³ Pendleton's imported water use includes water delivered by South Coast Water District.
⁴ Poway recycled use is reported quarterly.
### Reservoir Storage

#### (acre-feet)

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Reservoir</th>
<th>Capacity</th>
<th>FEBRUARY 2015</th>
<th>% of Change</th>
<th>FEBRUARY 2014</th>
<th>% of Change</th>
<th>Change During Month</th>
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<tbody>
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<td>178</td>
<td>30%</td>
<td>444</td>
<td>74%</td>
<td>(93)</td>
</tr>
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<td>Escondido, City of</td>
<td>Dixon</td>
<td>2,606</td>
<td>2,332</td>
<td>89%</td>
<td>2,325</td>
<td>89%</td>
<td>(81)</td>
</tr>
<tr>
<td></td>
<td>Wolfrord</td>
<td>6,506</td>
<td>2,042</td>
<td>31%</td>
<td>1,982</td>
<td>30%</td>
<td>(236)</td>
</tr>
<tr>
<td>Subtotal</td>
<td>9,112</td>
<td>4,374</td>
<td>48%</td>
<td>4,307</td>
<td>47%</td>
<td>(317)</td>
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<td>Red Mountain</td>
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<td>430</td>
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<td>0%</td>
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<td>Helix W.D.</td>
<td>Cuysmaca</td>
<td>8,195</td>
<td>431</td>
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<td>579</td>
<td>7%</td>
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<tr>
<td></td>
<td>Jennings</td>
<td>9,790</td>
<td>8,931</td>
<td>91%</td>
<td>9,002</td>
<td>92%</td>
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<tr>
<td>Subtotal</td>
<td>17,985</td>
<td>9,362</td>
<td>52%</td>
<td>9,581</td>
<td>53%</td>
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<td>93%</td>
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<td>Beck</td>
<td>625</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
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<tr>
<td></td>
<td>Morro Hill</td>
<td>465</td>
<td>140</td>
<td>30%</td>
<td>197</td>
<td>42%</td>
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<tr>
<td>Subtotal</td>
<td>1,090</td>
<td>140</td>
<td>13%</td>
<td>197</td>
<td>18%</td>
<td>(57)</td>
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<td>Ramona</td>
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<td>22%</td>
<td>2,479</td>
<td>21%</td>
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<td>34,806</td>
<td>2,977</td>
<td>9%</td>
<td>11,188</td>
<td>32%</td>
<td>(999)</td>
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<tr>
<td></td>
<td>El Capitan</td>
<td>112,807</td>
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<td>Hodges</td>
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<td>3,322</td>
<td>11%</td>
<td>3,759</td>
<td>12%</td>
<td>49</td>
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<tr>
<td></td>
<td>Lower Otay</td>
<td>49,849</td>
<td>34,768</td>
<td>70%</td>
<td>34,771</td>
<td>70%</td>
<td>1,105</td>
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<tr>
<td></td>
<td>Miramar</td>
<td>6,682</td>
<td>5,507</td>
<td>82%</td>
<td>5,521</td>
<td>83%</td>
<td>151</td>
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<tr>
<td></td>
<td>Morena</td>
<td>50,694</td>
<td>1,615</td>
<td>3%</td>
<td>1,923</td>
<td>4%</td>
<td>(15)</td>
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<td>Murray</td>
<td>4,684</td>
<td>1,452</td>
<td>89%</td>
<td>3,951</td>
<td>84%</td>
<td>224</td>
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<tr>
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<td>San Vicente</td>
<td>89,312</td>
<td>48,732</td>
<td>55%</td>
<td>42,891</td>
<td>48%</td>
<td>1,448</td>
</tr>
<tr>
<td></td>
<td>Sutherland</td>
<td>29,508</td>
<td>2,518</td>
<td>9%</td>
<td>2,938</td>
<td>10%</td>
<td>(7)</td>
</tr>
<tr>
<td>Subtotal</td>
<td>408,593</td>
<td>136,060</td>
<td>33%</td>
<td>148,790</td>
<td>36%</td>
<td>1,919</td>
<td></td>
</tr>
<tr>
<td>San Diego W/SD/Canta Fe ID</td>
<td>San Diego</td>
<td>883</td>
<td>385</td>
<td>44%</td>
<td>438</td>
<td>50%</td>
<td>(13)</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>Loveland</td>
<td>25,400</td>
<td>7,736</td>
<td>30%</td>
<td>8,429</td>
<td>33%</td>
<td>(8)</td>
</tr>
<tr>
<td></td>
<td>Sweetwater</td>
<td>28,079</td>
<td>3,611</td>
<td>13%</td>
<td>3,838</td>
<td>14%</td>
<td>28</td>
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<tr>
<td>Subtotal</td>
<td>53,479</td>
<td>11,347</td>
<td>21%</td>
<td>12,267</td>
<td>23%</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>Turner</td>
<td>1,612</td>
<td>1,125</td>
<td>70%</td>
<td>1,275</td>
<td>79%</td>
<td>-</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>Henshaw</td>
<td>51,774</td>
<td>4,786</td>
<td>9%</td>
<td>4,645</td>
<td>9%</td>
<td>489</td>
</tr>
<tr>
<td>MEMBER AGENCY TOTAL WATER IN STORAGE</td>
<td></td>
<td>561,793</td>
<td>173,851</td>
<td>31%</td>
<td>187,531</td>
<td>33%</td>
<td>1,890</td>
</tr>
<tr>
<td>SDCWA Accounts (city evap/seepage losses estimated)</td>
<td>El Capitan</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Hodges</td>
<td>8,475</td>
<td>7,826</td>
<td>85%</td>
<td>3,394</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Olivenhain</td>
<td>20,892</td>
<td>18,979</td>
<td>(254)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lower Otay</td>
<td>858</td>
<td>18</td>
<td>35</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>San Vicente</td>
<td>36,620</td>
<td>2,628</td>
<td>(5,354)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sweetwater</td>
<td>10</td>
<td>1</td>
<td>(0)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>66,856</td>
<td>29,452</td>
<td>(5,492)</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>TOTAL WATER IN STORAGE</td>
<td></td>
<td>586,582</td>
<td>240,706</td>
<td>41%</td>
<td>216,983</td>
<td>37%</td>
<td>(3,601)</td>
</tr>
<tr>
<td>OTHER AGENCIES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Metropolitan Water District</td>
<td>Skinner</td>
<td>44,264</td>
<td>37,457</td>
<td>85%</td>
<td>36,791</td>
<td>83%</td>
<td>3,394</td>
</tr>
<tr>
<td></td>
<td>Diamond Valley</td>
<td>810,000</td>
<td>393,290</td>
<td>49%</td>
<td>582,423</td>
<td>72%</td>
<td>(83)</td>
</tr>
<tr>
<td>State Water Project</td>
<td>Oroville</td>
<td>3,537,500</td>
<td>1,735,519</td>
<td>49%</td>
<td>1,406,989</td>
<td>40%</td>
<td>291,562</td>
</tr>
<tr>
<td>TOTAL OTHER WATER IN STORAGE</td>
<td></td>
<td>4,391,864</td>
<td>2,166,266</td>
<td>49%</td>
<td>2,026,203</td>
<td>46%</td>
<td>294,873</td>
</tr>
</tbody>
</table>

1 Excludes storage allocated to Escondido Mutual Water Co. or its rights to a portion of the unallocated water in Lake Henshaw.
2 Includes reserves subject to city's outstanding commitments to San Diego W/SD, and California American Mutual Water Co. (Cal-Am)
3 SDCWA has storage contracts in City of San Diego reservoirs in the amount of 40,000 AF, if available capacity exists.
4 Includes allocated and unallocated water in Lake Henshaw.
## Tier 1 Estimated Deliveries to Member Agencies

### (Figures in acre-feet)

**Calendar Year 2015 to Date (February)**

### Monthly Water Resources Report

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>CY2015 Tier 1 Threshold</th>
<th>CYTD Firm Deliveries</th>
<th>% of Tier 1 Threshold (Pre-QSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>12,376.0</td>
<td>2,210.8</td>
<td>17.9%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>935.0</td>
<td>122.8</td>
<td>13.1%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>17,859.0</td>
<td>2,595.5</td>
<td>14.5%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>10,325.0</td>
<td>1,294.6</td>
<td>12.5%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>25,519.0</td>
<td>4,075.8</td>
<td>16.0%</td>
</tr>
<tr>
<td>Lakeside M.W.D.</td>
<td>3,168.0</td>
<td>325.7</td>
<td>10.3%</td>
</tr>
<tr>
<td>Oceanside, City of</td>
<td>19,383.0</td>
<td>2,655.2</td>
<td>13.7%</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>13,071.0</td>
<td>2,245.0</td>
<td>17.2%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>21,390.0</td>
<td>3,834.3</td>
<td>17.9%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>9,939.0</td>
<td>1,267.8</td>
<td>12.8%</td>
</tr>
<tr>
<td>Pendleton M.C.B./South Coast W.D.</td>
<td>758.0</td>
<td>27.0</td>
<td>3.6%</td>
</tr>
<tr>
<td>Poway, City of</td>
<td>9,348.0</td>
<td>1,025.2</td>
<td>11.0%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>19,018.0</td>
<td>2,090.9</td>
<td>11.0%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>8,052.0</td>
<td>798.6</td>
<td>9.9%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>5,482.0</td>
<td>641.6</td>
<td>11.7%</td>
</tr>
<tr>
<td>San Diego, City of</td>
<td>144,555.0</td>
<td>26,681.4</td>
<td>18.5%</td>
</tr>
<tr>
<td>San Dieguito W.D.</td>
<td>3,116.0</td>
<td>635.2</td>
<td>20.4%</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>5,226.0</td>
<td>902.7</td>
<td>17.3%</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>9,650.0</td>
<td>1,789.8</td>
<td>18.5%</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>10,557.0</td>
<td>1,934.7</td>
<td>18.3%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>29,774.0</td>
<td>2,665.5</td>
<td>9.0%</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>11,876.0</td>
<td>2,220.1</td>
<td>18.7%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>2,165.0</td>
<td>329.9</td>
<td>15.2%</td>
</tr>
</tbody>
</table>

**MEMBER AGENCY TOTALS**

|               | 393,542.0 | 62,370.1 | 15.8% |

Less: QSA deliveries calendar year to date

|               | 29,616.6  |

Less: ESP deliveries calendar year to date

|               | 0.0       |

Deliveries to CWA storage year to date

|               | 5,893.6   |

Deliveries from CWA storage year to date

|               | 6,254.2   |

Estimated Tier 1 deliveries calendar year to date

|               | 32,392.9  | 8.2%    |

Invoiced Tier 1 deliveries calendar year to date

|               | 32,878.7  | 8.4%    |

---

1 Tier 1 threshold is 60% of a member agency's historic maximum year firm demand.

2 Emergency Storage Program (ESP) deliveries under Metropolitan's program designated by city of San Diego.

3 Includes forced deliveries and deliveries made through temporary carryover storage agreements and to Olivenhain Reservoir.

4 Includes sales from Water Authority storage accounts.

5 Estimated Tier 1 deliveries are based on member agency deliveries net of QSA deliveries and storage puts/takes. Invoiced deliveries are as reported on Metropolitan's invoice. Difference between Estimated and Invoiced Deliveries is explained by deliveries stored in Twin Oaks Valley Water Treatment Plant (TOVWTP) or other treatment plants, and not yet sold to member agencies.

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MONTHLY WATER RESOURCES REPORT
Summary of Water Authority Member Agency Operations

FEBRUARY 2015

Member Agency Deliveries (AF)

- **February:**
  - 2015: 32,066 AF
  - 2014: 29,883 AF

- **Previous 12 Months:**
  - 2015: 519,926 AF
  - 2014: 511,423 AF

Member Agency Water Use

- **February 2015:**
  - Imported: 91%
  - Surface: 2%
  - Recycled: 3%

- **Previous 12 Months:**
  - Imported: 91%
  - Surface: 2%
  - Recycled: 3%

Member Agency Storage (AF)

- **February:**
  - 2015: 173,851 AF
  - 2014: 187,531 AF

- **12 Month Average:**
  - 2015: 173,552 AF
  - 2014: 208,882 AF

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ENGINEERING AND OPERATIONS COMMITTEE

AGENDA FOR

MARCH 26, 2015

Ken Williams – Chair     Michael Hogan
Marty Miller – Vice Chair     John Linden
Ron Watkins – Vice Chair     Ron Morrison
Gary Arant     Ken Olson
Jimmy Ayala     Halla Razak
Brian Boyle     Javier Saunders
Brian Brady     John Simpson
Gary Croucher


2. Additions to Agenda (Government Code Section 54954.2(b)).

3. Public Comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.

4-A Directors’ Comments.

I. CONSENT CALENDAR

1. Resolution declaring the fee interest in San Diego County Water Authority Parcel Number 4E2-199-B is surplus to Water Authority needs.
   Staff recommendation:
   a) Adopt Resolution No. 2015-_____ declaring the fee interest in San Diego County Water Authority Parcel Number 4E2-199-B is surplus to Water Authority needs.
   b) Authorize the General Manager to dispose of the fee property for fair market value, in accordance with the San Diego County Water Authority Administrative Code, Chapter 7, reserving any easements and setbacks necessary for proper operation and maintenance of Water Authority facilities. (Action)

Nick von Gymnich
II. ACTION/DISCUSSION

1. Engineering and Operations Committee Work Plan for Calendar Years 2015 and 2016. Committee Chair and Vice Chairs’ Recommendation: Adopt the Engineering and Operations Committee Work Plan for Calendar Years 2015 and 2016. (Action) Chair Williams

2. Carlsbad Desalination Project.
   2-A Presentation on Carlsbad Desalination Project Update. (Information) Frank Belock
   2-B Notice of Completion for Pipeline 3 Desal Relining San Marcos to Twin Oaks.
       Staff recommendation:
       1. Authorize the General Manager to accept the Pipeline 3 Desal Relining San Marcos to Twin Oaks project as complete, record the Notice of Completion, and release funds held in retention to L.H. Woods & Sons, Inc., following the expiration of the retention period.
       2. Approve the transfer of $376,300 from the Pipeline 3 Desal Relining San Marcos to Twin Oaks project budget to the Post Construction Mitigation Program. (Action) Neena Kuzmich

III. INFORMATION

1. Advertisement for bids for the Nob Hill Improvements project.

IV. CLOSED SESSION

1. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   Name of Case: Traylor-Shea Joint Venture v SDCWA;
   San Diego Superior Court Case No. 37-2011-00092666-CU-BC-CTL

2. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   Name of Case: Shimmick Construction Co., Inc./Obayashi Corp., joint venture v. San Diego County Water Authority, San Diego
   Superior Court Case No. 37-2014-00026740-CU-BC-CTL

   Dan Hentschke
V. ADJOURNMENT

Kelly L. Walker
Deputy Clerk of the Board

NOTE: This meeting is called as an Engineering & Operations Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.
March 18, 2015

Attention: Engineering and Operations Committee

Resolution declaring the fee interest in San Diego County Water Authority Parcel Number 4E2-199-B is surplus to Water Authority needs.

Staff recommendation
a) Adopt Resolution No. 2015- _____ declaring the fee interest in San Diego County Water Authority Parcel Number 4E2-199-B is surplus to Water Authority needs.

b) Authorize the General Manager to dispose of the fee property for fair market value, in accordance with the San Diego County Water Authority Administrative Code, Chapter 7, reserving any easements and setbacks necessary for proper operation and maintenance of Water Authority facilities.

Alternatives
1. Reject the resolution and continue to hold the property for Water Authority use exclusively.

2. Direct staff to sell only the fee interest in the portions of the parcels that are not encumbered by pipeline 4E2.

Fiscal impact
The Water Authority will dispose of the property for fair market value as determined by an independent appraisal, based on data from sales of comparable properties

Background
The Water Authority Administrative Code requires that the Board of Directors must determine, by resolution, that real property is no longer necessary for Water Authority purposes prior to disposing of it.

Pipeline 4E2 is a 72-inch diameter pipeline extending Pipeline 4 from Sweetwater Reservoir south to Lower Otay Reservoir. The Water Authority purchased Parcel Number 4E2-199-B on March 2, 1992 for the construction of Pipeline 4E2. The 10,500 square foot parcel was improved with a single family residence when the Water Authority acquired the property. The residence was demolished during construction of the pipeline. The parcel is currently a vacant residential lot located within a developed single family neighborhood at 2001 Gotham Street, Chula Vista, CA 91913. Pipeline 4E2 encumbers the southwest corner of the parcel.

The right of way for Pipeline 4E2 in adjacent areas is approximately 35 feet wide. Reserving a similar easement width for Pipeline 4E2 on the subject property leaves a remainder parcel of
approximately 7,500 square feet, which staff recommends is surplus to Water Authority requirements.

Discussion
The process of offering surplus property for sale is governed by the Water Authority’s Administrative Code Chapter 7 and California Government Code Section 54220 et. seq., which require surplus government land be first made available for housing for persons and families of low and moderate income or recreational or open space purposes. The property will then be offered to public agencies, and finally to the general public.

After Board approval of this Resolution, staff will obtain an appraisal to determine the value of the fee interest in the property, minus any easements reserved by the Water Authority. Then the Water Authority will market the property to low and moderate income housing and park/open space non-profits, other governmental organizations, and member agencies, prior to marketing to the general public.

Currently no outside parties are seeking to acquire the parcel.

Prepared by: Nick von Gymnich, Senior Right of Way Agent
Reviewed by: William J. Rose, Director of Engineering
Approved by: Frank Belock, Jr., Deputy General Manager

Attachments: 1. Resolution No. 2015-_______
               2. Exhibit A to the Resolution
               3. Figure 1 – Vicinity Map
RESOLUTION NO. 2015-________

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN DIEGO COUNTY WATER AUTHORITY TO DECLARE THE FEE INTEREST IN SAN DIEGO COUNTY WATER AUTHORITY PARCEL NUMBER 4E2-199-B AS SURPLUS PROPERTY

WHEREAS, the San Diego County Water Authority is the fee owner of certain real property commonly described as San Diego County Water Authority parcel number 4E2-199-B (“the parcel”) located in Chula Vista, California, and

WHEREAS, the parcel was acquired for the construction of pipeline 4E2. With pipeline 4E2 now constructed and operational, additional area remains within this parcel that is surplus to the needs reserved for Pipeline 4E2, and

WHEREAS Water Authority Administrative Code requires that any property contemplated for sale first be declared, by Resolution, as surplus by the Board of Directors, and

WHEREAS, the parcels will be offered to other local public agencies for housing for persons and families of low and moderate income or recreational or open space purposes, as required by Government Code Section 54220, and

NOW, THEREFORE, BE IT RESOLVED, that this Board finds and determines and hereby declares that:

1. The above recitals are true and correct.

2. The Real Property described as San Diego County Water Authority parcel number 4E2-199-B is surplus to Water Authority needs.

3. The General Manager is authorized to dispose of the property for fair market value, in accordance with Chapter 7.08 of the San Diego County Water Authority Administrative Code, reserving therefrom any easements and setbacks necessary for proper operation and maintenance of Water Authority pipelines.

The real property referred to in this resolution is located in the County of San Diego, State of California, and is highlighted on the attached Exhibit “A”.

PASSED, APPROVED, and ADOPTED this ________ day of __________, 2015.
Ayes:

Noes:

Abstain:

Absent:

______________________________
Mark Weston,
Chair

ATTEST:

______________________________
Jim Madaffer
Secretary

I, Kelly Walker, Deputy Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2015-____ was duly adopted at the meeting of the Board of Directors on the date stated above.

______________________________
Kelly Walker
Deputy Clerk of the Board
Exhibit A

Resolution Declaring a Fee Interest in
Water Authority Parcel Number 4E2-199B
Surplus to Water Authority Needs
March 18, 2015

Attention: Engineering and Operations Committee

Engineering and Operations Committee Work Plan for Calendar Years 2015 and 2016

**Committee Chair and Vice Chairs’ recommendation:**
Adopt the Engineering and Operations Committee Work Plan for calendar years 2015 and 2016.

**Alternative:**
Modify the recommended goals.

**Background**
The Engineering and Operations Committee is responsible for matters of design, construction, replacement, maintenance and operation of the Water Authority’s facilities, property and equipment, including: administration of the Capital Improvement Program; administration of the Aqueduct Protection Program; right of way acquisition and management; system and facility security; water quality; other matters relating to facility operations. During the next two years, the Committee expects to review, discuss, and make decisions pertaining to these matters.

**Discussion**
Attached for your consideration is the Engineering and Operations Committee Work Plan for calendar years 2015 and 2016. The work plan was prepared under the direction of the Engineering and Operations Committee Chair and Vice Chairs and were provided for Committee review at the February 26, 2015 Committee meeting. The work plan items will be formally reviewed at the end of each calendar year to measure progress.

Prepared by: Gary A. Eaton, Director of Operations and Maintenance
William J. Rose, Director of Engineering

Reviewed by: Frank Belock, Deputy General Manager
Ken Williams, Chair, Engineering and Operations Committee

Attachment: Engineering and Operations Committee’s Work Plan for 2015 and 2016
Business Plan Items

Asset Management

1. Consider approval of a staff proposed budget for the Asset Management and Relining and Pipe Replacement Program in the fiscal years 2016 and 2017 Capital Improvement Program. (June 2015 – Business Plan Goal #3)

Capital Improvement Program

1. San Vicente Dam Raise – Provide oversight of efforts necessary to complete the State of California Division of Safety of Dams’ mandatory coring program and receive DSOD’s certification that the San Vicente Reservoir can be filled to the full height of the raised dam. Filling of the reservoir is controlled by the completion of the San Vicente Bypass Pipeline (see below) and available water. Provide on-going litigation support regarding the construction contract with Shimmick-Obayashi Joint Venture. (July 2013 - Business Plan Goal #1 and #8)

2. San Vicente Reservoir Marina Facilities – Provide oversight of efforts necessary to complete construction of the San Vicente Marina by April 2015. (December 2014 - Business Plan Goal #1)

3. San Vicente Bypass Pipeline – Provide oversight of efforts necessary to complete construction of the San Vicente Bypass Pipeline by October 2015. (December 2015 - Business Plan Goal #8)

4. Pipeline 3, 4, and 5 Relining for State Route 76 – Provide oversight of efforts necessary to complete the relining of all three Second Aqueduct pipelines within the right of way of the widened and realigned State Route 76 no later than May 2015. (Business Plan Goal #2)

5. Nob Hill Improvements – Provide oversight of efforts necessary to complete the design of the Nob Hill Improvements by March 2015, advertise for construction in April 2015 and complete construction by the fall of 2016. (Business Plan Goal #13)

6. Twin Oaks Valley Water Treatment Plant Expanded Service Area - Provide oversight of efforts necessary to complete construction at the Valley Center Pump Station by September 2015 to double, from 20 cfs to 41 cfs, the volume of treated water from the Twin Oaks Valley Water Treatment Plant delivered to the First Aqueduct. (September 2015 - Business Plan Goal #6)
7. First Aqueduct Regulatory Storage Project - Provide oversight of efforts necessary to complete the California Environmental Quality Act (CEQA) compliance for the project by July 2016. The project will provide operational reliability should treated water flows along the Second Aqueduct be interrupted. (July 2016 - Business Plan Goal #9)

**Carlsbad Seawater Desalination**

1. Consider periodic updated information on both the Carlsbad Desalination Facility (in accordance with the Carlsbad Desalination Facility Water Purchase Agreement) and the Desalinated Product Water Conveyance Pipeline (in accordance with the Desalination Design-Build Agreement).

2. Pipeline 3 Desalination Relining San Marcos to Twin Oaks – Provide oversight of efforts necessary to complete the relining of approximately 27,000 feet of Pipeline 3 by March 2015 from the Product Water Conveyance connection to the Twin Oaks Valley Water Treatment Plant prior to the scheduled start up and testing of the Carlsbad Desalination Facilities. (June 2015 - Business Plan CIP Goal #3)

3. Provide oversight of efforts necessary to complete commissioning/commercial operations of the Carlsbad Desalination projects in fall of 2015. (October 2015 - Business Plan Goal #6)

**Facilities Security and Emergency Preparedness**

1. Provide oversight of staff’s participation in/conducting a local inter-agency or regional emergency preparedness exercise. (December 2015 – Business Plan Goal #2)

2. Provide oversight of efforts required to complete video surveillance and communication upgrades at the Escondido Operations Center. (June 2016 – Business Plan Goal #4)

3. Provide oversight of staff’s participation in/conducting a local inter-agency or regional emergency preparedness exercise. (December 2016 – Business Plan Goal #5)

**Operations and Maintenance**

1. Achieve 97 percent uptime and produce $2.6 million in revenue at the Lake Hodges Hydroelectric Facility in fiscal year 2016. (June 2016 – Business Plan Goal #4)

2. Achieve 97 percent uptime and produce $2.6 million in revenue at the Lake Hodges Hydroelectric Facility in fiscal year 2017. (June 2017 – Business Plan Goal #7)
3. Provide oversight of the efforts necessary to resolve five of the top ten ROW enforcement cases. (June 2016 – Business Plan Goal #5)

4. Produce hydroelectric energy revenue, of $900,000 annually, at the Rancho Penasquitos Hydroelectric Plant. (June 2016 – Business Plan Goal #6)
March 18, 2015

Attention: Engineering and Operations Committee

Notice of Completion for Pipeline 3 Desal Relining San Marcos to Twin Oaks. (Action)

Staff recommendation
1. Authorize the General Manager to accept the Pipeline 3 Desal Relining San Marcos to Twin Oaks project as complete, record the Notice of Completion, and release funds held in retention to L.H. Woods & Sons, Inc., following the expiration of the retention period.
2. Approve the transfer of $376,300 from the Pipeline 3 Desal Relining San Marcos to Twin Oaks project budget to the Post Construction Mitigation Program.

Alternatives
Do not approve staff recommendations and provide direction to staff relative to issues requiring resolution.

Fiscal Impact
There are sufficient funds to support this action in the project budget and fiscal years 2014 and 2015 Capital Improvement Program appropriation. The rate category is transportation.

Background
On November 29, 2012, the Water Authority Board approved the Water Purchase and Design-Build agreements for the Carlsbad Desalination suite of projects, including new facilities and improvements that combine to deliver desalinated water. See Figure 1 for the location of all project components.

Pipeline 3 is a key component of the Carlsbad Desalination Project, which will facilitate the integration of desalinated water into the Water Authority’s aqueduct system. Treated water in this portion of Pipeline 3 currently flows in a southerly direction. As part of the desalination project, this section will carry desalinated water flows from the Carlsbad Desalination Project Conveyance Pipeline north to the Twin Oaks Valley Water Treatment Plant. The desalinated water will then be blended with treated water from Twin Oaks, and subsequently distributed to member agencies. In addition, this section of the pipeline will be under a significant increase in operating pressure due to pumping activities at the Carlsbad Desalination Plant. To mitigate these issues, this project structurally upgraded approximately 27,000 feet of existing 72- and 75-inch diameter gasketed steel pipe with new welded steel liners. Fourteen excavated access portals were required to perform the work.

Previous Board actions: On November 21, 2013, the Board authorized the General Manager to award a construction contract to L.H. Woods & Sons, Inc. in the amount of $25,270,000 for the Pipeline 3 Desal Relining San Marcos to Twin Oaks project.
Discussion
Change Orders 1, 2, 3, and 4 were executed under staff’s authority for a credit of approximately $893,570. These items, summarized below and detailed in Table 1, include administrative changes, design modifications, errors, differing site conditions, and environmental modifications.

**Administrative:** Staff executed twelve administrative changes for a total credit of $986,806. The items include time extensions for inclement weather, extension of milestone dates, and reimbursements to the Water Authority related to weld testing, in-plant inspection, and reconciling bid item allowances.

**Design Modifications:** Staff executed five design modifications for a total credit of $63,503. The items include a credit for deleting access portals to improve constructability; credit for removal of an air valve structure that was not needed; additional disinfection of pipe at the Twin Oaks Valley Water Treatment Plant to hasten shutdown completion; removal and replacement of coatings at three outlet structures that were not included in the contract; and a credit relating to actual cathodic protection work performed.

**Errors:** Staff executed one change order for a total of $53,129 to remove and replace a damaged fiber optic line running parallel to Pipeline 5 that was not identified prior to construction.

**Differing Site Conditions:** Staff executed five differing site condition change orders for a total of $57,047. One item, cleanup of Pipeline 3 due to a leaking bulkhead, was fully reimbursed by a prior contractor who was responsible for this work. The other four items were for replacement of site fencing; rehabilitation of existing manway nozzles with different types of coatings than was shown on the contract drawings, not discovered until after the pipeline was shut down and drained; additional fabrication work needed to properly connect to the existing pipe; and mechanical work needed to perform the hydrostatic test of the completed pipeline.

**Environmental Modifications:** Staff executed an environmental modifications change order for a total of $46,563 to add required environmental exclusionary gates at multiple portals, due to the presence of burrowing mammals.

The contractor has no open claims. The final construction contract price for the Pipeline 3 Desal Relining San Marcos to Twin Oaks project, including change orders is approximately $24,376,430, a decrease of 3.5 percent from the original contract value.

During construction, 5 percent of the total contract amount was retained in accordance with the contract terms. Undisputed retention will be released after the General Manager’s acceptance, expiration of the 60-day period following recording of the Notice of Completion, and receipt of a signed Conditional Waiver and Release of Liens and Claims from the contractor. L.H. Woods & Sons, Inc. provided a bond for faithful performance at the time of bidding, which will remain in full force and effect for the contract’s two-year post-construction warranty period.
The small business participation on this project was 48 percent. There was no minority- or women-owned business participation. This information is provided for statistical purposes.

The project requires five years of post-construction mitigation monitoring of the re-vegetated areas disturbed by construction activities. To close out the construction phase of the project and capitalize the project in a timely manner, staff recommends transferring funds from the project budget to the post-construction mitigation program to meet the post-construction monitoring needs.

Prepared by: Neena Kuzmich, Senior Engineer
Reviewed by: William J. Rose, Director of Engineering
Approved by: Frank Belock, Jr., Deputy General Manager

Attachments:
1. Figure 1 – Location Map
2. Table 1 – Summary of Construction Change Orders
<table>
<thead>
<tr>
<th>Change Order</th>
<th>Item No.</th>
<th>Description</th>
<th>Amount</th>
<th>Time Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>1</td>
<td>Delete Portal 11 and Construct Access Shaft</td>
<td>($21,259.00)</td>
<td>0</td>
</tr>
<tr>
<td>001</td>
<td>2</td>
<td>Extension of Time for Rain Days</td>
<td>$0</td>
<td>5</td>
</tr>
<tr>
<td>001</td>
<td>3</td>
<td>Disinfect 54-inch CML&amp;C Steel Pipe located at the Twin Oaks Valley Water Treatment Plant</td>
<td>$3,225.00</td>
<td>0</td>
</tr>
<tr>
<td>001</td>
<td>4</td>
<td>Add Environmental Exclusionary Gates</td>
<td>$46,563.00</td>
<td>0</td>
</tr>
<tr>
<td>001</td>
<td>5</td>
<td>Delete Air Valve Structure at Portal 15</td>
<td>($51,038.00)</td>
<td>0</td>
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<tr>
<td>001</td>
<td>6</td>
<td>Extension of Time for Milestone Date Number One</td>
<td>$0</td>
<td>40</td>
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<tr>
<td>001</td>
<td>7</td>
<td>Remove and Replace Pipeline 5 Fiber Optic Cable</td>
<td>$53,129.00</td>
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<td>002</td>
<td>1</td>
<td>Cleanup of Pipeline 3 Interior at Portal 1 South</td>
<td>$6,787.00</td>
<td>0</td>
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<tr>
<td>002</td>
<td>2</td>
<td>Extension of Time for Milestone Date Number One</td>
<td>$0</td>
<td>92</td>
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<tr>
<td>002</td>
<td>3</td>
<td>Revise Non-Destructive Testing Acceptance Requirements</td>
<td>($300,000.00)</td>
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<td>002</td>
<td>4</td>
<td>Milestone Date Number 2 Administrative Change</td>
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<td>003</td>
<td>1</td>
<td>Inspection of Off-Site Fabrication (Partial)</td>
<td>($590,639.26)</td>
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<td>004</td>
<td>1</td>
<td>Fence and Rip Rap Removal at Portal 1</td>
<td>$12,535.00</td>
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<td>004</td>
<td>2</td>
<td>Additional Coal Tar Removal at Flanged Outlets</td>
<td>$10,094.00</td>
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<td>004</td>
<td>3</td>
<td>Revise Design for Closure Piece at Portal 1</td>
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<td>4</td>
<td>Structure Rehabilitation of Manhole Nozzles</td>
<td>$19,345.00</td>
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<td>Cathodic Protection Test Stations</td>
<td>($4,525.00)</td>
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<td>Change Order</td>
<td>Description</td>
<td>Amount</td>
<td>Duration</td>
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<td>--------------</td>
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<tr>
<td>004 6</td>
<td>Inspection of Off-Site Fabrication (Final)</td>
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<td>004 7</td>
<td>Install Blind Flanges at Blowoff Valves</td>
<td>$8,773.23</td>
<td>0</td>
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<td>004 8</td>
<td>Extension of Time for Rain Days</td>
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<td>004 9</td>
<td>Reconcile Bid Item 11: Allowance for Partnering</td>
<td>($15,000.00)</td>
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<td>Reconcile Bid Item 12: Allowance for Soil Amendments</td>
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<td>004 11</td>
<td>Construction Water Usage</td>
<td>($27,110)</td>
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<td>004 12</td>
<td>Milestone Date Number 2 Acceptance Requirements</td>
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<td>0</td>
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</tr>
</tbody>
</table>

**Total Change Order Amount:** ($893,569.73)

**Total Time Extension:** 12 days

**Original Board Authorized Contract Amount:** $25,270,000.00

**New Contract Amount:** $24,376,430.27
March 18, 2015

Attention: Engineering and Operations Committee

Advertisement for Bids for the Nob Hill Improvements project (Information)

Background
The Water Authority operates three pipelines within a 130 foot wide right-of-way that crosses Nob Hill in the Scripps Ranch area of the City of San Diego (Pipeline 3, Pipeline 4, and Pipeline 4A of the Second Aqueduct). Hydraulic modeling has shown a potentially significant hydraulic transient concern at Nob Hill during certain operational scenarios. Hydraulic transients are short term pressure waves, sometimes referred to as water hammer, which result from sudden changes within the system, such as a power outage induced pump shut down or a quick valve closure. Unaddressed, during a transient event existing air release valves could release water or the pipelines could be damaged. Lowering Pipelines 3 and 4 at the Nob Hill high point will avoid hydraulic transients by maintaining higher pressures in the area. Pipeline 3 was taken out of service in the area as an interim transient damage mitigation measure until the Nob Hill Improvements project is complete.

Previous Board Action: On June 26, 2014, the Board certified the Final Environmental Impact Report for the Nob Hill Pipeline Improvements Project.

Discussion
The Nob Hill Improvements project replaces approximately 800 feet of Pipelines 3 and 4 and constructs approximately 1,600 linear feet of new access road within the aqueduct right-of-way. The permanent access road will be used during construction and later for ongoing operation and maintenance activities. Pipeline construction includes tunnel and trench methods. A 450-foot long tunnel will be constructed within Santiago Peak Volcanics bedrock for the new 96-inch diameter pipeline. Construction is estimated to last 18 months.

Due to the size and complexity of this project, staff utilized the formal project risk management process that was outlined to the Board approximately one year ago. The process involves identifying and addressing project risks that could potentially impact a project’s scope, schedule, and budget. During the design, staff identified project risks pertaining to construction issues. Mitigation measures for these risks are addressed in the contract documents, including the ability to collect liquidated damages for certain milestone delays.

A construction contract will be advertised for public bid this spring. The construction cost estimate is between $11.6 and $12.8 million. Additional funding for the construction phase of the project will be included in the recommended FY2016-2017 CIP budget. Staff anticipates returning to the Board this summer with a recommendation to award the construction contract.

Prepared by:  Karen Henry, Senior Engineer
Reviewed by:  William J. Rose, Director of Engineering
Approved by:  Frank Belock, Jr., Deputy General Manager
March 18, 2015

Attention: Engineering and Operations Committee

CLOSED SESSION:
Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: Traylor-Shea Joint Venture v SDCWA;
San Diego Superior Court Case No. 37-2011-00092666-CU-BC-CTL

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(1), to discuss the above-referenced matter at the March 26, 2015 meeting.

A closed session has also been included on the agenda of the formal Board of Directors’ meeting. Unless the Board desires additional discussion, it is not staff’s intention to ask for a closed session with the full Board at that time, but staff may request action to confirm directions given or action recommended by the committee.

Prepared by: Daniel S. Hentschke, General Counsel
March 18, 2015

Attention: Engineering and Operations Committee

CLOSED SESSION:
Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: Shimmick Construction Co., Inc./Obayashi Corp., joint venture
    v. San Diego County Water Authority, San Diego Superior Court
    Case No. 37-2014-00026740-CU-BC-CTL

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(1), to discuss the above-referenced matter at the March 26, 2015 meeting.

A closed session has also been included on the agenda of the formal Board of Directors’ meeting. Unless the Board desires additional discussion, it is not staff’s intention to ask for a closed session with the full Board at that time, but staff may request action to confirm directions given or action recommended by the committee.

Prepared by: Daniel S. Hentschke, General Counsel
IMPORTED WATER COMMITTEE

AGENDA FOR
MARCH 26, 2015

Mark Watton – Chair      Jim Murtland
DeAna Verbeke – Vice Chair    Ken Olson
Elsa Saxod – Vice Chair    Dave Roberts
David Barnum               Javier Saunders
Betty Evans                 Fern Steiner
Christy Guerin             Mark Weston
Michael Hogan             Doug Wilson
Jim Madaffer

1. Roll call – determination of quorum.

2. Additions to agenda (Government Code Section 54954.2(b)).

3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.

4. Chair’s report.
4-A Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. Imported Water Committee Work Plan for Calendar Years 2015 and 2016.  
   Committee Chair and Vice Chairs’ Recommendation:  
   Adopt the Imported Water Committee Work Plan for Calendar Years 2015 and 2016.  
   (Action)

   Chair Watton

2. Metropolitan Water District Issues and Activities Update.
   2-A Metropolitan Water District Delegates Report.  
   (Information)  
   (Supplemental Materials)

   MWD Delegates

3. Colorado River Programs.
   3-A Colorado River Board Representative’s Report.  
   (Information)  
   (Supplemental Materials)

   Doug Wilson
4. **Bay Delta Activities.**
   4-A State Treasurer’s Assessment of the Affordability and Financing Considerations of the Bay Delta Conveyance Facility.  (Information)  

Amy Chen

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III. **INFORMATION**

1. Presentation on Metropolitan Water District Storage Programs Update.  
   Amy Chen

   Amy Chen

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IV. **CLOSED SESSION**

1. **CLOSED SESSION:**  
   Conference with Legal Counsel - Existing Litigation  
   Government Code §54956.9(d)(1)  
   Name of Case: SDCWA v Metropolitan Water District of Southern California;  
   Case Nos. CPF-10-510830; CPF-12-512466; and CPF-14-514004  

   Dan Hentschke

2. **CLOSED SESSION:**  
   Conference with Legal Counsel - Existing Litigation  
   Government Code §54956.9(d)(1)  
   Name of Case: State Water Resources Control Board Petition of Imperial Irrigation District for Modification of Revised Water Rights Order 2002-0013  

   Dan Hentschke

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V. **ADJOURNMENT**

Kelly L. Walker  
Deputy Clerk of the Board

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**NOTE:** This meeting is called as an Imported Water Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.
March 18, 2015

Attention: Imported Water Committee

Imported Water Committee Work Plan for calendar years 2015 and 2016 (Action)

Imported Water Committee Chair and Vice Chairs’ recommendation
Adopt the Imported Water Committee Work Plan for calendar years 2015 and 2016.

Alternative
Modify the recommended goals.

Background
The Imported Water Committee is responsible for imported water matters, including: activities and issues as a member agency of the Metropolitan Water District of Southern California; administration of the Colorado River Quantification Settlement Agreement and related agreements; Colorado River Board; State Water Project; Bay-Delta; and other matters relating to water supplies from outside San Diego County. During the next two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

Discussion
Attached for your review is the Imported Water Committee Work Plan for calendar years 2015 and 2016. The work plan was prepared under the direction of the Imported Water Committee Chair and Vice Chairs and was provided for committee review at the February 26, 2015 committee meeting. The adopted work plan will be formally reviewed at the end of each calendar year to measure progress.

Prepared by: Amy I. Chen, Director of MWD Program
Dan Denham, Director of Colorado River Program

Reviewed by: Mark Watton, Chair, Imported Water Committee

Attachment: Imported Water Committee Work Plan for calendar years 2015 and 2016
Imported Water Committee Work Plan
for calendar years 2015 and 2016

Business Plan Items

Bay-Delta Plan
1. Adopt updated Bay-Delta work plan for Calendar Years 2015 and 2016 (March 2015 – BP #1)
2. Address issues related to the implementation of near-term Bay-Delta actions and long-term solutions to fix the Bay-Delta’s infrastructure (September 2017 – BP #2, #4, #5 and #6)
3. Recommend and advocate alternatives that would secure long-term firm financial commitments commensurate with benefits to pay the fixed costs of the Bay-Delta conveyance project; and to secure federal and state funds to support non-water supply improvements in the Bay-Delta that benefit the public at-large (September 2017 – BP #1, #3, #4 and #5)

Colorado River Water Supplies
1. Work with the Colorado River Sub Committee to ensure full access to supplies linked to the Quantification Settlement Agreement and related agreements, including the water transfer with IID, the All American Canal Lining Project, and the Coachella Canal Lining Project (June 2019 – BP #1, #2, #3, #4, #5, #6, #7 and #8)
2. Advocate for effective and efficient mitigation measures in support of the Water Authority’s supplies under the Quantification Settlement Agreement and related agreements (June 2019 – BP #1, #5, #6, and #8)
3. Recommend and support water supply projects that augment the region’s existing Colorado River supply sources, including binational projects (June 2019 – BP #9 and #10)
4. Advocate for the State to meet its mitigation and restoration obligations at the Salton Sea in a timely and effective manner (June 2019 – BP #5 and #6)

Metropolitan Water District Water Supplies
1. Work with the MWD Delegates to ensure long-term regional MWD water supply reliability and quality while ensuring equity for San Diego County water ratepayers (June 2016 – BP #3 and #4)
2. Work with the MWD Delegates to address issues related to MWD policies and programs to ensure MWD’s long-term fiscal sustainability (April 2016 – BP #2)
3. Consider options to secure short-term water transfers and optimize the Water Authority’s out-of-region storage to meet dry-year supply needs as required (December 2017 – BP #8 and #12)
4. Consider staff recommendations to the rate litigation to achieve a successful court outcome in the 2015-2016 rate case and to preserve the favorable April 24, 2014 ruling (December 2017 – BP #1, #10 and #11)
5. Address issues related to the governance, operation and ownership of the State Water Project that may impact imported water supplies to the region. (September 2017 – MWD Program: BP #5 and Bay-Delta Program: BP #6)

Other Items

1. Ensure coordination and consideration of local supply development as related to Bay-Delta, Colorado River and MWD supply development.
March 18, 2015

Attention: Imported Water Committee

State Treasurer’s Assessment of the Affordability and Financing Considerations of the Bay Delta Conveyance Facility (Information).

Purpose
This report reviews the State Treasurer’s financial assessment of the Bay Delta Conservation Plan (BDCP) and examines the report’s findings as they may impact the Water Authority.

Background
The BDCP is being developed as a joint Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) intended to result in long-term state and federal Endangered Species Act permits for the operation of the State Water Project (SWP) and Central Valley Project (CVP). Included in the BDCP are 22 conservation measures collectively meant to achieve the BDCP’s co-equal goal of “restoring and protecting ecosystem health, water supply, and water quality within a stable regulatory framework.” A central component of the BDCP strategy for water exporters is Conservation Measure 1 (CM1), Water Facilities and Operations. Conservation Measures 2 through 22 (CM2 through CM22) involve restoring and protecting habitat and reducing adverse effects of other stressors on the Bay Delta. The state has estimated the overall lifetime cost of the BDCP at $25 billion (in 2012 dollars), for the water conveyance facilities, including operations and maintenance, and ecosystem restoration. Of that, it is envisioned that $17 billion for water conveyance facilities, operations and maintenance and mitigation costs will be funded by the state and federal contractors, including the Metropolitan Water District (MWD), from which the Water Authority receives its supply from the Delta.

The Water Authority has actively engaged in support of a Bay-Delta solution. In 2012, the Water Authority’s Board of Directors adopted policy principles that reiterated its long-standing support for actions and projects that meet the co-equal goals of water supply reliability and environmental restoration. Using the principles as guidance, the Water Authority embarked on an extensive, multi-disciplinary review of the BDCP environmental and planning documents over the course of 2013 and 2014 that culminated in formal comment letters on the 2013 draft BDCP’s documents. The Water Authority urged state and federal officials to be more transparent and detailed in the fundamental financial components of the proposed $25 billion project, including the funding sources and cost allocation.

Following submittal of reportedly more than 10,000 comments on the BDCP and associated documents, the Department of Water Resources (DWR) and the other state and federal agencies leading the BDCP effort announced in August 2014 that it will publish a Recirculated Draft BDCP, Environmental Impact Report/Environmental Impact Statement (EIR/EIS), and Implementing Agreement (IA) in early 2015. In late 2014, DWR and its partners announced significant refinements to the proposed recirculated BDCP, EIR/EIS and IA, including changes to CM1 intended to reduce impacts to Delta communities and improve the long-term reliability and operation of the proposed tunnels. The announcement reported that the estimated cost of BDCP remained at $25 billion.

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In November 2014, based on the 2013 draft BDCP, the California Debt and Investment Advisory Commission, chaired by then-State Treasurer Bill Lockyer, released a report, “The Bay Delta Conveyance Facility: Affordability and Financing Considerations,” that examined the financial feasibility under various assumptions of the water facilities and associated costs to the contractors as described in the 2013 BDCP. Specifically, the report studies whether the cost of the BDCP conveyance facility is within the range of a select group of SWP and federal Central Valley Project (CVP) contractors’ capacity to pay for the project. The report also explores bond financing issues and potential risks in financing large infrastructure projects.

Discussion
While the State Treasurer’s report states that the cost of the conveyance facility “is within the range of urban and agricultural users’ capacity to pay,” it qualified the findings by stating that “a number of important financing issues...will need to be resolved before bonds could be issued to support construction of the BDCP conveyance facility,” and identified “a number of important risks that could pose significant obstacles to a successful financing of the proposed conveyance facility.” Because no agreement has been reached on how costs for the conveyance facilities will be allocated among the state and federal water contractors groups, and how costs will be passed down to their respective contractors, the report also states that its findings should be considered “preliminary and illustrative.”

Debt Financing. The report assumes the ecosystem restoration will be paid for by public funding, as assumed under the BDCP, and focused its analysis on the state and federal contractors’ ability to pay for the conveyance costs. To do so, it examines the conveyance facility costs over the lifetime of debt financing under three scenarios: a base case, a best case, and a worst case scenario (See Table 1 for a summary of financing assumptions by each case). The base case is equivalent to the capital costs as outlined in the 2013 BDCP. The best case scenario assumes capital costs would be 10 percent less than anticipated. The worst case scenario assumes capital costs would be 30 percent higher than expected. The three scenarios were selected to “illustrate the impact of a significant deviation from the base case in terms of costs, timing, interest rates and a number of other parameters.” Table 1 also summarizes the total peak annual costs in “year-of-expenditure” dollars (SYOE), which takes into account the timing of when the BDCP costs will actually be incurred and includes the associated construction cost inflation. In short, the peak debt service costs would be $1.58 billion per year (base case), $1.08 billion per year (best case), and $2.50 billion per year (worst case), all in SYOE. Since cost allocations have not been finalized, the State Treasurer’s report evaluated two allocation scenarios to illustrate the potential costs to the SWP and CVP contractors — a 50/50 or a 60/40 split. For the SWP contractors, the annual cost range, under a 50/50 split would be $542 million to $1.25 billion and under the 60/40 split would be $651 million to $1.5 billion.

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2 Costs estimated to be funded by the SWP and CVP Contractors in the 2013 BDCP includes $14.6 billion for water facilities, $1.5 billion for operation of those facilities over a 50-year period, and $1 billion for the contractors’ share of the mitigation costs; all in 2012 dollars
3 State Treasurer’s Report, pages 3-4.
Table 1. Debt Financing by the Water Contractors

<table>
<thead>
<tr>
<th>Financing Assumptions</th>
<th>Base Case</th>
<th>Best Case</th>
<th>Worst Case</th>
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<td>Debt Financed Costs ($YOE)</td>
<td>$19.7B</td>
<td>$14.8B (Base – 10%)*</td>
<td>$25.2B (Base +30%)*</td>
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<td>Par Amount of Bonds Issued ($YOE)</td>
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<td>Interest Rate</td>
<td>20 year avg. MMD AA-rated** (all-in true interest cost of 5.964%)</td>
<td>Base Minus 1% (all-in true interest cost of 4.947%)</td>
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<td>Issuance Start Year</td>
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<td>2018 (Base + 3 Yrs)</td>
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<td>Total Peak Annual Cost ($YOE)***</td>
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<td>$1,084.3M</td>
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<td>50/50 Split for SWP/CVP ($YOE):</td>
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<td>SWP Share</td>
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<tr>
<td>MWD Share</td>
<td>$437.51M</td>
<td>$300.90M</td>
<td>$694.44M</td>
</tr>
</tbody>
</table>

* For the Best Case and Worst Case the pre-contingency costs are adjusted by -10% and +30%, respectively. The contingency amount is then set to either 10% in the Best Case or 20% in the Worst Case or the original percentage, whichever is lower.

** Base interest rate = 20 year average of the MWD AA-rated general revenue bond index adjusted for a 95% confidence sensitivity cushion for interest rates in effect as of December 18, 2013.

*** Peak annual costs represent the average annual costs for the highest 10 years, though total costs are fairly constant for over 30 years.

In January 2015, MWD staff also reviewed the State Treasurer’s report, and compared data from the Treasurer’s report against its own analysis from September 2014. In MWD’s presentation, it brought the Treasurer’s Year-of-Expenditure data to 2015 dollars. Table 2 is the annual peak cost MWD presented using Treasurer’s data, but expressed in 2015 dollars.

Table 2. Debt Financing Cost (in 2015 $) Summary

<table>
<thead>
<tr>
<th>Total Peak Cost</th>
<th>Base Case</th>
<th>Best Case</th>
<th>Worst Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Contractor Cost ($2015)</td>
<td>$909M</td>
<td>$604M</td>
<td>$1,359M</td>
</tr>
<tr>
<td>SWP Share</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50/50 Split for SWP/CVP ($2015)</td>
<td>$455M</td>
<td>$302M</td>
<td>$680M</td>
</tr>
<tr>
<td>60/40 Split for SWP/CVP ($2015)</td>
<td>$546M</td>
<td>$362M</td>
<td>$816M</td>
</tr>
<tr>
<td>MWD Share (Table A)*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50/50 Split for SWP/CVP ($2015)</td>
<td>$211M</td>
<td>$140M</td>
<td>$315M</td>
</tr>
<tr>
<td>60/40 Split for SWP/CVP ($2015)</td>
<td>$253M</td>
<td>$168M</td>
<td>$378M</td>
</tr>
</tbody>
</table>

* MWD performed its own analysis in 2013, when the analysis is brought forward to 2015$, it shows MWD share would be $250M under a 50/50 split or $299M under a 60/40 split

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4 State Treasurer’s Report, The Bay Delta Conveyance Facility: Affordability and Financing Considerations, (November 2014), pages 3 and 34
5 MWD presentation from January 27, 2015.
To put these annual debt service estimates into perspective, MWD's current annual debt service payments for fiscal year 2015 total $325.8 million and comprise of 20 percent of its $1.6 billion annual budget.

Cost of Water. To evaluate the “affordability” of BDCP for specific contractors, the State Treasurer’s report chose four major contractors – MWD, Kern County Water Agency (Kern), Santa Clara Valley Water District (Santa Clara), and Westlands Water Agency (Westlands) – based on flow projections and project costs. These four contractors account for 70 percent of SWP Table A south-of-the-Delta contract amounts and 40 percent of CVP maximum annual south-of-the-Delta deliveries. The report qualified that the studied contractors “may not be representative of the many smaller SWP and CVP contractors, most notably CVP agricultural water users” and cautioned that these smaller agricultural water users may be unable to make payments to cover the projected BDCP costs. The report allocates the SWP costs based on each SWP contractors’ proportionate Table A allocation and allocates the CVP costs based on each CVP contractor’s historical average annual water deliveries. Based on those assumptions, it finds that water under a base case scenario would cost between $260 to $400 per acre-foot for MWD, $213 to $278 per acre-foot for Kern, $290 to $360 per acre-foot for Santa Clara, and $253 to $301 per acre-foot for Westlands. These unit costs are derived based on total expected Delta export (as opposed to the incremental BDCP yield restored by the project) and are presented in $YOE.

The State Treasurer’s report describes why it believes the cost is affordable for the urban and agricultural users. For the urban contractors, MWD and Santa Clara, the additional average annual payments are considered “likely manageable” when the new costs are spread over their total Delta supplies. For contractors that have a water supply portfolio less dependent on the Delta water, the report states that the contractor is “more likely (able to) afford the costs associated with implementing the BDCP” because it would have a smaller impact on the total cost than if the contractor relied on the Delta for more of its supplies. In addition, the report also noted that the urban contractors’ share of the BDCP is competitively priced when compared with the cost of water from desalination ($1,191 per acre-foot to $2,257 per acre-foot) and recycling ($955 per acre-foot to $1,672 per acre-foot). It is important to note, however, that the State Treasurer’s report analyzed BDCP unit cost over the entire melded Delta exports, as opposed to incremental unit costs. It then compared that melded Bay-Delta supply unit cost against the alternative supplies’ costs.

In MWD’s January 2015 presentation, MWD also averaged – or melded – its BDCP cost over 1.7 million acre-feet of annual MWD sales. However, in a previous presentation by MWD, an incremental BDCP benefit was described under a 60/40 split, along with a display of MWD’s incremental BDCP unit cost. Using the updated cost data from MWD’s January presentation and incremental yields from the September presentation, the incremental BDCP cost to MWD for restoring 199,337 acre-feet of Bay-Delta supplies (benefit described in the September presentation) ranges between $843/AF and $1,896/AF in 2015 dollars (see Table 3).

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6 Expected annual deliveries to the south of Delta SWP contractors on average range from 2.4 million acre-feet to 3.2 million acre-feet, State Treasurer’s Report, page 4.
8 Ibid, page 35.
9 September 23, 2014 Presentation to Special Committee on Bay-Delta
Table 3. MWD’s Incremental BDCP Unit Cost

<table>
<thead>
<tr>
<th>MWD Share Peak Annual Cost (2015$)</th>
<th>Cost Split</th>
<th>Base Case</th>
<th>Best Case</th>
<th>Worst Case</th>
<th>MWD Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD Cost/ BDCP Incremental Benefit</td>
<td>SWP: 60%</td>
<td>$253 M</td>
<td>$168 M</td>
<td>$378 M</td>
<td>$299 M</td>
</tr>
<tr>
<td></td>
<td>CVP: 40%</td>
<td>$1,269/AF</td>
<td>$843/AF</td>
<td>$1,896/AF</td>
<td>$1,500/AF</td>
</tr>
</tbody>
</table>

1. Based on data provided in MWD’s September 23, 2014 presentation, MWD’s calculated incremental BDCP benefit is about 200,000 AF/Y on average, based on its Table A allocation
2. State Treasurer’s assumptions: Best (capital costs 10% less; interest rates 1% lower); Base (current BDCP assumptions); Worst (capital cost 30% higher; interest rates 2% higher; project delayed three years)
3. MWD’s 2013 estimate displayed in 2015 $s
4. Costs shown differ from State Treasurer’s Report: Nominal $ shown in State Treasurer’s Report; 2015$ shown in MWD PPT and here. Data shown can be found in MWD’s January 27, 2015 presentation

It should be noted that the incremental unit cost range shown above represents “average” cost, based on average incremental BDCP yield of 199,337 acre-feet. The costs do not include the additional cost to capture and store wet-year water for dry-year use, or additional dry-year water transfer costs, and nor do they include the additional energy costs to transport water to Southern California; such costs are substantial.

For agricultural contractors, the State Treasurer’s report states Kern’s and Westlands’ “ability to pay for the BDCP-related costs depends primarily upon their agricultural customers’ capacity to absorb these higher water costs,” and compared the BDCP unit cost against this “capacity to absorb” the cost. To assess the affordability, the report looked at agricultural production and the cost data. The report notes that Kern and Westlands’ current crop mix indicates they could support the price of $277 per acre-foot and $291 per acre-foot, respectively, and therefore the report states that both Kern and Westlands have the “capacity to pay.” However, because the current crop mix uses average values, the report caveats the “capacity to pay” is “much higher for permanent crops and vegetable crops and much lower for row crops.” As the cost of the BDCP is applied, the report notes that it may cause agricultural contractors to shift toward higher value vegetable and permanent crops to increase their ability to pay for water or fallow a portion of their land, resulting in lower crop yields. The report then notes that switching to higher valued crops requires a substantial initial investment and “must be maintained continuously,” resulting in the need for dry-year supply investments that further increase the CVP contractors’ costs.

The report also expresses concern with the CVP’s ability to pay fixed cost that does not vary as a function of the amount of water delivered: “during a period of low water deliveries, at the same time contractors are securing alternative water supplies – potentially at high prices – they would be obligated to continue to make debt service payments. This could be problematic particularly for small agricultural contractors because their revenues will likely be constrained... and even for larger water districts that might be willing to accept a take-or-pay obligation, the question arises as to whether their member contractors would be willing or able to enter into a take-or-pay arrangement” given the financial risks they may sustain during a drought.

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10 State Treasurer’s Report, page 40.
11 Ibid, page 46.
The estimated costs illustrated in Table 3 are costs to MWD, and not the actual cost MWD charges its member agencies for water. For example, MWD’s 2015 Tier 1 Treated supply rate is $923 per acre-foot, and $1,055 per acre-foot for Tier 2 Treated supply.\footnote{Full service rates do not include additional charges including readiness-to-serve, and capacity charges.}

**Comparing Supply Options.** As noted earlier, the Treasurer’s report compared the melded unit cost of the Bay-Delta supplies with the incremental cost of alternative supplies. However, cost often is not the only factor when evaluating supply options. For the Water Authority, the reliability of supplies has been the primary driver of its multi-decade strategy to diversify its water sources. Table 4 illustrates water supply and programs available to help meet San Diego County’s water supply demands and how it compares to each other among other key factors, such as cost, cost-control and predictability, reliability, protection from drought, and local control.

<table>
<thead>
<tr>
<th>Meeting San Diego County’s Water Supply Demands</th>
<th>Long-Term Cost to San Diego Region</th>
<th>Cost-Control/Predictability</th>
<th>Reliability</th>
<th>Drought Proof</th>
<th>Local Control</th>
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<td>Conservation</td>
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<tr>
<td>MWD’s SWP Supplies without BDCP</td>
<td>![Best]</td>
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<tr>
<td>MWD’s SWP Supplies with BDCP</td>
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<td>![Best]</td>
<td>![Best]</td>
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<tr>
<td>MWD’s Colorado River Supplies</td>
<td>![Best]</td>
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<td>Imperial Irrigation District-Water Transfer</td>
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<tr>
<td>All American Canal Lining Project/Coachella Canal Lining Project Supplies</td>
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<td>![Best]</td>
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<td>![Best]</td>
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<tr>
<td>Carlsbad Desalination</td>
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</tr>
<tr>
<td>Recycled Water</td>
<td>![Best]</td>
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</tr>
<tr>
<td>Potable Reuse</td>
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</tr>
</tbody>
</table>

**Key:**
- ![Best]: Best
- ![Good]: Good
- ![Moderate]: Moderate
- ![Least]: Least

**Other risks.** The State Treasurer’s report also identifies several potential risks, such as those related to the absence of “take-or-pay” contracts by CVP contractors. Currently, the SWP contractors have take-or-pay contracts (proportionate to their Table A amount), while the CVP contractors do not.
Without a take-or-pay arrangement, during a dry-year, a contractor may choose to use alternative sources or curtail water use, which “would result in total payments that are insufficient to meet that year’s BDCP debt obligations unless another contractor were to make up the shortfall.” For the SWP contractors, the State Treasurer’s report notes, “if all of the SWP contractors do not agree to a BDCP funding amendment, the cost would increase for those that are willing to pay for the conveyance facility.”

An additional risk to consider is that it is the CVP contractors’ ability to reasonably issue debt of the magnitude described in the State Treasurer’s report. The report states “even if the CVP contractors develop a new credit with take-or-pay obligations and similar credit features to the DWR bonds, it is not clear at this point whether $10.25 billion of bonds (assuming a 50/50 split) in the base case could reasonably be issued without a large rate stabilization fund or other credit enhancement or subsidy from the federal government, state government or SWP contractors.”

The report also identifies potential risks to bond financing, such as construction cost overruns and delays, regulatory uncertainty, and unforeseen changes due to climate change. The report cites studies for potential cost overruns on “megaprojects” – bridge and tunnel projects experience cost overruns of 34 percent, on average. As noted, the State Treasurer’s report evaluated construction cost risks as a range of minus-10 percent to plus-30 percent.

**Next Steps.** The Water Authority Board has expressed a desire to be part of the discussion regarding financing of a Delta solution, particularly because the SWP water remains an integral part of the Water Authority’s supply portfolio. As the Water Authority continues to rely on water purchases from MWD for a portion of its supply, how MWD passes along its share of BDCP costs to its 26 member agencies is of vital interest to the Water Authority. The State Treasurer’s report is illustrative. Combining the data from the Treasurer’s report and estimated incremental BDCP yields reported by MWD, a better picture of the BDCP incremental unit cost is emerging. This exercise also sheds light on the importance of cost allocation among contractors, as the unit cost analyzed assumed largely that MWD would pay only about 25-30 percent of the project’s conveyance cost. Depending on the outcome of cost allocation discussions, the cost to MWD may vary significantly. Staff will continue to monitor the cost allocation discussions, and report back to the board as new information develops.

Prepared by: Debbie Discar-Espe, Senior Water Resources Specialist
Reviewed by: Amy Chen, Director of the MWD Program


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13 State Treasurer’s Report, page 31
The Bay Delta Conveyance Facility: Affordability and Financing Considerations

California Debt and Investment Advisory Commission

Prepared by

Blue Sky Consulting Group

November 2014
I. Executive Summary

The Bay Delta Conservation Plan (BDCP) is a collaborative effort involving numerous state and federal agencies with the goal of restoring and protecting the environmental health of the Sacramento-San Joaquin Delta while also improving the reliability of an important source of California’s water supply. Currently, the Delta provides vital water supplies to municipal, industrial and agricultural water users in the Central Valley and coastal and Southern California. These water deliveries are crucial to the state’s economy and represent a critical source of water for more than 25 million California residents. According to the BDCP documents, in the absence of the various conservation measures proposed in the plan, Delta water supplies are expected to become increasingly unreliable, water quality in the Delta would be vulnerable due to sea level rise and associated saltwater intrusion, and the state would be exposed to potentially severe public health consequences resulting from a major seismic event that could damage Delta facilities and temporarily halt water exports.

This report provides a preliminary assessment of the affordability and financing considerations of the Delta conveyance facility. The report does not address the merits of the BDCP per se or the question of whether the state and other parties involved in the project should proceed with this project.

BDCP Overview and Costs

An integral part of the BDCP is a proposal to construct a conveyance facility consisting of two 40-foot diameter tunnels reaching a maximum depth of more than 150 feet below ground that could carry up to 9,000 cubic feet per second (cfs) of water approximately 30 miles from the Sacramento River to the existing California Department of Water Resources’ (DWR) State Water Project (SWP) and the U.S. Bureau of Reclamation’s (USBR) Central Valley Project (CVP) south Delta pumps located approximately 17 miles southwest of Stockton at the Clifton Court Forebay. The BDCP currently estimates this new conveyance facility will have capital costs of about $14.57 billion in 2012 dollars. With construction cost inflation, the actual outlays will be higher. The SWP and CVP contractors that are participating in the development of the BDCP are expected to pay for the construction costs of the new facility, along with the associated mitigation measures, the facility’s operating costs, and a share of the cost of a number of the other BDCP conservation measures. In 2012 dollars, these additional costs represent another $2.45 billion in BDCP-related capital costs and operating and maintenance (O&M) costs, for a total of about $17 billion to be paid by the water contractors and their ratepayers, out of the total estimated BDCP costs of

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1 This report primarily reports expected costs in nominal, or “year of expenditure dollars” (YOE), unless otherwise stated. Note that the most current (2013) draft of the BDCP presents the expected costs in constant 2012 dollars. In some instances we also report expected costs in constant dollars. To avoid confusion, whenever values in constant dollars are presented here, they are reported in constant 2012 dollars ($2012).

2 Specifically, those water contractors that receive their water deliveries via the pumps at the Clifton Court Forebay are expected to provide the financing for the BDCP. These contractors are referred to collectively as the “south-of-Delta” water contractors.
almost $25 billion. Funding for the remaining $7.8 billion, which consists primarily of ecosystem restoration activities, is expected to come from various state and federal sources, including future state General Obligation bond measures approved by the voters. Specifically, $4.1 billion is identified as potentially coming from existing and new state water bonds and other state sources. Approximately $3.5 billion is identified as potentially coming from existing and new federal funding authorizations for habitat restoration. The remaining $0.2 billion is anticipated to come from interest income on fund balances.

While the actual allocation of the water contractor costs between the SWP and CVP contractors has yet to be determined, the November 2013 version of the BDCP public draft documents assumes that they are shared equally, with 50% paid by the SWP contractors and 50% paid by the CVP contractors. Alternative allocations that have been discussed include a 60/40 split, with the SWP contractors paying 60% of the costs and the CVP contractors paying 40%. We have looked at both allocations in this analysis. While costs likely would be allocated based on an initial split, there may be a “true-up” at the end of each year based on the actual allocation of water deliveries. For the purpose of the estimates presented here, however, the cost allocation is treated as fixed for either a 50/50 or 60/40 split and estimated water deliveries taken as given regardless of which cost allocation is used.

**Debt Financing by the Water Contractors**

The tunnels represent by far the largest component of contractor BDCP costs, and are expected to be financed via revenue bonds according to the BDCP. These bonds would be repaid by revenues from the SWP and CVP water contractors and their ratepayers rather than state taxpayers. While the security, structure, and other details of these bonds have not been finalized, the State Treasurer’s Office has developed a number of bond financing scenarios to estimate the associated annual debt service costs and to illustrate how these costs might increase or decrease under different assumptions regarding changes in construction costs and timing, changes in interest rates, and higher or lower reserve requirements, among other factors. Under the current “Base Case” scenario, the bonds would begin to be issued in 2015, debt-financed construction costs as currently estimated would be $14.7 billion in 2012 dollars, or $19.7 billion in “year-of-expenditure” dollars ($YOE), which factor in the timing of when these costs will actually be incurred and the associated construction cost inflation. Interest rates for the bonds would be equal to the 20-year average of the Municipal Market Data (MMD) AA-rated general revenue bond index (adjusted for a 95% confidence sensitivity cushion) rather than simply using today’s historically low rates. Under these assumptions, debt service costs would rise to almost $1 billion annually by 2026, leveling off to just under $1.4 billion by 2032 and staying there through about 2060. Total debt service costs under the Base Case scenario would equal $55.4 billion ($YOE)

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3 The total capital costs expected to be financed via revenue bonds includes $14.6 billion for the tunnels (Conservation Measure 1) and $89 million for “Tidal Natural Communities Restoration” (Conservation Measure 4), for a total of $14.7 billion in 2012 dollars.

4 Note that because of anticipated design changes in the project, bonds would not likely begin to be issued until 2016 or 2017.

5 Note that the BDCP uses an expected construction cost inflation rate of 2% rather than the 3% used here. The 3% rate used for this analysis results in a more conservative (higher) estimate of the year-of-expenditure costs (see Section IV and Appendix A for more detail).
(assuming no refunding savings). Other BDCP-related pay-as-you-go capital costs and O&M costs are expected to add an additional $100-200 million annually during this same period. Over the 10 years with the highest total costs, this represents a total average annual cost of just under $1.6 billion.

In addition to the “Base Case” scenario, we also examined a “Best Case” scenario where capital costs are 10% less than anticipated and interest rates are 1 percentage point lower, as well as a “Worst Case” scenario where capital costs are 30% higher than expected, interest rates are 2 percentage points higher, and the project is delayed by 3 years. The peak annual cost estimates for all three scenarios are provided in the following table, with these costs split between the SWP and CVP contractors using both 50/50 and 60/40 allocation alternatives.

<table>
<thead>
<tr>
<th>Financing Assumptions</th>
<th>Base Case</th>
<th>Best Case</th>
<th>Worst Case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Debt Financed Costs ($YOE)</strong></td>
<td>$19.7B</td>
<td>$14.8B (Base - 10%)*</td>
<td>$25.2B (Base + 30%)*</td>
</tr>
<tr>
<td><strong>Par Amount of Bonds Issued ($YOE)</strong></td>
<td>$20.5B</td>
<td>$15.4B</td>
<td>$26.4B</td>
</tr>
<tr>
<td><strong>Interest Rate</strong></td>
<td>20 year avg MMD AA-rated** (all-in true interest cost of 5.964%)</td>
<td>Base Minus 1% (all-in true interest cost of 4.947%)</td>
<td>Base Plus 2% (all-in true interest cost of 7.998%)</td>
</tr>
<tr>
<td><strong>Issuance Start Yr</strong></td>
<td>2015</td>
<td>2015 (Base)</td>
<td>2018 (Base + 3 Yrs )</td>
</tr>
<tr>
<td><strong>Total Peak Annual Cost ($YOE)</strong>*</td>
<td>$1,576.6M</td>
<td>$1,084.3M</td>
<td>$2,502.4M</td>
</tr>
<tr>
<td><strong>50/50 Split for SWP/CVP ($YOE):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWP Share</td>
<td>$788.3M</td>
<td>$542.1M</td>
<td>$1,251.2M</td>
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<tr>
<td>CVP Share</td>
<td>$788.3M</td>
<td>$542.1M</td>
<td>$1,251.2M</td>
</tr>
<tr>
<td><strong>60/40 Split for SWP/CVP ($YOE):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWP Share</td>
<td>$945.9M</td>
<td>$650.6M</td>
<td>$1,501.4M</td>
</tr>
<tr>
<td>CVP Share</td>
<td>$630.6M</td>
<td>$433.7M</td>
<td>$1,001.0M</td>
</tr>
</tbody>
</table>

* For the Best Case and Worst Case the pre-contingency costs are adjusted by -10% and +30%, respectively. The contingency amount is then set to either 10% in the Best Case and 20% in the Worst Case or the original percentage, whichever is lower.

** Base interest rate = 20 year average of the MMD AA-rated general revenue bond index adjusted for a 95% confidence sensitivity cushion for interest rates in effect as of December 18, 2013.

*** Peak annual costs represent the average annual costs for the highest 10 years, though total costs are fairly constant for over 30 years (see Figure 7).

These scenarios are intended to test the impacts of changes in the underlying financing assumptions, rather than represent the absolute best and worst case scenarios possible. They aim

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6 Note that that the 10% decrease and 30% increase applies only to the costs themselves, and not the contingency amounts included in the current cost estimates. The contingency amounts were treated separately, as explained below on page 22. Also, in addition to the Base Case, Best Case and Worst Case, numerous additional financing scenarios were also prepared, and are summarized in Appendix A.
to illustrate the impact of a significant deviation from the base case in terms of costs, timing, interest rates and a number of other parameters. It is possible, for example, that construction costs ultimately could exceed the cost estimate we use for the Worst Case scenario. However, it is unlikely that the value of all of the parameters in each scenario would move in the same direction (that is, so as to all increase costs or all decrease costs). Thus, our Best and Worst Case scenarios are intended to illustrate a reasonable range in terms of the impact of changes in these parameters on the project’s total cost.

To place these costs in context it is helpful to estimate the cost per acre-foot of expected water deliveries. Current estimates of average annual total SWP and CVP exports for all south-of-Delta water contractors range from 4.7 to 5.6 million acre-feet (AF) depending upon how much water is assumed to be needed to meet the environmental needs of the Delta. Under the Base Case financing scenario, this implies that the average peak annual costs represent additional costs to the water contractors of about $289 to $343/AF.

The costs per acre-foot for the SWP and CVP overall depend upon how the costs are allocated and on the average annual water deliveries each group is expected to receive. Expected annual deliveries to the south-of-Delta SWP contractors on average range from 2.4 million AF to 3.2 million AF, implying that a 50/50 split would result in their Base Case average costs per acre-foot ranging from $248/AF to $322/AF. For the CVP, south-of-Delta average annual deliveries range from 2.2 to 2.3 million AF; thus, a 50/50 split results in their peak annual average costs ranging from $345 to $367/AF. As one would expect, allocating the costs 60/40 between the SWP and CVP results in somewhat higher costs for the SWP and lower costs for the CVP.

**Costs to Specific Water Contractors and their Ratepayers**

To illustrate the issues that affect the affordability of the BDCP for specific contractors, we considered four contractors that represent some of the largest agricultural and municipal and industrial (M&I) contractors from the SWP and CVP: the Metropolitan Water District (MWD), the Kern County Water Agency (Kern), the Westlands Water District (Westlands), and the Santa Clara Valley Water District (Santa Clara). MWD is the largest south-of-Delta SWP contractor, accounting for 46% of the SWP’s “Table A” water commitments, and Kern is the second largest with 24%. Westlands is the largest south-of-Delta CVP contractor, with 36.4% of the “maximum contract quantity” value of water potentially delivered to south-of-Delta CVP contractors. Santa Clara is a water contractor with deliveries from both the SWP and CVP, accounting for 2% of the SWP and 5% of the CVP. Altogether, these four contractors account for over 70% of the SWP Table A south-

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7 Note that the total forecast deliveries are 4.6 to 5.4 million AF, which are lower than total exports due to system losses and evaporation.

8 The SWP’s “Table A” is the summary of the volume of water allocated and delivered under SWP contracts. The “Maximum Table A” amounts determine the maximum amount of water a contractor may request in any year. The Table A amounts are also used as a basis for allocating some SWP operating costs among the contractors. Note that while actual Table A deliveries vary from year to year depending upon the amount of water available for export, they remain proportional to the maximum Table A amounts for each SWP contractor (i.e., MWD’s Table A deliveries consistently represent 46% of the total Table A deliveries, etc.) The CVP contractors have a similar “Maximum Contract Quantity” that represents the maximum amount of water deliveries each contractor may receive if existing supplies enable the CVP to fulfill 100% of all water contracts in a given year.
of-Delta contract amounts and 40% of the maximum annual south-of-Delta CVP deliveries. MWD and Santa Clara provide water primarily to M&I users, while Kern and Westlands provide mostly irrigation water to agricultural users. Many issues remain to be resolved for how the BDCP costs will be allocated among the individual SWP and CVP contractors, but for the purpose of our analysis we have allocated the SWP costs proportionately to each SWP contractor’s Table A allocation, and have allocated the CVP costs based primarily on each CVP contractor’s expected average annual water deliveries. Because so much uncertainty remains as to how costs will actually be allocated among water contractors and their customers, however, all of the results presented here should be considered preliminary and illustrative.

MWD is estimated to face increased average annual costs from the BDCP of $365 to $438 million under the Base Case financing scenario using a 50/50 and 60/40 split, respectively. This translates to a range of $260 to $400/AF using the estimated average annual deliveries, though the effective annual cost could vary substantially between wet years and dry years. Santa Clara’s share of the average peak annual BDCP costs are estimated to be around $56 to $61 million per year using the Base Case scenario, which translates to a range of $290 to $360/AF based on average year deliveries. Additional average annual payments in this range likely are manageable to contractors like MWD and Santa Clara, which have a diverse portfolio of water supplies and a large number of municipal and industrial water users, allowing them to spread these additional costs across a wider base and therefore should result in lower rate increases to their residential, industrial and commercial customers.

Unlike MWD and Santa Clara, however, Kern and Westlands provide water mainly to agricultural users; thus, their ability to pay for the BDCP-related costs depends primarily upon their agricultural customers’ capacity to absorb these higher water costs. Kern’s average peak annual BDCP costs are estimated to be in the range of $187 to $225 million under the Base Case financing scenario, or an effective cost of $225 to $350/AF in $YOE, depending upon the overall level of water exports and whether the costs are split 50/50 or 60/40 between the CVP and SWP. This range corresponds to $113 to $178 in $2012 for additional BDCP-related costs. According to data from the DWR, Kern paid an average of $100/AF for SWP water over the five-year period from 2008 to 2012. Adding the expected BDCP costs to these existing costs results in total estimated costs of $213 to $278/AF ($2012). Using recent agricultural production and revenue data, it is estimated that Kern’s current crop mix could support a price of $277/AF for irrigation water, which is basically the same as the top end of the range for total estimated costs. It should be noted, however, that the estimated “capacity to pay” for water is much higher for permanent crops and vegetable crops, and much lower for row crops.

For Westlands, the estimated BDCP-related costs are $172 to $215 million per year under the Base Case financing scenario, or $290 to $380/AF on average in $YOE, which corresponds to $144 to $192/AF in $2012. Agricultural customers in Westlands have paid around $109/AF for water on

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Note that these estimates assume all south-of-Delta SWP and CVP water contractors will participate in financing the BDCP; should this not be the case, the water deliveries used for these estimates would be lower, resulting in higher costs to participating contractors and a corresponding higher average cost per acre-foot. In addition, these estimates assume that some costs (i.e., deliveries for refuges) are borne by all CVP contractors, not just the south-of-Delta CVP contractors.
average in recent years, indicating that the total cost for water when expected BDCP costs are added should range between $253 and $301/AF ($2012). An analysis of the current crop mix in Westlands indicates that it could support a price of $291/AF for irrigation water. As such, the estimated capacity to pay for Westlands’ current crop mix is slightly below the high end of the range of expected total costs for water once the BDCP costs are included. A summary of the “capacity to pay” analysis for both Kern and Westlands is provided in the following table.  

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<tr>
<th>Crop Category</th>
<th>WY 2011-2013 &quot;Cost of Service&quot; Rate For Ag Users ($/AF)**</th>
<th>Est. Avg. Base Case BDCP Costs ($/AF) Low High</th>
<th>Current BDCP Costs + Est. Avg. BDCP Costs Low High</th>
<th>Payment Capacity ($/AF)</th>
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</table>

* SWP water charges for Kern provided by DWR for 2008-2012.

** Average agricultural "Cost of Service" rate for water years 2011, 2012, and 2013 taken from data contained in Westlands Water District 2012 Water Plan and from the presentation entitled "Westlands Water District Annual Water User’s Workshop" (March 19, 2013).

As the table above shows, if the mix of crops were shifted toward higher value vegetable and permanent crops, the capacity to pay for water could be as high as $500/AF or more in 2012 dollars for both Kern and Westlands; however, doing so may inhibit these growers from falling land in dry years or quickly rotating or substituting crops when growing conditions or market forces would otherwise encourage them to do so. In addition, while it may still be possible to reduce water use by switching to more efficient irrigation techniques, many growers have already converted to drip/micro irrigation—for example, almost 70% of the irrigated Westlands farm land already uses drip irrigation, up from only 13% in 2000. Thus, while some strategies exist to allow agricultural users to cope with the expected cost increases associated with the BDCP, there are ultimately limits to how far they can go.

**Key Financing Considerations**

There are a number of important financing issues that will need to be resolved before bonds could be issued to support construction of the BDCP’s conveyance facility. Foremost among these

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10 Note that this analysis uses current estimates of the costs, yields, and crop prices to estimate the current capacity to pay for water for Kern and Westlands. To the extent non-water production costs, yields, and crop prices differ in the future, these estimates may not be representative of their future capacity to pay for water.
is the certainty of the revenue stream required to pay debt service on the bonds. Debt service to finance the Delta tunnel conveyance necessitates annual principal and interest payments. However, as described further in this report, the effective cost of fixed debt service as a function of water deliveries would vary significantly due to fluctuations in deliveries due to the Delta’s hydrology. If water contractors could “opt out” of paying debt service in low water years in favor of potentially cheaper alternative supplies, this would result in an uncertain revenue stream to support the bonds.

SWP contractors that contract with DWR to pay for the operation, maintenance, planning and capital costs of the State Water Project are subject to a number of important requirements under the terms of their water supply contracts, which provide the security for DWR’s revenue bonds. For example, the contracts include a so-called “take or pay” provision. This requirement ensures that revenues to cover bond debt service are available regardless of whether water deliveries are reduced because of drought or other conditions. In addition to a take-or-pay requirement, these contracts include provisions that require DWR to charge amounts sufficient to repay all project costs and produce net revenues at least equal to 1.25 times annual debt service on DWR’s bonds plus the amount needed for operation and maintenance costs. Most contracts also include so-called “step-up” provisions whereby DWR can increase amounts billed to other contractors by up to 25% if needed if another contractor defaults on a payment. These and other provisions of the DWR contracts have resulted in very strong credit ratings of AAA/Aa1 on DWR’s bonds, enabling DWR to borrow at low interest rates. Moreover, seven of the SWP contractors have two AA/Aa or higher category credit ratings themselves, including MWD which carries ratings of AA+/AAA/Aa1 on over $4.2 billion of outstanding revenue bonds. More than 56% of the assumed financial responsibility for the conveyance facility, is expected from SWP Contractors that have two AA/Aa or higher category ratings by Standard & Poor’s (S&P), Fitch Ratings (Fitch) or Moody’s Investor Service (Moody’s), according to information obtained from the three rating agencies’ websites.\textsuperscript{11}

In contrast, since USBR has provided the funding for the capital costs of the CVP, the CVP has not had a program of revenue bond issuances backed by contractor revenues similar to DWR. The average credit profile of the CVP contractors is also significantly different from those of the SWP contractors. The largest SWP contractors are wholesale agencies while the majority of CVP contractors are agricultural districts. Three of the CVP contractors, representing approximately 5% of the CVP contractors’ assumed financial responsibility for the conveyance facility, have two AA/Aa category ratings.\textsuperscript{12}

The CVP contractors will need to develop a new credit to finance their share of the conveyance facility. In order to issue bonds for their portion of the conveyance facility, CVP contractors will likely need to agree to “take-or-pay” contracts since debt service on bonds must be paid irrespective of hydrologic conditions or the amount of water delivered in a given year. However, fixed payments from contractors that don’t vary as a function of the amount of water delivered

\textsuperscript{11} Eleven of the SWP contractors, representing 63% of the assumed financial responsibility, have at least one AA/Aa category or higher rating.

\textsuperscript{12} Nine of the CVP contractors, representing 49% of the assumed financial responsibility, have at least one AA/Aa category rating.
are potentially challenging. During a period of low water deliveries, at the same time contractors are securing alternative water supplies, they would be obligated to continue to make debt service payments. This could be problematic particularly for small agricultural contractors because their revenues will likely be constrained either simply as a function of crop prices or because they would fallow a portion of their acreage, resulting in lower crop yields to bring to market.

The financial pressure on contractors having to make annual debt service payments, potentially in addition to securing alternative water supplies in dry years, might be able to be partially mitigated in a number of different ways, including the establishment of a large rate-stabilization reserve. However, such a reserve would need to be funded initially, and rules would need to be established to govern how it would be replenished when it is utilized during dry periods.

Even if the CVP contractors develop a new credit with a take-or-pay obligation and similar credit features to the DWR bonds, it is not clear at this point whether $10.25 billion of bonds (assuming a 50/50 split) in the Base Case could reasonably be issued without a large rate stabilization fund or other credit enhancement or subsidy from the federal government, state government, or SWP contractors.

**Key Financing Risks**

Finally, there are a number of important risks that could pose significant obstacles to a successful financing of the proposed conveyance facility. Construction cost overruns and delays, which are not uncommon for large infrastructure projects of this type, could result in substantially higher debt service costs for the SWP and CVP contractors, which they may or may not be able to pass on to their water users. Regulatory uncertainty, whereby the efforts to restore the fragile Delta ecosystem are not as successful as planned, could lead to reductions in exports from the Delta such that the water deliveries are insufficient to generate the revenues necessary for the water contractors to meet their debt service obligations. If the BDCP’s anticipated state and federal funding for habitat conservation is not ultimately forthcoming, the ability to operate the tunnels could be jeopardized. Climate change also presents a financing risk, both by causing unforeseen changes to precipitation patterns such that deliveries from the Delta fall below the levels preliminarily anticipated based on current modeling of the impact of climate change and through greater than anticipated sea level rise leading to increased salinity in the west Delta, again reducing water deliveries to the extent that water contractors will be unable to raise the revenues needed to pay their debt service.
II. Introduction

Project background and overview

The Bay Delta Conservation Plan (BDCP) is a collaborative effort involving numerous state and federal agencies that are endeavoring to restore the Sacramento-San Joaquin Delta and protect the state’s water supply. The BDCP provides a regulatory framework for implementing various habitat restoration measures and operating criteria for the Delta water systems. The regulatory process involves securing approval of permits for various projects from various agencies.\(^{13}\)

Prominent among those projects is a proposal to construct a conveyance facility that would transport water from the Sacramento River north of the Delta to the existing State Water Project (SWP) and federal Central Valley Project (CVP) south Delta pumps to serve municipal and industrial (M&I) and agricultural water users in the Central Valley and coastal and Southern California. This conveyance facility (referred to as Conservation Measure 1 (CM1) in the BDCP) would consist of two 40-foot diameter tunnels reaching maximum depths of more than 150 feet below ground that could carry up to 9,000 cubic feet per second (cfs) of water approximately 30 miles from the Sacramento River to the existing SWP and CVP pumps located approximately 17 miles southwest of Stockton at the Clifton Court Forebay.

The project is designed to improve the Delta habitat and the reliability of the water supply coming from the Delta. As envisioned by the BDCP planning process, in the absence of the various conservation measures proposed to be undertaken under the plan, SWP/CVP south Delta exports would continue to be unreliable, water quality in the Delta would be vulnerable due to sea level rise, and the state would be exposed to potentially severe public health consequences resulting from a major seismic event that could damage Delta facilities and temporarily halt water exports.\(^{14}\)

The Delta is subject to future sea level rise as a result of climate change and to the risk of earthquakes, both of which could lead to a catastrophic collapse of Delta levees and, potentially, severely disrupt delivery of water from the Delta. The resulting loss of water supplies could result in significant economic losses to the state, depending on how long deliveries were disrupted. By taking water from the Delta north of the existing pumps, the project also creates the potential for higher water exports during the December through June period.

In addition, under the BDCP, along with the expenditure of the $14.57 billion in 2012 dollars (or $19.7 billion when factoring in construction cost inflation) capital cost of the new conveyance facility, approximately $5.28 billion in 2012 dollars in capital spending would be invested in habitat restoration and efforts to reduce the impact of stressors on various covered species.

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\(^{13}\) http://baydeltaconservationplan.com/PlanningProcess/BDCP/BDCPProcess.aspx  
\(^{14}\) BDCP EIR/EIS, Chapter 3, Description of Alternatives (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_EIR-EIS_Chapter_3_-_Description_of_Alternatives.sflb.ashx)
(including responses to changed circumstances).\textsuperscript{15} An additional $4.9 billion in non-capital expenditures are expected to be incurred over the 50-year life of the plan. Of the $24.75 billion ($2012) total cost of the BDCP, the water contractors are anticipated to contribute $16.93 billion. The remaining $7.8 billion, which consists primarily of ecosystem restoration activities, is expected to come from various state and federal sources, including future state General Obligation bond measures approved by the voters. Specifically, $4.1 billion is identified as potentially coming from existing and new state water bonds and other state sources.\textsuperscript{16} Approximately $3.3 billion is identified as potentially coming from existing and new federal funding authorizations for habitat restoration.

**Purpose of this report**

This report provides a preliminary assessment of the affordability and financing considerations of the Delta conveyance facility. Chiefly, it estimates the cost of financing the conveyance facility under different sets of assumptions, estimates the amount of debt service cost a selected group of SWP and CVP water contractors would face, and sets those costs in context in terms of the payment capacity of different types of agricultural products. The report also addresses a number of issues related to how bonds to finance the construction of the facility would need to be structured in order to be issued successfully. Finally, the report explores a number of risks to successfully financing construction of the facility. This report does not address the merits of the BDCP per se or the question of whether the state and other parties involved in the project should proceed with this project.

In the third section of the report, we describe the project and the current estimate of its cost.

In the fourth section of the report, we explore the issue of affordability in some detail by identifying the effective cost of water delivered from the Delta in terms of required debt service payments. We also compare these costs to the cost of alternative supplies for a selected group of water contractors and to the capacity for water purchase for various agricultural crops.

The fifth section of the report evaluates various financing considerations that would need to be addressed in order to successfully bring the issuance to market.

\textsuperscript{15} Of this amount, the SWP and CVP contractors would be responsible for the entire capital cost of the new conveyance facility and a portion of the habitat restoration costs. For the breakdown of these costs, see Figure 5 of this report and Tables 8-37 and 8-38, BDCP Chapter 8, Implementation Costs and Funding Sources (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_8_-_Implementation_Costs_and_Funding_Sources.sflb.ashx)

\textsuperscript{16} See Table 8-37 of BDCP Chapter 8 Implementation Costs and Funding Sources (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_8_-_Implementation_Costs_and_Funding_Sources.sflb.ashx). Since Chapter 8 was drafted, the Legislature removed the water bond that had previously been placed on the November 2014 ballot and replaced it with a water bond designed to be "tunnel neutral," according to various media reports. As such, the bond measure voters will consider this year contains little if any funding for Delta habitat restoration activities of the sort contemplated as part of the BDCP.
The last section of the report discusses a number of important risks associated with the project for the purpose of evaluating the extent to which these risks might pose significant obstacles to a successful financing.

Among these risks are:

- **Construction cost overruns and delay** – Construction delay or a significantly higher than anticipated cost to construct the conveyance facility would drive up the effective cost of water exported from the Delta, thereby putting pressure on the ability of contractors to make debt service payments.

- **Regulatory uncertainty** – Regulatory uncertainty refers to the risk that, despite substantial investments in habitat restoration and an effort to manage the flow of water in the Delta, these efforts prove to be less successful at improving Delta ecology than preliminarily estimated, resulting in the need to reduce exports from the Delta to a degree that jeopardizes the willingness or ability of water contractors to pay for the exported water. This could, in turn, potentially put repayment of debt service at risk.

- **Climate change and sea level rise** – There is a risk that precipitation patterns evolve in a direction that differs significantly from the pattern currently anticipated under the BDCP planning process such that exports from the Delta are substantially below the anticipated level, again potentially jeopardizing the willingness or ability of water contractors to pay debt service. Because the risk of a significant deviation – should one occur – is likely greater further out in time when the balance of financing costs remaining to be paid is diminishing, this mitigates the risk associated with these issues.
III. Project Description and Estimated Project Cost

Description of the project

The BDCP process has defined the current preferred conveyance facility for purposes of regulatory and environmental review and public input as follows: The facility would consist of two 40-foot diameter tunnels that would carry water approximately 30 miles from north of the Delta to the existing SWP and CVP pumps south of the Delta. Three pumps would be used to divert up to 9,000 cfs from the Sacramento River. The existing Clifton Court forebay south of the Delta would be expanded to temporarily store water before being pumped to SWP and CVP contractors via the existing system of SWP and CVP aqueducts and canals.

How much is the facility estimated to cost?

The preliminary estimate of the capital cost of the facility is $14.57 billion in 2012 dollars (or $19.7 billion when factoring in construction cost inflation), including design, project management, construction management, construction costs, construction cost contingency and land acquisition. The $14.57 figure includes a contingency of $2.6 billion for tunneling work and $658 million for all other construction work.\(^\text{17}\)

According to the BDCP planning staff, this estimate has a range of minus 10 percent to plus 30 percent, based on the type of the estimate at this stage of the project planning process.\(^\text{18}\) The estimate reflects the application of contingencies, is the type typically used for preliminary budget approval and would be refined as the planning and design process proceeds. The Association for the Advancement of Cost Engineering International practice guidelines specify the range of the estimate could be exceeded if there are unusual risks associated with the project.\(^\text{19}\)

The preliminary estimate for the operating cost of the facility is $36.9 million per year starting in the 11th year (2025) following approval of permits for the facility. These costs are anticipated to rise to approximately $79.3 million annually 16 years after the approval of permits with the inclusion of capital replacement costs, which are anticipated to begin in the 21st year (2035).\(^\text{20}\)

\(^\text{17}\) Table 8–5 BDCP Chapter 8, Implementation Costs and Funding Sources (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Chapter_8_-Implementation_Costs_and_Funding_Sources.sflb.ashx).

\(^\text{18}\) Note that the current BDCP draft indicates the estimates have a range of -25% to +50%, but discussions with BDCP planning staff confirm that that range is in error, and the current estimates in fact have a range of -10% to +30%.

\(^\text{19}\) http://www.aacei.org/non/rps/56R-08.pdf

\(^\text{20}\) We have used a figure of $40.2 million ($2012) as the basis for calculating our estimate of future operating costs of $79.3 million ($YOE) starting in 2035. Note that Table 8.5 of the draft BDCP Chapter 8 reports annual operating costs rising to $38 million ($2012); however, the more detailed data presented in the BDCP’s Appendix 8A shows annual costs rising to $40.2 million. Discussions with the DWR have confirmed that the $40.2 million figure is in fact correct.
IV. Financing Costs and Affordability of the Project

Overview

To assess the affordability of the BDCP project, we first examine the expected resulting water deliveries as projected by the California Department of Water Resources (DWR). We also estimate the annual debt financing costs under various financing scenarios, plus any additional BDCP-related Operations & Maintenance (O&M) costs or additional capital costs allocated to the SWP and CVP contractors, to estimate the range of annual total costs. We then examine these costs in two ways – as total annual costs in dollar terms, and in terms of total cost per acre-foot of delivered water. Because the annual debt service and BDCP-related operational costs are fairly consistent through time, but annual water deliveries can vary considerably, we estimate the cost/AF for an average delivery year as well as across various exceedance levels\(^\text{21}\) to better capture the impact of this water delivery variability. Ultimately, if contractors are obligated to pay debt service irrespective of the amount of water delivered – a so-called “take-or-pay” arrangement – the cost of debt service would likely be a relatively fixed annual cost. However, even under this arrangement, debt service cost per acre-foot of delivered water provides us with insight into the cost pressures contractors would face in securing alternative supplies during dry years. This analysis is conducted for total overall water deliveries to all south-of-Delta contractors and then separately for the total SWP deliveries and the total CVP deliveries. Finally, we construct estimates of costs for a select group of SWP and CVP contractors and discuss some of the factors that affect the affordability of the BDCP costs to those agencies and their water users.

Water Deliveries

The analyses that follow rely on water delivery estimates based on modeling work done by DWR as part of the preparation of the BDCP draft plan. That modeling uses the 81-year hydrologic period used by the CALSIM II model to simulate SWP and CVP operations.\(^\text{22}\) Specifically, we have used the delivery estimates associated with the proposed project from the draft BDCP (equivalent to Alternative 4 from the draft BDCP EIR/EIS). The proposed project assumes a dual conveyance with two 40-foot diameter tunnels and 3 intakes, capable of conveying up to 9,000 cfs from the north Delta. Water would be conveyed from three fish-screened intakes between Clarksburg and Walnut Grove to an expanded Clifton Court Forebay south of the Delta.\(^\text{23}\)

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\(^{21}\) See the glossary for an explanation of exceedence levels.

\(^{22}\) According to the DWR, CALSIM II is a peer-reviewed generalized water resources simulation model for evaluating operational alternatives of large, complex river basins. It currently uses historical hydrologic conditions from 1922 through 2002 to simulate SWP/CVP operations under various scenarios. The model is a product of joint development between DWR and Bureau of Reclamation. For more information see the DWR website: http://modeling.water.ca.gov/hydro/model/index.html.

\(^{23}\) For a detailed description see Chapter 3 of the EIR/EIS, Description of Alternatives (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_EIR-EIS_Chapter_3_-_Description_of_Alternatives.sflb.ashx), and the August 2013 document BDCP Refinements Respond to Community and Statewide Needs.
The draft BDCP also includes different modeling scenarios to analyze the environmental impacts of requiring higher or lower amounts of water to flow through the Delta into the San Francisco Bay at different times of the year. Some Delta species may benefit from higher flows at certain times of the year, while other species may benefit from lower flows during those times; thus, it is currently uncertain whether the optimal environmental outcomes will result from higher or lower outflows in the Spring or in the Fall, or in both. Higher outflows to benefit the Delta ecosystem will result in lower water deliveries to SWP and CVP contractors, all things equal, as the water that might otherwise be exported to water users is instead allowed to flow through the Delta and out to the Pacific Ocean through the San Francisco Bay. Therefore, a “low outflow” scenario provides more water for SWP and CVP contractors, while a “high outflow” scenario provides less water to SWP and CVP water users.

Scenarios have been created that test the combinations of expected high and low seasonal outflows and the resulting impact on Delta water exports to the SWP and CVP contractors. At the most basic level, these scenarios can be divided into high and low outflow in the Spring and high and low outflow in the Fall, resulting in four scenarios. We have used those four scenarios in our analyses, along with the “No Action Alternative” (NAA), as defined in the draft EIR/EIS, to serve as a baseline.

Finally, multiple water delivery scenarios have been prepared for the draft BDCP to correspond to different points in time in the implementation of the BDCP. The “Early Long-Term” (ELT) scenarios use the expected conditions as of 2025, while the “Late Long-Term” (LLT) scenarios use the conditions expected in 2060.24 For our analyses we have used the ELT scenarios under the assumption that they best represent the conditions that will be in effect during the period of peak annual costs for the water contractors. Specifically, we have used the following ELT scenarios:

- No Action Alternative (NAA) = absence of BDCP
- Low Outflow Scenario (LOS) = low fall outflow, low spring outflow
- Evaluated Starting Operation (ESO) = high fall outflow, low spring outflow
- Spring High Outflow (SprHOS) = low fall outflow, high spring outflow
- High Outflow Scenario (HOS) = high fall outflow, high spring outflow

As described above, the delivery scenarios are estimated based on the hydrologic conditions that existed over an extended 81-year period. The CALSIM II output we received from the DWR provides annual export and delivery estimates corresponding to the hydrologic conditions for the years 1922 through 2002. This provides a sense of the variability of potential Delta exports through time, as well as the prevalence of extended periods of high or low exports. Figure 1 provides a graph of the delivery data in chronological order as received for the delivery scenarios used.

Figure 1: Total Estimated South-of-Delta Water Deliveries for ELT Scenarios

![Figure 1: Total Estimated South-of-Delta Water Deliveries for ELT Scenarios](image)

Figure 2 provides a summary of the minimum, average, and maximum annual deliveries in thousands of acre-feet for each of the scenarios analyzed. In addition, the table shows the total deliveries by exceedance level, which represents the percent of years in which a value is equaled or exceeded, and is often used to illustrate the probability of water deliveries meeting or exceeding a specific level. For example, using the delivery estimates for the NAA scenario, the table shows that 20% of the time deliveries are estimated to meet or exceed a level of 5,673,000 AF. Similarly, 80% of the time the estimated deliveries will be 3,436,000 AF or greater. Thus, lower exceedance levels are associated with the wettest years, as there are very few years when deliveries are expected to be higher; conversely, higher exceedance levels are associated with the driest years. The 50% exceedance level represents the median estimated annual deliveries, with half of the years expected to be higher and half lower.

| Delivery Scenario | Annual Deliveries Min | Annual Deliveries Avg | Annual Deliveries Max | Driest Years 90% | Driest Years 80% | Driest Years 70% | Exceedance Level 60% | Exceedance Level 50% | Exceedance Level 40% | Exceedance Level 30% | Exceedance Level 20% | Exceedance Level 10% | Wettest Years 10% | Wettest Years 20% | Wettest Years 30% | Wettest Years 40% | Wettest Years 50% | Wettest Years 60% | Wettest Years 70% | Wettest Years 80% | Wettest Years 90% |
|-------------------|-----------------------|-----------------------|----------------------|------------------|------------------|-------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| NAA               | 1,744                 | 4,628                 | 7,693                | 2,433            | 3,436            | 4,123             | 4,297               | 4,698               | 4,987               | 5,259               | 5,673               | 6,647               |                |                |                |                |                |                |                |                |                |                |
| LOS               | 1,622                 | 5,464                 | 7,921                | 2,349            | 3,862            | 4,539             | 5,278               | 6,123               | 6,424               | 6,792               | 7,079               | 7,420               |                |                |                |                |                |                |                |                |                |                |
| ESO               | 1,738                 | 5,138                 | 7,804                | 2,314            | 3,163            | 3,871             | 4,891               | 5,386               | 5,959               | 6,513               | 7,025               | 7,227               |                |                |                |                |                |                |                |                |                |                |
| SprHOS            | 1,313                 | 4,896                 | 7,915                | 2,189            | 3,421            | 4,216             | 4,569               | 5,050               | 5,327               | 5,734               | 6,495               | 7,124               |                |                |                |                |                |                |                |                |                |                |
| HOS               | 1,292                 | 4,596                 | 7,843                | 2,168            | 2,930            | 3,626             | 4,080               | 4,572               | 5,028               | 5,472               | 6,288               | 7,114               |                |                |                |                |                |                |                |                |                |                |

Data taken from CALSIM II output as received from DWR.

Figure 2: Total Estimated Annual Water Deliveries (CVP+SWP) by ELT Scenario (AF, thousands)

Of the four BDCP scenarios, the Low Outflow Scenario (LOS), which assumes low outflows through the Delta in both the Spring and in the Fall, provides more water for export from the Delta and
thus results in the highest estimated water deliveries. The High Outflow Scenario (HOS) assumes high outflows through the Delta and out to the Pacific in both periods, resulting in the lowest estimated deliveries of the four. Note that it is somewhat misleading to compare the NAA scenario against the other BDCP scenarios because those scenarios include estimated adjustments in outflow expected to be required to meet the environmental goals laid out in the BDCP, whereas the NAA scenario does not include such adjustments.

Figure 3: Total Estimated Deliveries for ELT Scenarios by Exceedance

![Graph showing total annual South-of-Delta deliveries by exceedance level for different scenarios.]

Figure 3 graphically compares the exceedance values for each scenario, and confirms that the spread among the scenarios is greatest at the lower exceedance levels (wetter years), specifically in the 50% to 20% exceedance level range. As Figure 3 indicates, the differences among the BDCP scenarios are less pronounced at the higher exceedance levels (driest years). That is, the difference between the LOS and HOS scenarios in the driest years is generally not as great as the difference in the average or wetter years.

In addition to examining total estimated deliveries, we also used more detailed annual data series to break out the exports into CVP total deliveries and SWP total deliveries, and to estimate the deliveries for specific CVP and SWP contractors. Specifically, the individual series received were as follows:

- Total exports (all CVP and SWP South-of-Delta (SOD) water exports)\(^{25}\)

\(^{25}\) Total exports include all water exported via pumping at the Banks and Jones Pumping Plants in the Delta. It includes both diversions at the proposed north Delta intakes and the existing south Delta intakes. It includes any water diverted from the Delta for deliveries to South-of-Delta CVP refuges, Exchange Contractors, Ag and M&I service contractors, as well as additions to the San Luis Reservoir. To maintain consistency, our estimates of total water deliveries throughout this report uses the sum of the
• CVP Ag and M&I deliveries via the San Felipe Division Project
• CVP Ag and M&I deliveries via the San Luis & Delta Mendota Water Authority (SLDMWA)
• CVP Ag deliveries to contractors via the Cross Valley Canal
• CVP Refuge Level 2 deliveries
• CVP Exchange Contract deliveries
• Individual Ag & M&I deliveries to each of the 26 SWP SOD contractors, with separate series for “Normal” deliveries, Article 21 deliveries, and Article 56 deliveries.\(^{26}\)

Because the CALSIM II model provides detailed delivery estimates for each of the 26 SOD SWP contractors, we are able to sum those annual deliveries to estimate the total SWP deliveries. Similarly we took the sum of the CVP delivery series to estimate the total for the CVP contractors. These SWP and CVP totals are provided in Figure 4.

Figure 4: SWP and CVP Deliveries by Early Long Term Scenario (thousands of AF)

<table>
<thead>
<tr>
<th>SWP/ CVP Delivery Scenario</th>
<th>Annual Deliveries</th>
<th>Driest Years</th>
<th>Exceedance Level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Min</td>
<td>Avg</td>
<td>Max</td>
</tr>
<tr>
<td>SWP NAA</td>
<td>725</td>
<td>2,545</td>
<td>4,427</td>
</tr>
<tr>
<td>LOS</td>
<td>578</td>
<td>3,180</td>
<td>4,655</td>
</tr>
<tr>
<td>ESO</td>
<td>711</td>
<td>2,949</td>
<td>4,539</td>
</tr>
<tr>
<td>SprHOS</td>
<td>354</td>
<td>2,630</td>
<td>4,690</td>
</tr>
<tr>
<td>HOS</td>
<td>360</td>
<td>2,446</td>
<td>4,577</td>
</tr>
<tr>
<td>CVP NAA</td>
<td>987</td>
<td>2,083</td>
<td>3,266</td>
</tr>
<tr>
<td>LOS</td>
<td>1,025</td>
<td>2,284</td>
<td>3,266</td>
</tr>
<tr>
<td>ESO</td>
<td>1,014</td>
<td>2,189</td>
<td>3,266</td>
</tr>
<tr>
<td>SprHOS</td>
<td>958</td>
<td>2,266</td>
<td>3,266</td>
</tr>
<tr>
<td>HOS</td>
<td>932</td>
<td>2,150</td>
<td>3,266</td>
</tr>
</tbody>
</table>

Data taken from CALSIM II output as received from DWR.

Estimated Costs

Chapter 8 of the BDCP planning documents provides a breakout of the estimated capital and operational costs associated with the BDCP, and it also presents the fraction of those costs

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\(^{26}\) Of the 29 SWP contractors, three (County of Butte, Plumas County FC&WCD, and City of Yuba City) receive water from the Upper Feather River rather than the Delta and are therefore excluded from this analysis.

The DWR defines Article 56 and Article 21 water as follows:
Article 56 (“carryover”) water: “Table A water that is allocated to a contractor in a given year, but is unused and stored in SWP supply reservoirs (when storage capacity is available) for use by that contractor in a following year. The water is temporarily stored or carried over in SWP reservoirs, primarily San Luis Reservoir.”
Article 21 water: “Water identified in an article of SWP long-term water supply contracts between the California Department of Water Resources (DWR) and each SWP water contractor. The article addresses non–Table A water that becomes available on an intermittent, interruptible basis.”

(from http://www.water.ca.gov/calendar/docs/DWR_SWP_IS-ND_071613_repro.pdf)
allocated to the SWP and CVP contractors. A summary of these contractor costs is provided in Figure 5.

Figure 5: BDCP Funding Provided by Participating Water Contractors ($2012 Millions)

<table>
<thead>
<tr>
<th>BDCP Implementation Elements with Contractor Payment Responsibilities</th>
<th>Total Capital Cost</th>
<th>Operational Cost (50-Yr Permit Term)</th>
<th>Total Cost</th>
<th>% Paid by Contractors</th>
<th>Total Amount Paid by Contractors</th>
<th>Contractors’ Debt Financed Capital Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CM1 Water Facilities and Operation</td>
<td>$14,570.9 *</td>
<td>$1,456.0</td>
<td>$16,026.9</td>
<td>100.0%</td>
<td>$16,026.9</td>
<td>$14,570.9</td>
</tr>
<tr>
<td>CM3 Natural Communities Protection and Restoration</td>
<td>$460.1</td>
<td>$0.0</td>
<td>$460.1</td>
<td>20.2%</td>
<td>$92.8</td>
<td></td>
</tr>
<tr>
<td>CM4 Tidal Natural Communities Restoration</td>
<td>$1,909.6 *</td>
<td>$0.0</td>
<td>$1,909.6</td>
<td>12.6%</td>
<td>$240.6</td>
<td>** $88.8</td>
</tr>
<tr>
<td>CM6 Channel Margin Enhancement</td>
<td>$120.2</td>
<td>$0.0</td>
<td>$120.2</td>
<td>13.0%</td>
<td>$15.6</td>
<td></td>
</tr>
<tr>
<td>CM7 Riparian Natural Community Restoration</td>
<td>$47.6</td>
<td>$0.0</td>
<td>$47.6</td>
<td>2.7%</td>
<td>$1.3</td>
<td></td>
</tr>
<tr>
<td>CM9 Vernal Pool and Alkali Seasonal Wetland Complex Restoration</td>
<td>$1.7</td>
<td>$0.0</td>
<td>$1.7</td>
<td>9.0%</td>
<td>$0.2</td>
<td></td>
</tr>
<tr>
<td>CM10 Non tidal Marsh Restoration</td>
<td>$52.7</td>
<td>$0.0</td>
<td>$52.7</td>
<td>4.0%</td>
<td>$2.1</td>
<td></td>
</tr>
<tr>
<td>CM11 Natural Communities Enhancement and Management</td>
<td>$138.1</td>
<td>$236.6</td>
<td>$374.7</td>
<td>20.2%</td>
<td>$75.6</td>
<td></td>
</tr>
<tr>
<td>CM15 Localized Reduction of Predatory Fishes</td>
<td>$2.8</td>
<td>$102.2</td>
<td>$105.0</td>
<td>40.7%</td>
<td>$42.8</td>
<td></td>
</tr>
<tr>
<td>CM16 Nonphysical Fish Barriers</td>
<td>$763.0</td>
<td>$508.7</td>
<td>$1,271.7</td>
<td>14.3%</td>
<td>$181.7</td>
<td></td>
</tr>
<tr>
<td>CM22 Avoidance and Minimization Measures</td>
<td>$0.0</td>
<td>$36.3</td>
<td>$36.3</td>
<td>24.4%</td>
<td>$8.9</td>
<td></td>
</tr>
<tr>
<td>Program Administration</td>
<td>$0.0</td>
<td>$336.4</td>
<td>$336.4</td>
<td>9.4%</td>
<td>$31.5</td>
<td></td>
</tr>
<tr>
<td>Monitoring and Research</td>
<td>$0.0</td>
<td>$912.8</td>
<td>$912.8</td>
<td>8.3%</td>
<td>$75.4</td>
<td></td>
</tr>
<tr>
<td>Property Tax Revenue Replacement</td>
<td>$0.0</td>
<td>$26.6</td>
<td>$26.6</td>
<td>43.3%</td>
<td>$9.7</td>
<td></td>
</tr>
<tr>
<td>Changed Circumstances</td>
<td>$184.0</td>
<td>$0.0</td>
<td>$184.0</td>
<td>10.4%</td>
<td>$37.1</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$16,930.2</strong></td>
<td><strong>$14,659.7</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Other Costs:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EIR/EIS Mitigation Measures Not Counted Elsewhere</td>
<td>$0.0</td>
<td>$141.8</td>
<td>$141.8</td>
<td>65.2%</td>
<td>$92.5</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL ALL COSTS</strong></td>
<td><strong>$18,250.7</strong></td>
<td><strong>$3,956.8</strong></td>
<td><strong>$22,207.5</strong></td>
<td><strong>$17,022.7</strong></td>
<td><strong>$14,659.7</strong></td>
<td></td>
</tr>
</tbody>
</table>

* The capital costs for these items are expected to be paid through debt issuances, all others are PAYGO.
** This analysis assumes only those CM4 capital costs incurred by 2028 will be debt-financed, and the rest will be PAYGO.

As the table above shows, these costs include both capital costs and O&M costs associated with the specific BDCP implementation elements. The capital costs associated with item CM1, the construction and operation of the conveyance facilities, account for the largest single cost item for the contractors at $14.57 billion ($19.7 billion factoring in construction cost inflation) in capital costs and an additional $1.46 billion in O&M costs ($4.2 billion when adjusted for inflation) over the 50-year permit period. The capital costs associated with CM1 and a portion of CM4 are currently anticipated to be debt-financed, while the remaining capital costs paid by the water

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contractors are expected to be PAYGO funded ("pay-as-you-go"). Under these assumptions, the total capital costs expected to be financed by the SWP and CVP contractors is approximately $14.7 billion in 2012 dollars ($19.7 billion when factoring in construction cost inflation) and the combined contractors’ share of the PAYGO capital costs and O&M costs total approximately $2.3 billion in 2012 dollars (or $6.2 billion when adjusted for inflation), for a total of just over $17 billion in 2012 dollars ($25.9 billion when factoring in construction cost inflation and general inflation of 3% for O&M costs).

Using the expected annual cost schedules provided by Chapter 8 of the draft BDCP documents (November 2013 revision) and consultants to the BDCP, we then constructed annual payments for the debt-financed capital costs, PAYGO capital costs, and O&M costs. For the capital costs that are expected to be financed with debt, financing schedules were constructed to estimate the total annual principal and interest payments that would be required to finance these debt issuances. Numerous assumptions were necessary to construct these debt schedules, including the expected construction cost inflation rate issuance schedule, term of the bonds issued, assumed rating and interest rates, underwriting costs and other costs of issuance, and the amount of debt service reserve funds that would also be financed. The assumptions used for the “Base Case” financing scenario are presented in Figure 6 below. As shown in Figure 6, the construction cost inflation rate used here is 3% rather than the 2% inflation rate used in the BDCP. The 3% rate is based on historical averages for construction costs of similar large infrastructure projects, and is described more fully in Appendix A. The use of 3% rather than 2% results in higher year-of-expenditure costs, and thus provides a more conservative estimate of the total debt financing costs.

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28 Only those CM4 construction costs that are expected to occur through 2028 were included due to the low amounts needed for CM4 costs after that. For the purposes of this analysis, the remaining CM4 construction costs after 2028 are included with the other capital PAYGO contractor costs.
**Figure 6: Assumptions for “Base Case” Debt Financing Payment Schedule**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Cost</strong></td>
<td>$14.57 B for CM1 + $88.8 M for CM4 = $14.66 B ($2012)</td>
</tr>
<tr>
<td></td>
<td>Represents a total of $19.68 B in Year of Expenditure dollars</td>
</tr>
<tr>
<td><strong>Construction Cost Inflation Rate</strong></td>
<td>0% in 2012; 3% thereafter</td>
</tr>
<tr>
<td><strong>Bond Issuance Schedule</strong></td>
<td>2015 - $351,522,021; 2016 - $496,084,700; 2017 - $527,029,058; 2018 - $660,368,235; 2019 - $1,481,937,250; 2020 - $2,211,346,578; 2021 - $2,390,480,267</td>
</tr>
<tr>
<td></td>
<td>2022 - $2,452,383,543; 2023 - $2,424,236,929; 2024 - $2,319,817,762; 2025 - $1,831,407,038; 2026 - $1,554,490,901; 2027 - $889,480,983; 2028 - $93,067,126</td>
</tr>
<tr>
<td></td>
<td>Total par amount of bonds to be issued: $20,503,670,000</td>
</tr>
<tr>
<td><strong>Final Maturity</strong></td>
<td>40 years from date of each issuance</td>
</tr>
<tr>
<td><strong>Assumed Ratings</strong></td>
<td>AA/AA/Aa</td>
</tr>
<tr>
<td><strong>Interest Rates</strong></td>
<td>All-in true interest cost (TIC) of 5.96%. This is the 20-year average of the MMD AA-rated general revenue bond index adjusted for a 95% confidence sensitivity cushion for rates in effect as of December 18, 2013. The spread between 30 and 40 years was assumed to be 30 basis points. The TIC reflects costs to issue the bonds.</td>
</tr>
<tr>
<td><strong>Underwriter Discount</strong></td>
<td>$5 per $1,000</td>
</tr>
<tr>
<td><strong>Cost of Issuance</strong></td>
<td>$1,500,000 per issue</td>
</tr>
<tr>
<td><strong>Debt Structure</strong></td>
<td>Five years of interest only followed by 35 years of level debt for each issue</td>
</tr>
<tr>
<td><strong>Type of Debt</strong></td>
<td>Tax-exempt, fixed rate</td>
</tr>
<tr>
<td><strong>Bond Funded Debt Service Reserve</strong></td>
<td>50% of maximum annual debt service for each issue: 3.74% investment rate, which is the 20-year average of the 3-Year U.S. Treasuries adjusted for a 95% confidence sensitivity cushion.</td>
</tr>
<tr>
<td><strong>Capitalized Interest</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

To estimate the total costs to the water contractors associated with the implementation of the BDCP, these annual financing costs were then added to the contractors’ annual PAYGO and O&M costs. The debt service portion of these costs totals are estimated to reach just under $1.4B per year and the PAYGO and O&M costs contribute an additional $74 million by 2030 to just over $200 million by 2054. Figure 7 shows these combined costs through time.

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29 The 3% inflation rate for construction costs is based on combined historical averages for similar construction projects as described in Appendix A.

30 Note that the PAYGO and O&M costs were also converted to year-of-expenditure dollars using the same 3% inflation rate used for the debt financed capital costs, as the general inflation rate is also assumed to be 3%. For the purposes of this analysis, the PAYGO capital costs are assumed to end after 50 years while the O&M costs are assumed to continue.
As shown in Figure 7, the annual costs vary somewhat from year to year. To investigate the affordability of the BDCP costs to the contractors, we looked at those years where real costs are highest. To do this, we have defined “Peak Annual Costs” as the average annual costs across the highest ten years. For the Base Case, this represents the period from 2048 through 2057 and is approximately $1.58 billion. It should be noted that the actual annual costs contractors would face will depend on how the debt issuance for these costs is structured and the resulting pattern of debt service costs over time. For example, the financing and resulting debt service could be structured to be “wrapped around” existing debt service obligations on the part of contractors so that the cost of financing the BDCP is not simply added to existing debt service obligations on an annual basis. However, because additional future non-BDCP debt service obligations are unknown and because the structure of the BDCP issuance has not been determined, our results should be regarded as illustrative.

In addition to the Base Case, financing costs were also estimated based on a “Best Case” scenario and a “Worst Case” scenario to test the impacts of changes in the underlying financing assumptions. Rather than representing the absolute best and worst case scenarios possible, these alternative cases are intended to illustrate the impact of a significant deviation from the base case in terms of costs, timing, interest rates and a number of other parameters. It is possible that for example, construction costs ultimately could exceed the cost estimate we use for the Worst Case scenario. However, it is unlikely that the value of all of the parameters in each scenario would move in the same direction (that is, so as to all increase costs or all decrease costs). Thus, our Best and Worst Case scenarios are intended to illustrate a reasonable range in terms of the impact of changes in these parameters on the total cost of the project. Both alternatives start with the Base Case, but the Best Case assumes that construction costs are 10% lower than current estimates.
and interest rates are decreased by 100 basis points, while the Worst Case assumes that real
construction costs are 30% higher than the Base Case, interest rates are 200 basis points higher
than the Base Case, and there is a three-year delay for the start of the bond issuances from 2015
to 2018. In this way, the Worst Case financing scenario results in cost increases not only from
increased real construction costs due to increased scope or unforeseen additional costs, but also
from cost increases due to construction cost inflation caused by the delay in the start of the
construction process itself.

Finally, to complete our analysis we also allocated the total cost estimates between the SWP and
CVP contractors using two allocation assumptions. The first assumes that the costs are split
equally (50/50) between the SWP and CVP contractors, with each group responsible for 50% of
the costs, as presented in the current draft BDCP plan. The second uses an alternative allocation
of 60/40, with the SWP contractors responsible for 60% of the costs, and the CVP contractors
responsible for 40%. Figure 8 presents a summary of the differences in assumptions in the Base
Case, Best Case and Worst Case scenarios, along with the peak annual cost in total for the SWP
and CVP contractors under the 50/50 split and the 60/40 split. While costs likely would at least
initially be allocated based on some defined split between the SWP and CVP, there may be a
“true-up” at the end of each year based on the actual allocation of water deliveries, so that the
costs actually paid by SWP and CVP contractors could vary from year to year as relative deliveries
vary. For the purpose of this analysis, however, the cost allocation is treated as fixed for either a
50/50 or 60/40 split and estimated deliveries taken as given regardless of which cost allocation is
used.

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31 The current cost estimates include estimates for the costs themselves plus an additional contingency amount. In the BDCP draft
this contingency is estimated at 20% for most cost items, but for the construction costs associated with the tunnels it is set at
36%. The 10% decrease in costs for the Base Case decreases the costs by 10% and lowers the contingency amounts to reflect 10% of
this lower figure unless a particular cost item is already below 10%, in which case the percent contingency is kept the same. For
the Worst Case, the costs are raised 30% and the contingency is lowered to 20% of this lower cost figure unless it is already below
20%. In this way, the Best Case lowers debt-financed contractor costs (including contingency) by 24.5%, and the total contractor
costs (including contingency) by 23.1%. For the Worst Case scenario, the debt-financed contractor costs (including contingency)
are raised by 17.4%, and the total contractor costs (including contingency) are raised by 18.6%.

32 A number of alternative scenarios were also prepared by the State Treasurer’s Office to illustrate the impact of specific changes
in the assumptions used, such as an increase or decrease in construction costs, construction delays, higher or lower interest rates,
etc. A summary of these scenarios is provided in Appendix A.
## Estimated Costs per Acre-Foot

To estimate the resulting total cost per acre foot for all water exports, we divide the total peak annual costs presented in Figure 8 by the water exports in Figure 2. These estimates are presented below in Figure 9. Applying the three financing scenarios (Best Case, Base Case and Worst Case) to all four of the delivery scenarios results in 12 total scenarios. As the table shows, the variability across the four delivery scenarios is not as great as the variability across the three financing scenarios – for example, the Base Case average cost/AF ranges from a low of $289 for the LOS delivery scenario to a high of $343 for the HOS scenario, while the finance scenarios applied to the LOS delivery scenario produce average cost/AF estimates that range from as low as $232 in the Best Case to as high as $504 in the Worst Case.
Figure 9: Peak Annual Cost/AF for Total Deliveries (SWP+CVP) by Scenario ($YOE)

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Values in $YOE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Avg $/AF</td>
</tr>
<tr>
<td><strong>Financing</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Delivery</strong></td>
<td></td>
</tr>
<tr>
<td>Best Case</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td>ESO</td>
</tr>
<tr>
<td></td>
<td>SprHOS</td>
</tr>
<tr>
<td></td>
<td>HOS</td>
</tr>
<tr>
<td>Base Case</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td>ESO</td>
</tr>
<tr>
<td></td>
<td>SprHOS</td>
</tr>
<tr>
<td></td>
<td>HOS</td>
</tr>
<tr>
<td>Worst Case</td>
<td>LOS</td>
</tr>
<tr>
<td></td>
<td>ESO</td>
</tr>
<tr>
<td></td>
<td>SprHOS</td>
</tr>
<tr>
<td></td>
<td>HOS</td>
</tr>
</tbody>
</table>

Similar estimates can be constructed for the SWP and CVP exports separately by applying the appropriate export estimates in Figure 4 above to the peak annual costs in Figure 8. These estimates are presented in Figure 10, which assumes a 50/50 split between the SWP and CVP, and Figure 12, which assumes a 60/40 split.
As shown in Figure 10, there is a difference between the SWP and CVP total costs when compared across different exceedance levels. Using the Base Case/HOS scenario as an example, the cost/AF for the SWP contractors ranges from $202/AF at the 10% exceedance level to $842/AF at the 90% level, an increase of over 400%. The CVP costs, however, range from $246/AF to $641/AF, an increase of just over 260%. Because the peak annual costs are equal when the costs are split 50/50 between the CVP and SWP, this implies that the total SWP exports are more variable than the CVP total exports. Figure 11 below, which presents comparable estimates assuming a 60/40 allocation between the SWP and CVP, shows a similar pattern.
**Figure 11: Peak Annual Cost/AF Assuming a 60/40 SWP/CVP Cost Allocation**

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Values in $YOE</th>
<th>Avg $/AF</th>
<th>90%</th>
<th>80%</th>
<th>70%</th>
<th>60%</th>
<th>50%</th>
<th>40%</th>
<th>30%</th>
<th>20%</th>
<th>10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financing</td>
<td>Delivery</td>
<td>205</td>
<td>547</td>
<td>300</td>
<td>247</td>
<td>204</td>
<td>177</td>
<td>166</td>
<td>160</td>
<td>157</td>
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**Delivery and Cost Estimates for Specific Contractors**

**METHODOLOGY**

To understand the issues that affect the affordability of the BDCP for specific contractors, we selected four contractors that represent some of the largest agricultural and M&I contractors from the SWP and CVP. Specifically, we examine the Metropolitan Water District (MWD), the Kern County Water Agency (Kern), the Westlands Water District (Westlands), and the Santa Clara Valley Water District (Santa Clara). As the largest water users, the four contractors selected may not be representative of the many smaller SWP and CVP contractors, most notably CVP agricultural water users; however, they do represent a substantial portion of total SWP and CVP south-of-Delta water deliveries and are used here to provide some insight into the issues all contractors share in common. A summary of the four selected contractors and their characteristics is provided in Figure 12.
MWD and Santa Clara primarily provide water to M&I users, while Kern and Westlands primarily supply agricultural users. MWD and Kern are the two largest SWP contractors, accounting for about 70% of the SOD total Table A values. Santa Clara receives water from both the SWP and CVP, accounting for 2.4% of the SWP SOD Table A and 4.7% of the CVP SOD Maximum Contract Quantity. Westlands is the single largest CVP water contractor and represents 36.4% of the CVP’s SOD “maximum contract quantity” total.

As discussed above, the Delta water export data series produced by the CALSIM II model include estimates for each SWP contractor, so we have used the sum of the Normal, Article 56, and Article 21 deliveries for MWD, Kern, and the SWP portion of the Santa Clara deliveries. For the CVP contractors, however, the CALSIM II model output does not provide delivery estimates for individual contractors, but only for the total Ag and M&I deliveries via the San Felipe Division Project, the San Luis & Delta Mendota Water Authority (SLDMWA), and via the Cross Valley Canal. For the CVP portion of the Santa Clara deliveries, we have estimated their share of the San Felipe deliveries based on the Santa Clara share of the “Max Contract Quantity” and their allocation of agricultural and M&I water, since the CVP distinguishes between agricultural use and historical M&I use to allocate scarce water deliveries in dry years, providing a higher percent of the contract quantity for M&I use than for agricultural use. Similarly we have used Westlands’ share of the SLDMWA deliveries, again following the current allocation process, to estimate M&I deliveries and agricultural deliveries in years when full contract quantities are not available.

The CVP delivery priority schedule in Figure 13 provides the level of “Historical Use” for M&I users that is first met before the corresponding percent of contracted agricultural water is provided. As the delivery schedule shows, the priority given to CVP M&I water users provides them with 50% of their historical use before any water is provided to agricultural users. After the 50% threshold for M&I users is met, both M&I and Ag users receive an increasing share of their contract quantity/historical use. At the high end, agricultural water deliveries are capped at 75% of their contract quantity until 100% of M&I deliveries are provided.

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**Figure 12: Contractors Selected for Affordability Investigation**

<table>
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<tr>
<th></th>
<th>MWD</th>
<th>Kern</th>
<th>Westlands</th>
<th>Santa Clara</th>
</tr>
</thead>
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<tr>
<td>SWP Table A Quantity (AF) (% Total SOD Table A)</td>
<td>1,911,500 (46.3%)</td>
<td>982,730 (23.8%)</td>
<td>(n/a)</td>
<td>100,000 (2.4%)</td>
</tr>
<tr>
<td>CVP Max Contract Qty (AF) (% Total SOD CVP)</td>
<td>(n/a)</td>
<td>(n/a)</td>
<td>1,186,688 (36.4%)</td>
<td>152,500 (4.7%)</td>
</tr>
<tr>
<td>M&amp;I vs. Ag</td>
<td>95% M&amp;I</td>
<td>90% Ag</td>
<td>99% Ag</td>
<td>90% M&amp;I</td>
</tr>
</tbody>
</table>

---

33 The maximum Table A amount is the basis for apportioning water supply and costs to the 29 SWP contractors. The total South-of-Delta Table A totals 4,132,836 AF and does not include the 39,420 AF for the three Feather River contractors (Source: SWPAO (5/21/2012), http://www.water.ca.gov/swpaoo/docs/notices/12-09.pdf).

34 The CVP contractors have a “Maximum Contract Quantity” similar to the SWP’s “Table A,” though numerous additional considerations are used to give priority for deliveries in dry years. The CVP south-of-Delta contractors include the following, with the corresponding Maximum Contract Quantity annual amounts in AF: Refuges – Level 2 (271,001), Exchange Contractors (840,000), Settlement Contractors (35,023), and Service Contractors (2,110,648) for a total of 3,256,672 AF. Westlands and Santa Clara are both Service Contractors. (Source: "Central Valley Project (CVP) Water Contractors", Bureau of Reclamation, revised 2/22/2012).
Figure 13: CVP Water Delivery Priority and Contract Quantity Detail

<table>
<thead>
<tr>
<th>CVP Delivery Priority</th>
<th>San Felipe Division</th>
<th>Max History Use M &amp; I Ag</th>
<th>Ag Contract Qty</th>
<th>% M&amp;I</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100% 100%</td>
<td>When M&amp;I allocation &lt;100%:</td>
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<td></td>
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<tr>
<td>75% 100%</td>
<td>San Benito County Water District</td>
<td>43,800</td>
<td>15,250</td>
<td>33,550</td>
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<tr>
<td>70% 95%</td>
<td>Santa Clara Valley Water District</td>
<td>152,500</td>
<td>130,000</td>
<td>33,100</td>
</tr>
<tr>
<td>65% 90%</td>
<td>San Felipe Total</td>
<td>196,300</td>
<td>138,250</td>
<td>68,650</td>
</tr>
<tr>
<td></td>
<td>Santa Clara % of Total</td>
<td>77.7%</td>
<td>94.0%</td>
<td>48.2%</td>
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<tr>
<td>60% 85%</td>
<td>When M&amp;I allocation is 100%:</td>
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<tr>
<td>55% 80%</td>
<td>San Benito County Water District</td>
<td>43,800</td>
<td>15,250</td>
<td>33,100</td>
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<tr>
<td>50% 75%</td>
<td>Santa Clara Valley Water District</td>
<td>152,500</td>
<td>119,400</td>
<td>33,100</td>
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<tr>
<td>45% 70%</td>
<td>San Felipe Total</td>
<td>196,300</td>
<td>127,650</td>
<td>68,650</td>
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<td></td>
<td>Santa Clara % of Total</td>
<td>77.7%</td>
<td>93.5%</td>
<td>48.2%</td>
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<tr>
<td>40% 65%</td>
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<tr>
<td>35% 60%</td>
<td>San Luis &amp; Delta Mendota Water Authority (SLDMWA)</td>
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<tr>
<td>5% 55%</td>
<td>Delta-Mendota Canal - All but Westlands</td>
<td>297,412</td>
<td>11,254</td>
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<tr>
<td>5% 55%</td>
<td>Mendota Pool</td>
<td>877,438</td>
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<td>5% 55%</td>
<td>San Luis Unit - All but Westlands</td>
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<tr>
<td>5% 55%</td>
<td>Westlands</td>
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<td>2,735</td>
<td>1,183,953</td>
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<td>SLDMWA Total</td>
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<td>Westlands % of Total</td>
<td>66.4%</td>
<td>10.9%</td>
<td>67.2%</td>
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* The values for San Benito and Santa Clara were provided by those agencies and differ slightly from the values reported in the document "Central Valley Project (CVP) Water Contractors, Bureau of Reclamation, revised 2/22/2012" from which the rest of the data were taken.

Figure 13 also shows the share of the San Felipe Division water deliveries that go to Santa Clara, and the share of the SLDMWA deliveries that go to Westlands. As those tables show, Santa Clara accounts for about 78% of the total contract quantity for San Felipe, and 96% of the San Felipe M&I water quantities. Overall, M&I use accounts for about 59% of the San Felipe water. Similarly, Westlands accounts for just over 66% of the SLDMWA total water contracts, though only 11% of the M&I water. Historical M&I use accounts for only 1.4% of the SLDMWA water contracts.

The information presented in Figure 13 was used to estimate the CVP water deliveries to the individual CVP contractors, Santa Clara and Westlands. First, the total estimated annual water deliveries for San Felipe Division or the SLDMWA was compared against the CVP delivery priority schedule to determine the allocation to M&I and agricultural use. For example, if the San Felipe Division has a total of 150,000 AF in estimated deliveries for a given year, that amount will not provide 100% of the total maximum contract quantity of 196,300 AF for the Division. Comparing the total against the delivery schedule, 150,000 AF provides enough water to meet at least 80% of the M&I use and 55% of the Ag use (80% x 138,250 AF = 110,600 AF for M&I use and 55% x 68,650 AF = 37,758 AF for Ag use for a total of 148,358 AF). The remaining deliveries were then allocated proportionately to Ag and M&I use; in this example, 75% of the water is for M&I use and 25% for Ag use, so 75% of the remaining 1,643 AF also is allocated to M&I and 25% to Ag, resulting in a total of 111,824 AF to M&I and 38,176 AF to Ag. Thus, the final percentage allocations represent 81% of the “M&I Historical Use” and 56% of the “Ag Contract Quantity,” which meets the requirements of the CVP delivery priority schedule. Finally, the CVP water deliveries to the
individual contractor were estimated by applying the contractor’s share of the agency’s M&I and Ag water deliveries. For our example, Santa Clara represents 94% of the San Felipe M&I use and 48.2% of the San Felipe Ag water contracts when M&I water deliveries are less than 100% of the maximum allocation, so Santa Clara is assumed to receive 94% of the M&I water and 48.2% of the Ag water, for a total of 123,558 AF out of the full 150,000 AF in this example.

Figure 14 provides a summary of the annual delivery estimates for the four BDCP delivery scenarios for each of the four individual contractors.

**Figure 14: Deliveries by BDCP Scenario (ELT) for Selected SWP and CVP Contractors (thousands of AF)**

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<th>Contractor</th>
<th>Delivery Scenario</th>
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<th>80%</th>
<th>70%</th>
<th>60%</th>
<th>50%</th>
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</table>

Data taken from CALSIM II output as received from DWR.

In addition to deliveries, we have also estimated the possible allocation of BDCP costs among the four individual contractors. As mentioned above, as a starting point we have allocated the BDCP contractor costs between the SWP and the CVP using both a 50/50 and a 60/40 split. It should be noted, however, that the final allocation of costs between the SWP and the CVP has not yet been determined, nor has the methodology for allocating these costs among the individual SWP and CVP contractors. Thus, these results should be viewed as preliminary and illustrative. While costs likely would be allocated based on an initial split, there may be a “true-up” at the end of each year based on the actual allocation of water deliveries.

To allocate the SWP costs to the individual SWP contractors, we have simply used each contractor’s share of the total SOD Table A quantities. This provides a reasonable estimate of cost allocation, as the SWP currently allocates actual deliveries proportionately to each contractor’s Table A value, and also allocates system-wide capital costs in the same way. Using this approach we estimated the peak annual costs for MWD, Kern, and the SWP portion of Santa Clara. These peak annual costs were then divided by the total annual deliveries, including the Article 21 and
Article 56 deliveries, to estimate the peak annual cost/AF. Note that the actual methodology for allocating costs among the SWP contractors has not yet been determined; thus, these results should be considered preliminary and illustrative.

The CVP, however, has a far more complex system for allocating both deliveries and costs. In addition, there are many questions remaining as to how the BDCP costs assigned to the CVP overall would be allocated among the individual CVP contractors. To construct a simplified estimate, we have assumed that all of the BDCP costs allocated to the CVP contractors would be considered conveyance costs and allocated equally among the SOD CVP contractors on a cost-per-acre-foot basis. In addition, we have assumed that the costs associated with the Exchange Contractors would be paid by the Friant contractors, as they currently pay for the Exchange Contractor costs. We then assume that the associated costs for the Refuges’ Level 2 water deliveries are divided equally by all CVP contractors system-wide by assuming that the SOD delivery estimates are proportionate to the overall CVP deliveries (i.e., if SOD CVP delivery estimates are 75% of maximum contract quantity amounts, we assume all system-wide CVP deliveries for that year are 75% of maximum contract quantity amounts). We divide the costs for the Refuges’ Level 2 deliveries among all of the non-refuge CVP contractors and add this to the estimated cost/AF, and assume all SOD CVP contractors pay that same rate for their deliveries in that year.

RESULTS

We first present our cost estimates for the individual contractors in terms of cost/AF of delivered water. Figure 15 provides the peak annual cost/AF estimates for MWD across the various delivery and finance scenarios. For the 50/50 SWP/CVP cost allocation, the average costs to MWD range from $179 - $232/AF in the Best Case finance scenario, to $260 - 337 /AF in the Base Case, to as high as $413 - $535 /AF in the Worst Case. In terms of exceedance levels, the costs at the 90% level are as high as $589 /AF in the Best Case, $856 /AF in the Base Case, and $1,358 /AF in the Worst Case.

35 For a detailed description, see the “Mid-Pacific Region Central Valley Project (CVP) Water Contracts Fact Sheet” (http://www.usbr.gov/mp/PA/docs/fact_sheets/CVP_Water_Contracts.pdf).
36 For example, it has not yet been determined whether some or all of the construction costs allocated to the CVP will be spread among all of the CVP contractors, or only among the SOD CVP contractors. For the purpose of this analysis we have taken the conservative approach that only the SOD CVP contractors will pay these costs.
37 Note that the final determination of how the Exchange Contractor costs will be allocated has not yet been made, and the assumption that the Friant contractors will pay these costs is only one possible approach.
### Figure 15: Peak Annual Cost/AF for MWD by Scenario

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</tr>
</thead>
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</tr>
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#### 50/50 SWP/CVP Cost Allocation

#### 60/40 SWP/CVP Cost Allocation

Figure 16 provides the peak annual cost/AF for Kern, Figure 17 provides the values for Santa Clara, and Figure 18 provides the values for Westlands. The average peak annual cost/AF assuming a 50/50 SWP/CVP split range from $150 to $260/AF in the Best Case, $225 to $380/AF in the base case, and up to $350 to $600/AF in the Worst Case. For the exceedance levels there is even more variation among the contractors, ranging from somewhere around $100 to $175/AF in the Best Case at the 10% exceedance level to as much as $1,000 to $1,400/AF for the SWP contractors and $1,000 to $1,100/AF for the CVP contractors at the 90% exceedance level in the Worst Case financing scenario. This variation by exceedance level is important to note, for while the SWP contractors currently have “take-or-pay” contracts that require them to make annual payments proportional to their Table A amounts and their share of the transport capacity for the conveyance facilities used to deliver their Delta water supplies regardless of the amount of water actually delivered, the CVP contractors do not currently have such take-or-pay requirements. If the BDCP costs are not allocated under some type of take-or-pay arrangement, it is possible that some contractors could choose to simply decline water deliveries in dry years when the cost/AF is very high, and instead use alternative sources (e.g., groundwater) or curtail water use (e.g., by fallowing agricultural land). If contractors were able to opt out in a given year, this would result in total payments that are insufficient to meet that year’s BDCP debt obligations unless another contractor were to make up the shortfall. This topic is discussed in more detail in Section V below.
### Figure 16: Peak Annual Cost/AF for Kern by Scenario

<table>
<thead>
<tr>
<th>Scenario</th>
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50/50 SWP/CVP Cost Allocation

### Figure 17: Peak Annual Cost/AF for Santa Clara by Scenario

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50/50 SWP/CVP Cost Allocation

60/40 SWP/CVP Cost Allocation
### Figure 18: Peak Annual Cost/AF for Westlands by Scenario

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<th>Values in $YOE</th>
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<th>70%</th>
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In addition to examining the individual water contractors’ BDCP-related costs in terms of cost per acre-foot, we also estimated those costs in annual terms since, assuming that debt service payments are subject to take-or-pay contracts, many contractors likely will treat these costs as fixed, annual costs and, in some instances, collect them as property tax charges or assessments where possible. These estimates are presented in Figure 19 below, which provides the estimated annual costs assuming both a 50/50 and a 60/40 split between the SWP and CVP, and for each of the three financing scenarios (Best Case, Base Case and Worst Case) described above. For the SWP contractors, we simply allocated the SWP costs proportionately based on each contractor’s Table A amount – thus, since MWD’s Table A contract quantity represents 46.3% of the total Table A amount, MWD pays 46.3% of the SWP’s costs. For the CVP contractors, the total CVP costs were allocated based on that contractor’s share of the total average CVP SOD deliveries plus their share of the cost for the Refuges’ Level 2 deliveries, using the average across all four delivery scenarios. Using this approach, Westlands share of CVP SOD deliveries plus their share of the Refuges’ costs total on average 27.3% of the total CVP costs. As Figure 19 also illustrates, the expected peak annual costs vary depending upon the financing scenario and cost allocation assumptions used. Under the Base Case, MWD’s annual BDCP costs range from $365 million to about $438 million per year, though these annual costs are considerably lower under the Best Case scenario ($250

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38 Note that Westlands’ share of costs (27.3%), which is based on estimated share of deliveries is less than their share of the “maximum contract quantity” for SOD CVP contractors (36.4%). This is because CVP deliveries are not strictly allocated by maximum contract quantity amounts, but rather some contractors have higher priority for deliveries in dry years when all contracted deliveries cannot be made.
These annual costs would be in addition to whatever debt-related costs and other fixed annual costs contractors will have while the BDCP costs are financed. While it is difficult to estimate what the full extent of such future obligations will be, over the five-year period from 2008 through 2012 SWP contractors paid an average of just over $280 million annually for the debt service associated with the SWP capital costs and an additional $400 million annually for other fixed operating costs, such as minimum O&M and energy charges for a total of $680 million in annual fixed costs that SWP contractors must pay regardless of the level of Delta water deliveries.

For individual contractors, existing fixed costs associated with CVP and/or SWP deliveries, in addition to their own debt obligations, can vary widely. For example, MWD paid an average of around $123 million annually in SWP capital costs and around $230 million in other SWP fixed operating costs from 2008 through 2012. According to its financial statement, MWD also paid approximately $343 million in debt obligations in 2012. In total, these obligations represent just under $700 million in current fixed annual costs, as compared to the estimated $365 million in BDCP costs under the Base Case (50/50 split). For Santa Clara, SWP capital costs over the same 2008-2012 period averaged over $6 million, and other SWP fixed operating costs totaled over $8

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million. On the CVP Santa Clara pays approximately $15 million in direct debt service for the San Felipe Division Facilities. Santa Clara also pays fixed operating and in-basin capital CVP costs on a rate basis depending on water deliveries. However, if insufficient revenue is collected to cover Santa Clara’s annually allocated share of fixed costs, Santa Clara provides an annual deficit payment to cover the balance owed. These fixed costs amount to roughly $5 million per year. Santa Clara’s combined SWP and CVP fixed costs therefore amount to about $34 million per year. Santa Clara also pays about $13 million in debt service for its other water utility costs, for a total of approximately $47 million in fixed annual costs. As such, the estimated $61 million in BDCP costs under the Base Case would represent a considerable increase in fixed annual costs.

For Kern and Westlands, the current debt service is considerably lower at just $11 million and $20 million, respectively. For the SWP fixed costs, Kern and its member agencies also paid an additional $27 million in capital costs and $44 million in other fixed operating costs annually. Kern and Westlands, however, differ from MWD and Santa Clara in some important ways. While Kern has a more diverse set of ultimate water users through its various member agencies than Westlands does, both Kern and Westlands act primarily as coordinating agencies to facilitate the delivery of SWP and CVP water to a limited number of agricultural users, rather than developing additional water supplies and investing in delivery and storage infrastructure, as MWD and Santa Clara do. Thus, one would expect the debt service obligations of Kern and Westlands to be lower, and it is therefore not necessarily appropriate to assess the BDCP costs in terms of existing debt service for these water agencies. In the section that follows, we present what we believe to be a more appropriate analysis of the ultimate agricultural water users’ capacity to pay for the BDCP costs for both Kern and Westlands.

**Examining the Affordability of the BDCP Costs**

There are several factors to consider when assessing the affordability of the BDCP. One key factor is how the average price for Delta water compares to the available alternatives. There are two dimensions to this comparison. First, to the extent that the Delta exports represent a small portion of a contractor’s supply portfolio, any additional costs from the BDCP will result in a smaller impact to the price charged to their customers. For example, if a contractor on average receives 10% of its total water supplies from the Delta, the BDCP-related costs will have a much smaller impact on total costs and thus on the price charged to its customers than if it relies on the Delta for 100% of its supplies. Thus, a contractor with a diverse set of water supplies and a large number of water users can more likely afford the costs associated with implementing the BDCP.

Second, to the extent that its customers have alternative sources available, a contractor or water agency may have decreased demand for the Delta exports as the price of Delta exports increases. This could be especially true in the absence of any sort of “take-or-pay” obligation on the part of the water contractor’s customers, whether they be agricultural water users or municipal water

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40 The cost figures for Santa Clara were provided by the Santa Clara Valley Water District.
41 The Kern debt service values are taken from the KCWA Financial Statements 2011 and represent estimates for FY 2012. Westlands values were provided by the Westlands Water District and are estimates for FY 2012-13. Note that the current debt estimates for Santa Clara and Westlands exclude any capital fees owed to the Bureau of Reclamation for their share of the CVP capital costs.
agencies. The current draft BDCP shows costs for current water recycling projects in Southern California ranging from $955/AF to $1,672/AF, and costs for desalination projects ranging from $1,191/AF to $2,257/AF, indicating that the average costs associated with the BDCP will still result in competitive prices for Delta water at least compared to these alternatives. However, during periods of severe drought, such as the state is currently experiencing, the effective cost of the BDCP could exceed the cost of alternatives, particularly if the cost of those alternatives declines significantly over time. Given the potential for some lower cost alternatives and the relatively low likelihood of take-or-pay contracts between contractors and their customers, treating debt service costs as annual fixed costs collected through the property tax or assessments where possible could mitigate the impact of reduced demand due to lower-cost alternatives. Nevertheless, it seems clear that particularly agricultural customers would face higher costs during dry years from a combination of fixed debt service costs and the cost of alternative supplies.

Another factor to consider is whether the variability in deliveries can be mitigated. One way to achieve this would be to store water in wet years for use in dry years. This storage could be in the form of surface storage (i.e., reservoirs) or groundwater reserves, which can also be actively replenished or recharged in wet years and drawn upon in dry years. For example, MWD has surface storage capacity of approximately 1.5 million AF under its control, plus an additional estimated 3.2 million AF of groundwater basins available for storage within the MWD service area. Even accounting for the 570,000 AF currently set aside to meet emergency requirements, this provides over 4 million AF of potential storage that may be filled during wet years and drawn upon during dry years. With current deliveries to its member agencies of approximately 2 million AF, this storage provides MWD with an important resource during periods of decreased supplies.

An additional tool available to the water contractors is the use of water transfers or exchanges. Such exchanges would allow those contractors that have excess water supplies in wet years or those that create them through effective conservation activities or the development of additional supplies to transfer those excess supplies, either on a short-term or a long-term basis, to other water users who need them. While there are numerous legal and logistical obstacles remaining, the development of such water markets would allow many contractors to better optimize both their water deliveries over time and the costs associated with those water supplies.

Another way to smooth out this variability is through financial reserves, which could be used both to purchase additional supplies in dry years and thus reduce supply fluctuations, and to smooth out prices charged by drawing from the reserves to cover costs in years when revenues are low and adding to it when revenues are high. To the extent that the water contractors have or create

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42 Draft Bay Delta Conservation Plan, Appendix 9.A (May 2013), pp. 9A-36 and 9A-37. Note that these costs are current costs, and it is difficult to determine exactly what future costs will be. To the extent that the implementation of the BDCP results in more Delta water being exported, contractors may be able to spend less on future costs associated with securing alternative water supplies. Any such decrease in spending could mitigate some portion of the contractors’ BDCP costs, though it is impossible to predict or quantify the extent to which this may occur.

43 MWD Region Urban Water Management Plan, November 2010, pages 3-56 and A3-35.
financial reserves for this purpose, they could also help alleviate year-to-year price swings due to variations in Delta water supplies.

Finally, it is important to consider the affordability of the project to agricultural users. To do this, we have estimated the “Payment Capacity” for water for both Kern and Westlands. For both contractors, we analyzed the past five years of agricultural production from 2008 through 2012. For Kern, we used the annual Kern County Agricultural Crop Reports to calculate the average number of acres harvested for each of the major crops produced. These reports also provided data on the units produced (tons, pounds, etc.) and the revenue generated. We used these figures to calculate the gross revenue for each crop in each year, converted them to 2012 dollars using the CPI, and calculated the gross revenue per acre. We then used the most recently available cost studies from the University of California Cooperative Extension to estimate the cost per acre, again converting these values to 2012 dollars using the CPI. The cost of water was excluded to estimate the cost per acre net of water. We subtracted this cost measure from the gross revenue to calculate the gross margin per acre. We then subtracted 10% to account for a 10% return to the owner/management. Finally, we applied the consumptive water use in AF/acre as reported in the November 2011 version of the Kern Integrated Regional Water Management Plan to estimate the payment capacity for each crop. Specifically, we divided the gross margin per acre net of the 10% return to calculate each crop’s payment capacity for water – that is, the amount an average producer could afford to pay for an acre-foot of water and still make a 10% return. Finally, we estimated the average value by crop category, weighting by the number of acres harvested. The crops were categorized into permanent crops (fruit and nut trees, grapes, etc.), vegetable crops (lettuce, tomatoes, etc.) and field crops (alfalfa, corn, etc.). The results of this analysis are provided in Figure 20 below. As this table shows, the payment capacity in Kern for permanent and vegetable crops is estimated to be quite high, at over $500/AF. Field crops have a much lower payment capacity, at $13/AF. When we take the weighted average, again weighted by acres harvested, the overall capacity to pay over the 2008-2012 time period was around $277/AF.

**Figure 20: Water Payment Capacity Estimates for Kern ($2012)**

<table>
<thead>
<tr>
<th>Crop Category</th>
<th>Acres Harvested</th>
<th>Gross Rev/Acre ($)</th>
<th>Cost/Acre Net Water ($)</th>
<th>Gross Margin/Acre ($)</th>
<th>Return to Mgmt (10%)</th>
<th>Water Use (AF/Acre)</th>
<th>Payment Capacity ($/AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>343,519</td>
<td>$7,276</td>
<td>$5,337</td>
<td>$1,939</td>
<td>$194</td>
<td>3.32</td>
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<tr>
<td>Vegetable</td>
<td>82,118</td>
<td>$8,529</td>
<td>$7,398</td>
<td>$1,132</td>
<td>$113</td>
<td>1.75</td>
<td>$583</td>
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<tr>
<td>Field</td>
<td>403,586</td>
<td>$1,097</td>
<td>$1,053</td>
<td>$44</td>
<td>$4</td>
<td>3.07</td>
<td>$13</td>
</tr>
<tr>
<td>OVERALL</td>
<td>829,224</td>
<td>$4,393</td>
<td>$3,456</td>
<td>$937</td>
<td>$94</td>
<td>3.04</td>
<td>$277</td>
</tr>
</tbody>
</table>

We conducted a similar analysis for Westlands, again starting with the agricultural production reports from 2008 through 2012. For Westlands, the annual crop reports used were the Westlands Water District Annual Crop Acreage Reports, which provide only the acreage planted.

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44 Available at http://www.kernag.com/caap/crop-reports/crop-reports.asp.
45 CPI used was the June value for the California CPI as reported by the Department of Industrial Relations (DIR).
47 The 10% return to management follows the methodology of a similar 2010 study Entrix conducted for the Westlands Water District (“Farm Viability and Water Prices in the Westlands Water District,” Entrix (January 8, 2010)).
48 See specifically Table 2-20 of the Kern Integrated Regional Water Management Plan (November 2011).
To estimate the total production and revenue, we used the annual crop reports from the Fresno County Department of Agriculture.\(^49\) These provided data on the average units produced (tons, pounds, etc.) and the revenue generated per acre for each crop. We used the same cost data from the UC Cooperative Extension to estimate the gross margin per acre for each crop, subtracted the 10% return to management, and applied the 2030 projected water use requirements as reported in the Westlands Water District 2012 Water Management Plan.\(^50\) The crops again were categorized into permanent, vegetable, and field crops. The results of this analysis are provided in Figure 21. As this table shows, the payment capacity in Westlands is similar to that of Kern, with permanent and vegetable crops having much higher payment capacity values than field crops--here in the range of $400-$500/AF in 2012 dollars. Field crops were estimated to have an average payment capacity of $43/AF, much lower than the other types of crops, but higher than the $13/AF estimated for Kern. Overall, the weighted average results for Westlands were quite similar to those for Kern, at around $290/AF vs. Kern’s $277/AF, again, all in 2012 dollars.

### Figure 21: Water Payment Capacity Estimates for Westlands ($2012)

<table>
<thead>
<tr>
<th>Crop Category</th>
<th>Acres Harvested</th>
<th>Gross Rev/ Acre ($)</th>
<th>Cost/Acre Net Water ($)</th>
<th>Gross Margin/ Acre ($)</th>
<th>Return to Mgmt (10%)</th>
<th>Water Use (AF/Acre)</th>
<th>Payment Capacity ($/AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>103,058</td>
<td>$5,114</td>
<td>$3,468</td>
<td>$1,646</td>
<td>$165</td>
<td>3.54</td>
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</tr>
<tr>
<td>Vegetable</td>
<td>143,179</td>
<td>$5,319</td>
<td>$4,113</td>
<td>$1,206</td>
<td>$121</td>
<td>2.13</td>
<td>$510</td>
</tr>
<tr>
<td>Field</td>
<td>160,586</td>
<td>$1,170</td>
<td>$1,032</td>
<td>$137</td>
<td>$14</td>
<td>2.85</td>
<td>$43</td>
</tr>
<tr>
<td>OVERALL</td>
<td>406,823</td>
<td>$3,629</td>
<td>$2,734</td>
<td>$896</td>
<td>$90</td>
<td>2.77</td>
<td>$291</td>
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</tbody>
</table>

It should be noted that the payment capacity estimates for Kern and Westlands presented above represent the total cost for irrigation water; thus, additional water-related costs such as existing SWP or CVP debt, additional delivery charges, and other costs must be added to the expected BDCP costs before comparing them against these payment capacity estimates. As explained above, Kern’s average peak annual BDCP costs are estimated to be somewhere in the range of $187 to $225 million under the Base Case financing scenario, or an effective cost of $225 to $350/AF in $YOE, depending upon the overall level of water exports and whether the costs are split 50/50 or 60/40 between the CVP and SWP. This range equals $113 to $178 in $2012 for additional BDCP-related costs. According to the DWR, Kern paid an average of $100/AF for SWP water between 2008 and 2012; thus, their total costs when BDCP-related costs are included are estimated to be between $213 and $278/AF. For Westlands, the estimated BDCP-related costs are $172 to $215 million per year, which translates into $290 to $380/AF on average in $YOE for the Base Case financing scenario. This corresponds to $144 to $192/AF in $2012. Agricultural customers in Westlands have paid on average around $109/AF for water in recent years based on the published “Cost of Service” water rates, indicating that the total cost for water when expected BDCP costs are added should range between $253 and $301/AF ($2012). These figures, along with the estimated payment capacity values discussed above, are presented in Figure 22.

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\(^{49}\) Fresno County Department of Agriculture Annual Agricultural and Crop Reports (2009-2012).

\(^{50}\) See specifically: Westlands Water District, Water Management Plan, 2012 (Dated 4/19/2013), Table 26, p. 61.
As shown in Figure 22, the current capacity to pay for water for both Kern and Westlands falls toward the high end of the range of expected costs when BDCP costs are added to current costs, indicating that their current crop mix may be capable of supporting these increased costs. In very dry years such as the current year, however, agricultural users may find it challenging to meet their fixed debt obligations for the BDCP if they must also pay for alternative water supplies or limit production because of a lack of available irrigation water. In addition, this analysis uses current estimates of the costs, yields, and crop prices to estimate the current capacity to pay for irrigation water for both Kern and Westlands. To the extent that non-water production costs, yields, and crop prices differ in the future, these estimates may not be representative of their future capacity to pay for water.

It should also be noted that many of the larger water users in Westlands and Kern are in fact vertically integrated agricultural concerns that not only grow the fruits and vegetables but also process and distribute them, which would indicate that some growers may be better equipped to absorb the increases in water prices associated with the BDCP. In general, the payment capacity analysis illustrates some potential strategies that agricultural users could employ to mitigate the BDCP cost increases. One strategy would be to change the mix of crops produced, planting more acres of permanent and vegetable crops and fewer acres of field crops. While this may be possible for some individual farmers, there are downsides to this strategy as well. Permanent crops require a substantial initial investment, both the high capital investments of purchasing and planting the trees or vines and setting up the appropriate irrigation infrastructure, and the lost revenue from the initial establishment period between the time it is planted and the time it begins producing a

### Kern ($2012)

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<tr>
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<tbody>
<tr>
<td>Permanent</td>
<td>$100</td>
<td>$113 - $178</td>
<td>$213 - $278</td>
<td>$526</td>
</tr>
<tr>
<td>Vegetable</td>
<td>$100</td>
<td>$113 - $178</td>
<td>$213 - $278</td>
<td>$583</td>
</tr>
<tr>
<td>Field</td>
<td>$100</td>
<td>$113 - $178</td>
<td>$213 - $278</td>
<td>$13</td>
</tr>
<tr>
<td>OVERALL</td>
<td>$100</td>
<td>$113 - $178</td>
<td>$213 - $278</td>
<td>$277</td>
</tr>
</tbody>
</table>

### Westlands ($2012)

<table>
<thead>
<tr>
<th>Crop Category</th>
<th>WY 2011-2013 Average &quot;Cost of Service&quot; Rate For Ag Users ($/AF)**</th>
<th>Est. Avg. Base Case BDCP Costs ($/AF)</th>
<th>Current Costs + Est. Avg. BDCP Costs ($/AF)</th>
<th>Payment Capacity ($/AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent</td>
<td>$109</td>
<td>$144 - $192</td>
<td>$253 - $301</td>
<td>$418</td>
</tr>
<tr>
<td>Vegetable</td>
<td>$109</td>
<td>$144 - $192</td>
<td>$253 - $301</td>
<td>$510</td>
</tr>
<tr>
<td>Field</td>
<td>$109</td>
<td>$144 - $192</td>
<td>$253 - $301</td>
<td>$43</td>
</tr>
<tr>
<td>OVERALL</td>
<td>$109</td>
<td>$144 - $192</td>
<td>$253 - $301</td>
<td>$291</td>
</tr>
</tbody>
</table>

* SWP water charges for Kern provided by DWR for 2008-2012.
viable crop. In addition, these permanent crops must be maintained continuously, and the land cannot be fallowed in dry years or irrigation curtailed if supplies become difficult or expensive to obtain. These increased risks may limit the potential for some producers to move large portions of their production into these types of crops.

Another strategy available to agricultural users is to improve the efficiency with which they irrigate. The type of irrigation used depends to some extent on the crop – some permanent and vegetable crops can be irrigated using highly efficient drip irrigation systems, while most field crops require sprinklers or furrow (gravity) irrigation. Also, the initial investment in purchasing and setting up these systems can be substantial. In general, there has already been a marked move to more efficient irrigation techniques throughout the state. DWR’s 2010 Statewide Irrigation Survey reported that the drip/micro irrigation accounted for 43% of the total irrigated land in the San Joaquin River region in 2010, up from 35% in 2001, while the percent using gravity irrigation methods fell from 54% to 45% over the same period. For any single water district, however, there may be even less capacity for migrating to more efficient irrigation techniques. In the Westlands district, for example, 65% of all irrigated land was already using drip/micro irrigation as of 2011, and 22% was using either pressurized sprinkler or a combination of sprinkler/furrow irrigation, which is often the most efficient system for irrigating certain types crops. Figure 23 shows the irrigation trends in Westlands from 1985 through 2011.

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51 For example, according to the UC Cooperative Extension, almond trees begin bearing after 3 years and reach full production at 7 years.
52 See http://www.water.ca.gov/landwateruse/surveys.cfm.
Figure 23: Irrigation Trends in the Westlands Water Districts

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<tbody>
<tr>
<td>Surface Furrow</td>
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<td>38</td>
<td>34</td>
<td>28</td>
<td>26</td>
<td>22</td>
<td>22</td>
<td>23</td>
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<tr>
<td>Border Strip</td>
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<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>5</td>
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<td></td>
</tr>
<tr>
<td>Combination sprinkler/furrow</td>
<td>15</td>
<td>38</td>
<td>43</td>
<td>44</td>
<td>44</td>
<td>45</td>
<td>42</td>
<td>39</td>
<td>34</td>
<td>28</td>
<td>24</td>
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<tr>
<td>Pressurized Sprinkler</td>
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<td>16</td>
<td>15</td>
<td>13</td>
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<td>12</td>
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<td>13</td>
<td>15</td>
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<tr>
<td>Drip/Trickle</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>13</td>
<td>15</td>
<td>18</td>
<td>22</td>
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<td>33</td>
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<td>46</td>
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<td>62</td>
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<td>100</td>
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</tr>
</tbody>
</table>

V. Financing Considerations

As discussed Chapter 8 of the draft BDCP, it is anticipated that the SWP and CVP contractors (and their customers) – not taxpayers generally throughout the state – will pay for the costs of the new Delta conveyance facility, the cost of mitigation measures undertaken in connection with construction of the facility, the facility’s operating costs, and a share of the cost of a number of the other BDCP conservation measures. The draft BDCP also anticipates that the costs of the conveyance facility and certain other capital costs will be funded from the proceeds of revenue bonds to be issued by DWR, a joint powers authority such as the State and Federal Contractors Water Agency (SFCWA) or by individual water contractors.

As described earlier in this report, the capital costs expected to be financed in the Base Case are estimated to be $14.7 billion in 2012 dollars. When factoring in construction cost inflation, costs to issue the bonds, and a six month debt service reserve, the amount of bonds that need to be issued increases to approximately $20.5 billion. By any measure, this is an extraordinarily large amount of bonds to be issued for a single project and would be one of the most expensive infrastructure projects ever undertaken in California and the United States.

Below, we review a number of issues related to the financeability of the Delta conveyance facility. We have assumed that the SWP and CVP contractors will separately finance their respective costs of the conveyance facilities, which is the approach currently being pursued by the SWP and CVP contractors for pre-construction costs.

Credit Characteristics of the SWP Contractors and the Bonds Issued by the DWR for the State Water Project

Currently, 29 public agency SWP contractors contract with the DWR to pay for the operation, maintenance, planning and capital costs, including interest, of the State Water Project under the terms of water supply contracts. The contractors are principally located in the San Francisco Bay Area, the Central Coast, the Central Valley and Southern California and their service areas encompass approximately 25 percent of the state’s land area and approximately 71 percent of its population. According to DWR, of the 29 contractors, 24 provide water primarily for municipal and industrial purposes and five provide water primarily for agricultural purposes. Under the water supply contracts, the original forms of which were judicially validated, DWR imposes a fixed charge that includes amounts for operations, debt service and debt service coverage, and a variable charge that enables DWR to recover the net cost of energy used to deliver water to the contractors.

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53 The amount that would need to be issued for the Worst Case scenario is $26.4 billion and the amount that needs to be issued for the Best Case scenario is $15.4 billion.
54 26 of the contractors are districts formed for water related purposes, one is a city, and two are counties.
DWR has issued $7.9 billion of revenue bonds for the State Water Project (DWR Bonds), of which $2.4 billion are outstanding. The bonds are rated AAA by S&P and Aa1 by Moody's. The rating agencies cite the following factors in their rationale for DWR's very strong credit ratings:

- **“Take or Pay” Contracts.** The water supply contracts require SWP contractors to pay DWR for its expenses regardless of the amount of water that is delivered. This is a particularly important feature. The contracts remain in effect through 2035 or until the repayment of all bonds, whichever is longer.

- **Essentiality.** The 29 SWP Contractors serve approximately 71% of the state’s population.

- **Credit Strength of SWP contractors.** More than 55% of the combined contract revenue pledged to the outstanding bonds is derived from contractors rated Aa3 or higher by Moody’s. MWD, which represents 46% of total contracted water entitlements, has over $4.2 billion of revenue bonds outstanding and is rated AAA/Aa1/AA+ by S&P, Moody’s and Fitch, respectively. DWR reports that there have been no material payment defaults or delinquencies from the SWP contractors, even in severe drought conditions.

- **Debt Service Coverage.** DWR has covenanted to charge amounts under the water supply contracts sufficient to repay all projects costs and to produce net revenues at least equal to 1.25 times annual debt service on the bonds plus the amount needed for operation and maintenance costs. Excess amounts are held by DWR and are generally credited back to the contractors once a year.

- **“Step-Up” Provisions.** Under all but three bond amendments to the contracts, if a contractor defaults on a payment, DWR can increase amounts billed to the other contractors by up to 25% if needed. MWD’s maximum step-up amount is larger than the next largest contractor’s total DWR debt service obligation. This effectively provides coverage from MWD of any other individual contractor’s payment delinquency.

- **Ability to Suspend Water Deliveries.** If a contractor defaults under its water supply contract, DWR may, upon six months’ notice, suspend water deliveries to that contractor. During such period, the contractor remains obligated to make all payments required by the water supply contracts.

- **Property Tax Assessment.** If a contractor fails or is unable to raise sufficient funds by other means to make its payments to DWR, the contractor is required by the water supply contract to levy a tax assessment sufficient to make the payment. The ability to levy property taxes was determined in 1983 by the *Goodman v. Riverside* case to not be constrained by the state’s constitutional 1% property tax rate limit. We also understand that most urban SWP contractors, except MWD, collect property tax revenue to cover their fixed charges from DWR.

- **Debt Service Reserve.** DWR is required to maintain a debt service reserve equal to at least one-half of the maximum annual debt service on the bonds that are outstanding under the general bond resolution.

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55 The original construction of the SWP was financed from the issuance of $1.5 billion of State of California general obligation bonds, which were authorized by the Burns-Porter Act of 1960 (the draft BDCP indicates that this amount is equivalent to $12.9 billion to $18.2 billion in 2011 dollars). These bonds, $229 million of which are outstanding, are paid by revenues from the SWP contractors - the State’s General Fund would only be used if there were to be a shortfall. DWR has also issued $1.5 billion of revenue bonds for certain power facilities of the State Water Project, of which $57 million are outstanding.
**DWR’s Strong Cash Position.** As of June 30, 2013, DWR held $560 million of available cash, which equaled 68% of DWR’s total operating expenditures less depreciation, including certain non-SWP expenditures. The rating agencies view this liquidity as important due to DWR’s need to have sufficient cash to operate during an effective two-year lag in charge adjustments under its “true-up” billing adjustment process at the end of each year.

**Credit Characteristics of the CVP Contractors and their Debt Obligations**

USBR’s Central Valley Project supplies water to more than 250 water contractors, with just over 50 receiving water from the Delta and presumably forming the core of the CVP contractors that would pay for the Delta tunnels. CVP contractors include large municipal users, irrigation districts and individual farmers in the Central Valley as well as major urban centers in the San Francisco Bay Area. The majority of the CVP’s water is used for agricultural purposes. According to the USBR, the CVP provides water for six of the top 10 agricultural counties in the nation’s leading farm state.

Generally, the costs of CVP construction efforts by USBR are first allocated into pools based on the benefits they provide (e.g., water conveyance, storage, pumping, etc.). The costs in these pools are further divided by purpose (e.g., flood control, irrigation, recreation, fish and wildlife, municipal and industrial (M&I) use, etc.). These purposes are classified as either reimbursable or non-reimbursable. Reimbursable costs, such as irrigation and M&I, are paid at least in part, by project beneficiaries of, for example, a water conveyance. Non-reimbursable costs are borne by the federal and/or state government, as in the case of flood control or navigation. Reimbursable capital and O&M costs are totaled for each pool and by purpose. Capital costs are then divided by the historical and projected deliveries to derive a cost per acre-foot. A similar cost per acre-foot is calculated for O&M costs using just the historical five-year average of water deliveries. For each contractor, each year their total costs per acre-foot of water delivered are calculated by adding the cost per acre-foot for all of the cost pools to which they belong. In the case of water districts, these costs are passed along to the districts’ customers through a variety of charges.

Water service contracts are used to recoup the cost of a CVP facility where multiple benefits accrue to contractors. For these projects, costs are allocated to contractors based on the amount of water they receive. Water rates for each contractor are calculated annually by USBR adjusting for changes in the cost of service. Charges are also adjusted to amortize capital costs so as to recover all project costs by 2030. In low water delivery years, capital charges paid to USBR by CVP contractors are less than the amount budgeted to be paid towards the outstanding capital balance because the CVP contractors do not have a “take or pay” obligation with USBR. To the extent that a CVP contractor does not pay the full charge for capital costs in a given year, these costs are included in a recalculated obligation for future years. Irrigation contractors also do not pay USBR interest charges on capital costs.

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56 The costs of the CVP are allocated among project purposes based on a 1975 cost allocation study. According to the USBR, a new cost allocation study is currently underway and is expected to be completed by 2014-2015.
Since USBR has provided the funding for the capital costs of the CVP, the CVP has not had a program of bond issuances backed by contractor revenues similar to DWR. However, the San Luis and Delta-Mendota Water Authority (SLDMWA), a joint powers authority which represents 27 CVP contractors, has issued $50 million of bonds on behalf of a subset of the contractors to finance Delta Habitat Conservation and Conveyance Program planning costs. These bonds are secured 100% by Westlands, which is in turn reimbursed by participating contractors for their allocable shares of debt service. These bonds have underlying ratings of A+/AA- by S&P and Fitch, respectively, based on Westlands’ ratings. Three of the CVP contractors, which represent approximately 5% of the CVP contractors’ assumed financial responsibility for the conveyance facility, have two AA/Aa category ratings.57

Financing Approach

SWP Contractors. As discussed above, the existing financing mechanism for the SWP contractors – the DWR Bonds – is highly rated and widely accepted among investors. Given the strong credit features of the DWR credit, we believe DWR should be able to issue additional bonds to finance the SWP contractors’ share of the approximately $20.5 billion of revenue bonds that would need to be issued under the Base Case scenario. Based on discussions with various parties, we are not aware of any impediments under state law or within the existing bond covenants to financing the BDCP conveyance costs under the DWR Bonds credit. However, the water supply contracts would need to be formally extended through the final maturity of the bonds to be issued (the contracts are currently set to expire in 2035) and amended to address the funding of the conveyance facility and related costs.58 If all of the SWP contractors do not agree to a BDCP funding amendment, the cost would increase for those that are willing to pay for the conveyance facility. It is not clear how contractors that do not agree to the BDCP funding amendment would be affected since they already have water supply contracts in place through 2035.

CVP Contractors. Since the CVP contractors do not have an existing credit similar to the DWR Bonds and since we do not believe it is feasible for Westlands to secure the full amount of the CVP contractors’ share of the $20.5 billion of bonds that would need to be issued under the Base Case scenario (similar to the approach taken with the $50 million of SLDMWA bonds), the CVP contractors will need to develop a new credit to finance their share of the conveyance facilities. New contracts will need to be negotiated and agreed to by the contractors with a term that extends through the final maturity of the bonds. Developing such a credit to successfully finance the CVP contractors’ $10.25 billion share of bonds under the Base Case (assuming 50/50 split

57 Nine of the CVP Contractors, representing 49% of the assumed CVP financial responsibility, have at least one AA/Aa category rating. These figures include the Friant contractors, but do not include any CVP contractors that would have less than 0.1% of the assumed financial responsibility combined. Note that these percentages are based on the “maximum contract quantity” and not estimated deliveries for individual CVP contractors.

58 According to DWR, an agreement in principle on an extension of the water supply contracts to 2085 has been negotiated and is about to undergo a full CEQA review. A separate contract amendment will be necessary to establish the terms on which SWP contractors will participate in the BDCP.
between SWP and CVP contractors) will be challenging for a variety of reasons, including, but not limited to the following.

- In order to issue bonds for their portion of the conveyance facility, CVP contractors will likely need to agree to “take-or-pay” contracts since debt service on bonds must be paid irrespective of hydrologic conditions or the amount of water delivered in a given year. However, fixed payments from contractors that don’t vary as a function of the amount of water delivered are potentially problematic. As was described in Section IV, the effective cost of fixed debt service as a per acre-foot-of-delivered-water charge would vary significantly due to fluctuations in water deliveries. During a period of low water deliveries, at the same time contractors are securing alternative water supplies – potentially at high prices - they would be obligated to continue to make debt service payments. This could be problematic particularly for small agricultural contractors because their revenues will likely be constrained either simply as a function of crop prices or because they would fallow a portion of their acreage, resulting in lower crop yields to bring to market. Thus, even if CVP contractors are willing to accept a take-or-pay obligation for debt service, which would be a significant change, for some of the smaller agricultural contractors it may not be realistic to expect they would always be able to make fixed debt service payments. And even for larger water districts that might be willing to accept a take-or-pay obligation, the question arises as to whether their member contractors would be willing or able to enter into a take-or-pay arrangement.

There are a few possible approaches that could be taken to help address this issue. First, as noted in Section IV, for many contractors the BDCP debt service obligation will be treated as a fixed annual cost potentially to be collected through property tax charges or assessments, to the extent these charges are legally permissible. While this does not eliminate the potential for higher costs during dry years from a combination of debt service costs and the cost of alternative supplies, it does create a more stable financing arrangement where debt service costs are predictable from one year to the next.

Second, the creation of a large rate stabilization fund has been discussed as a way to mitigate large impacts of prospective rate adjustments and to make financing of the conveyance facility more economically viable for CVP contractors. Using this approach, the issue is how large of a reserve fund is needed to provide assurance that debt service can always be paid and how the reserve would be funded. In addition to funding such a reserve initially, it would need to be replenished through a surcharge or higher rates whenever it is utilized during dry periods. In addition, the contractors would still need to be obligated to pay debt service regardless of the amount of water they receive if the rate stabilization fund was exhausted.

Finally, contracts could be structured to provide for lower-priced water deliveries for customers for whom contracts permit a limited reduction in supply during dry years in exchange for a lower price for that interruptible supply. Other contractors for whom
having a more reliable supply is critical would pay a somewhat higher price for that guarantee.

- Bonds to be repaid by the CVP contractors will also likely need to include other credit features that are included in the DWR bonds such as “step-up” provisions, ability to suspend water deliveries for non-payment, excess debt service coverage requirements, ability to levy a tax assessment for non-payment (if permissible), etc. As with take or pay contracts, such features would be a significant change for the CVP contractors and may raise significant policy issues—especially regarding the impact on smaller agricultural contractors.

- The average credit profile of the CVP contractors is significantly different from those of the SWP contractors. While the largest SWP contractors are wholesale agencies, the majority of CVP contractors are agricultural districts. More than 63% of the SWP contractors assumed financial responsibility is from contractors rated AA- or Aa3 or higher by S&P or Moody’s, while approximately 48% of the CVP contractors’ assumed responsibility for the conveyance facility is from contractors that have at least one rating in the AA/Aa category. Westlands, which has the largest entitlement of the CVP contractors, accounts for approximately 36.44% of the “maximum contract quantity” amount of water under contract to be delivered to CVP contractors, and is rated A+/AA- by S&P and Fitch. Assuming a 50/50 split between SWP and CVP, Westlands’ share of the $10.25 billion of bonds for CVP contractors under the Base Case would be approximately $3.74 billion if the “maximum contract quantity” percentages were used to allocate CVP debt obligations. By contrast, Westlands currently has approximately $237 million of bonds outstanding.

- Rating agencies and investors will closely scrutinize the affordability of the financing for the conveyance facility as well as the willingness and ability of the CVP contractors to pay debt service during a sustained dry period.

Even if the CVP contractors develop a new credit with a take or pay obligation and similar credit features to the DWR bonds, it is not clear at this point whether $10.25 billion of bonds (assuming a 50/50 split) in the Base Case could reasonably be issued without a large rate stabilization fund or other credit enhancement or subsidy from the federal government, state government, or SWP contractors.

Other Financing Issues

Ownership of Conveyance Facility. In order to finance the conveyance facility with tax-exempt bonds, USBR is precluded from having an ownership share in the facility. Thus, a variety of ownership structures are being discussed, including one in which a joint powers authority would own the CVP contractors’ share of the project and DWR would own the SWP contractors’ share of the project. Other ownership structures involving public agencies are also possible.
**Construction Management and Governance.** Given the size and scope of the proposed project, construction management and the ongoing governance plan for operations, financial management and regulatory matters will be considerations in the assessment of credit worthiness by the rating agencies and investors.

**Coordinated Plan of Finance.** To the extent that the bonds for the conveyance facility would be issued by more than one entity, the plan of finance would need to be highly coordinated among the issuers.

“**Wrapped Debt Service.**” Instead of just adding the new debt service for the conveyance facility on top of the existing debt service, principal for the new bonds could be “wrapped” around the existing DWR debt service. This could potentially provide some near-term debt service relief for the SWP contractors from 2020-2030, but would result in a longer average life of the new bonds and a higher all-in-TIC. However, because the extent of future debt service obligations from future non-BDCP-related capital projects is unknown, the extent of such near-term debt service relief is unclear.
VI. Project Risks

Construction Cost Risk

As described in Section III, the conveyance facility is estimated to cost $14.57 billion in 2012 dollars. As noted, this estimate has a range of minus 10 percent to plus 30 percent, based on the type of the estimate at this stage of the project planning process. If the cost of designing and constructing the facility ultimately comes in at the high end of the range, this would increase the cost of CM1 to $18.9 billion in 2012 dollars. At the low end of the range, the cost of the conveyance facility would decline to $13.1 billion. In addition, as previously noted, contractors will be responsible for other costs associated with the plan, including mitigation costs, operating costs and the cost for their share of other BDCP conservation measures.

It is possible that the cost of the project will significantly exceed the upper end of the current range of the cost estimate. In a 2003 study of risks associated with so-called “megaprojects,” the authors conclude that very large infrastructure projects – primarily transportation projects – commonly experience cost overruns of 50 to 100 percent or more due to their complexity and the failure to properly assess risks inherent in the projects. More specifically, the study found that bridge and tunnel projects experienced cost overruns of 34 percent, on average.

One of the key points the authors make is that the incentives to recognize and control risks associated with these very large projects are often not strong or properly aligned. They argue that this occurs largely because the risk of cost overruns or project failure is borne by a governmental entity and, ultimately, taxpayers.

While the conveyance facility may be constructed by the DWR, water contractors will bear the cost of paying for the project. This at least partially aligns the incentive for cost control and risk assessment since the water contractors and their customers would bear the impact of cost overruns. However, making the contractors responsible for construction would likely strengthen the incentive. However, it might be argued that the incentive for cost control on the part of at least some of the water contractors is not as strong as it would be if private investors’ capital were at risk since, for a significant number of water contractors, they would pass higher costs through to their ratepayers. Arguably, having some private capital at risk would make the incentive for cost control even stronger.

However, even with ratepayers bearing the burden of any higher costs, significant cost overruns would result in higher debt loads for the water contractors, potentially raising concerns about their ability to absorb these costs, particularly for smaller agricultural contractors that are not in a position to pass these costs through to ratepayers.

Construction Delay Risk

Given the scale of the project, construction of the conveyance facility is expected to take a considerable period. As currently envisioned, design work on the facility would begin soon after the Record of Decision (ROD)/Notice of Decision (NOD). While the timeframe for the ROD/NOD is uncertain, it is anticipated that that would occur sometime in 2015. This would be followed several years later by the commencement of construction, assuming that the appropriate permits have been secured by that point. Construction is estimated to be completed by 2028.

In light of the complexity of the project, it is reasonable to expect some deviation from this schedule. Some activities will likely take less time than anticipated; others will likely take more. In addition, some aspects of the project present risks that could result in delay, such as:

Geology of the Tunnel Alignment
The construction schedule anticipates a certain pace of progress with respect to drilling the tunnel alignment. However, since the number of tunnel borings performed to date is smaller than what will eventually be performed prior to construction due to access issues, the construction team may encounter geological conditions that differ from those currently anticipated. Whether this could affect the construction schedule depends on the type of unanticipated conditions encountered.

Legal Challenges
Given the controversy surrounding the BDCP, it is likely that potentially numerous lawsuits will be filed challenging the project. The project schedule anticipates that even if lawsuits are filed, the construction schedule will stay on track as the litigation is resolved, so long as the construction team is not enjoined from proceeding with land acquisition and collecting boring samples, for example. If a court stops the construction team from pursuing these efforts, however, the schedule would be affected to an unknown extent.

Another potential legal challenge could involve the application of Proposition 26 to the water charges imposed by water contractors on their member agencies and customers for the cost of the conveyance facility. This measure, which amended the California Constitution, was passed by the voters at the November 2010 General Election. Generally, the measure requires that governmental entities show that fees bear a reasonable relation to the cost of the service being provided and that the manner in which costs are apportioned bear a reasonable relationship to the fee payer’s benefits. While these requirements generally predated the measure’s adoption by the voters, the courts are at the initial stages of interpreting what additional requirements, if any, it imposes regarding the application and design of user charges.

Funding Sources for Habitat Conservation Efforts
The BDCP proposes undertaking significant habitat conservation efforts as a condition of receiving permits to pursue the construction of the conveyance facility. Of the total $24.75 billion ($2012) estimated cost of the BDCP, approximately $8.2 billion would be invested in habitat restoration
and efforts to reduce the impact of stressors on various covered species (including responses to
changed circumstances and research and monitoring). Of this amount, $5.28 billion is for capital
purposes. Funding for habitat conservation is proposed to come primarily from various state and
federal sources, including future General Obligation bond measures approved by the voters.
Specifically, $4.1 billion is identified as potentially coming from existing and new state water
bonds and other state sources for this purpose. Approximately $3.3 billion is identified as
potentially coming from existing and new federal funding authorizations for habitat restoration. If
sufficient funding for habitat conservation is not ultimately forthcoming, the ability to operate
the conveyance facility could be jeopardized. In this report, we have not assessed the likelihood
that the various potential habitat conservation funding sources identified in the BDCP documents
will actually be available to finance the entire BDCP project.

Seismic Risk
The BDCP draft discusses the risk to Delta water exports from a seismic event that would damage
or destroy some of the Delta’s levees. Risk of seismic damage to Delta levees is also an issue with
respect to two other timeframes: during construction of the conveyance facility and after
construction is completed. A major seismic event during construction would pose the risk of delay
to construction itself at the same time that water supplies from the existing south of Delta pumps
might be disrupted. This could create a situation where water agencies are scrambling to secure
water supplies to replace Delta water losses at the same time they are beginning to pay debt
service on bonds to finance the construction of the new conveyance facility, depending on the
timing of bond issuance. A major seismic event after construction is completed and the new
facility is operational would, in theory, pose less of a challenge, since the facility is intended to
make Delta water exports less susceptible to disruption from an earthquake. According to BDCP
staff, the tunnels are being designed to withstand the maximum seismic event that would occur
every roughly 2,400 years.

Regulatory Risk

This section discusses the potential for environmental regulators to reduce allowable Delta water
exports in the future.

Under the No Action Alternative, some steps would continue to be taken to improve the ecology
of the Delta, but not on the scale that would occur under implementation of the BDCP. As a result,
risks to the health of the Delta due to a combination of climate change and sea level rise, seismic
risks, and flood risks would be mitigated to a lesser extent than under implementation of the
BDCP. Without the BDCP’s conservation measures, further restrictions on consumptive water use
become more likely as a means to improve the ecological health of the Delta. It is not possible to
determine the probability of future additional restrictions on Delta water extraction. However,
the probability is greater under the No Action Alternative than under implementation of the
BDCP.

60 The balance of the cost of habitat restoration costs is anticipated to come from the SWP and CVP contractors.
In exchange for agreeing to fund the debt service on a new water conveyance facility, SWP and CVP contractors and consumers would prefer to have a guarantee regarding the minimum amount of water that can be extracted from the Delta each year for consumptive use. Based on our discussions with various regulatory agencies and outside experts, such a guarantee is unlikely to materialize.

The Federal Endangered Species Act (ESA) and the California Natural Community Conservation Planning Act (NCCPA) set out conditions under which resource agencies can provide regulatory assurances to permittees concerning their mitigation obligations. The ESA includes a “no surprises” policy, which states that once a Habitat Conservation Plan is approved and implemented, “the federal government will not require additional conservation or mitigation measures, including land, water (including quantity, timing, and delivery), money, or restrictions on the use of those resources.”

Under the NCCPA, the California Department of Fish and Wildlife can also provide some assurance to permittees. “The assurances provided to the entities receiving permits under the NCCPA will ensure that if there are unforeseen circumstances, no additional financial obligations or restrictions on the use of resources will be required of the Permittees without their consent.”

Nevertheless, even when these assurances are granted, both federal and state regulators have the right to revoke a permit if continuing the permitted activity would jeopardize the continued existence of a protected species.

Notwithstanding the fact that federal and state law provide the opportunity for some level of regulatory assurance, several factors make a blanket assurance regarding minimum water exports from the Delta very unlikely in the case of the BDCP. The BDCP is a huge project covering a large, complex ecosystem. It includes many moving parts and the science of the Delta is uncertain and evolving, particularly as it relates to the impact of climate change and sea level rise. Given these circumstances, regulators expect to take an adaptive management approach to the Delta under which policies evolve in response to new information. The operating criteria of the new facility will have to meet the regulatory requirements of the Endangered Species Act and other relevant state and federal statutes.

The BDCP includes a number of measures intended to help protected Delta species thrive. These include predator control, the Yolo Bypass fishery enhancement, and tens of thousands of acres of habitat restoration. In addition, the new conveyance itself has the potential to improve the ecological health of the Delta by conveying water around the Delta rather than through it, which sometimes results in “reverse” flows under certain conditions. 

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62 Ibid., p. 6-30.
63 Reverse flows can occur on the Old and Middle Rivers in the Delta when water deliveries through the south Delta pumps result in currents moving in the opposite direction from the natural flow. This can confuse fish and result in greater numbers of fish being trapped in the pumps fish screens.
the so-called Decision Tree process, prior to operation of the facility, hypotheses guided by biological goals and objectives regarding the impact of habitat restoration on recovering species would be tested. Based on that experience, operations criteria may be adjusted, and the amount of water needed for outflows and the amount available for export could go up or down. Ultimately, various regulatory agencies will retain authority to determine how the facility is operated.

Although the conservation measures are expected to improve species health in the Delta, significant uncertainties remain over the extent to which they will achieve their objectives. As a result, regulators are unlikely to limit the extent to which water operations can be changed in response to new information or changes in future circumstances. Instead, through adaptive management, regulators and Delta managers will update Delta policy, including water management, as new research becomes available and as researchers see how the Delta responds after the new conservation measures are implemented. If the Delta’s health does not improve sufficiently, environmental regulators could, in the future, require additional protective measures, including reductions in the amount of water than can be extracted for consumptive use. By the same token, if these protective measures significantly improve the health of the Delta, it is possible that the amount of water exported from the Delta could increase by an unknown amount. Ultimately, a better understanding of the impact of habitat restoration on future conditions in the Delta is needed before long-term operations criteria can be developed.

To the extent that deliveries increase under potential new operating criteria, that would reduce the effective cost of water delivered to SWP and CVP contractors given fixed debt service requirements to pay for construction of the conveyance facility. Conversely, if deliveries are lower on average, the effective cost of debt service on a per acre foot basis would be higher.

**Risk of Climate Change and Sea Level Rise**

As described earlier, the modeling presented in this report builds on modeling work done as part of the preparation of the draft BDCP. The modeling undertaken in connection with the draft BDCP makes certain assumptions regarding the future conditions with respect to sea level rise and climate change. In addition, as discussed, that modeling uses the 81-year hydrologic period used by the CALSIM II model to simulate SWP and CVP operations. Thus, this information provides an illustration of the impact of sea level rise and climate change on the historical pattern of precipitation.

*Climate Change*

Global climate change is projected to result in increased surface and water temperatures in California. However, projecting future changes in precipitation is more difficult. Since the 1930s, while precipitation has increased in the Sacramento River basin, this has not been the case in the
San Joaquin River basin.\(^{64}\) Overall, studies forecast changes in precipitation in California as a whole, with declines in precipitation particularly in Southern California through 2100. While the mean-annual amount of precipitation is forecast to decrease only slightly in the Sacramento and San Joaquin River basins, more precipitation is forecast to come in the form of rainfall rather than snow, resulting in earlier runoff.\(^{65}\)

For purposes of projecting the impact of climate change in the development of the BDCP, an approach has been used that combines forecasts from 112 future climate projections used in the development of the 2007 International Panel on Climate Change Fourth Assessment Report. The methodology was further refined in an effort to reflect the impact that climate change will have not only in terms of higher average temperatures and lower average precipitation, but also the expected increase in variability around those averages in the form of weather extremes.\(^{66}\)

Unlike sea level rise, where the impact of climate change can be characterized by a single figure denoting the extent of the projected rise, the impact of climate change on temperature and precipitation is more complex. In general, climate change is expected to result in higher average temperatures and lower average precipitation. However, there will be significant monthly and, even daily, variation around those averages. And, as noted, more of the region’s precipitation is expected to come in the form of rainfall. Thus, the monthly pattern of runoff in the SWP and CVP watersheds is likely to change significantly from the historical pattern.

The results of the 112 projections used to develop the BDCP climate change forecast exhibit some variability regarding the projected annual average temperature and precipitation. In other words, some projections forecast drier and warmer conditions compared to the mid-range climate change scenario, while others forecast wetter and less warm conditions. Similarly, some projections forecast drier and less warm conditions and still others forecast wetter and warmer conditions.

These variations among climate change scenarios could potentially affect annual average exports from the Delta. There is a risk that precipitation patterns evolve in a direction that differs significantly from the pattern currently anticipated under the BDCP planning process such that exports from the Delta are substantially below the anticipated level, again potentially jeopardizing the willingness or ability of water contractors to pay debt service. Because the risk of a significant deviation – should one occur – is likely greater further out in time when the balance of financing costs remaining to be paid is diminishing, this mitigates the risk associated with this issue.

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\(^{66}\) BDCP, Appendix 5.A.2 Climate Change Approach And Implications For Aquatic Species, p. 5.A.2-8, (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Appendix_5A_-_2_-_Climate_Change_Approach_and_Implications_for_Aquatic_Species.sflb.ashx).
Sea Level Rise

Global climate change is projected to result in an increase in sea level. For BDCP planning purposes, sea level rise is projected to be approximately 12 - 18 cm (5 - 7 inches) at year 2025, and approximately 30 – 60 cm (12 – 24 inches) at year 2060. For the BDCP alternatives, given the uncertainty in sea level rise projections, the mid-point of the estimates was used, resulting in sea level rise of 15 cm (6 inches) by 2025 and 45 cm (18 inches) at 2060.⁶⁷

If sea level rise is greater than anticipated under these assumptions, salinity would increase in the western and central Delta. Delta operations criteria are designed to maintain freshwater in the western Delta in the Spring (Spring X2), and, in the case of the conveyance facility alternative currently under consideration, in the fall (Fall X2) under certain operating conditions. As sea level rise occurs, more water would need to be released from the SWP and CVP reservoirs north of the Delta to avoid saltwater intrusion into the Delta, therefore, less water would remain in storage at the end of September and less water would be available for SWP and CVP water supplies both upstream and downstream of the Delta.⁶⁸

Greater than anticipated sea level rise resulting in increased salinity in the west Delta could also affect the ability to take water from the south Delta in the fall months. As a result, less water would be available for SWP and CVP deliveries south of the Delta.

Alternatively, to the extent that sea level rise is less than that assumed in the BDCP modeling, this would likely result in more water being available for SWP and CVP deliveries south of the Delta.

To the extent that the impact on water deliveries is significantly different from the assumptions employed in the BDCP planning process, this could affect the effective cost of water delivered to SWP and CVP contractors and may affect their ability to pay debt service for the facility. Again, because the risk of a significant deviation – should one occur – is likely greater further out in time when the balance of financing costs remaining to be paid is diminishing, this mitigates the risk associated with this issue.

⁶⁷ BDCP, Appendix 5.A.2 Climate Change Approach And Implications For Aquatic Species, p. 5.A.2-10, (http://baydeltaconservationplan.com/Libraries/Dynamic_Document_Library/Public_Draft_BDCP_Appendix_5A_-_2_-_Climate_Change_Approach_and_Implications_for_Aquatic_Species.sflb.ashx).
Appendix A: Supporting Detailed Data: Annual Estimates of Water Contractors’ BDCP-related Costs

The table below provides the annual BDCP-related costs expected to be paid by the water contractors both in 2012 dollars and in year-of-expenditure dollars.

Figure 24: Annual Contractor BDCP-related Costs

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<td>2064</td>
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</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>14,570.9</strong></td>
<td><strong>88.8</strong></td>
<td><strong>14,659.8</strong></td>
<td><strong>439.2</strong></td>
<td><strong>1,886.8</strong></td>
</tr>
</tbody>
</table>
Summary of Financing Scenarios

The table below provides a summary of the financing scenarios prepared by the State Treasurer’s Office to illustrate the impact of changing various assumptions such as an increase or decrease in construction costs, delays, higher or lower interest rates, and other factors.

Figure 25: Summary of Financing Scenarios Prepared by the State Treasurer's Office

<table>
<thead>
<tr>
<th>Scenarios*</th>
<th>Project Funds</th>
<th>Par Amount</th>
<th>Total Interest</th>
<th>Total Debt Service</th>
<th>Maximum Annual Debt Service</th>
<th>Final Debt Service Reserve</th>
<th>All-In TIC</th>
<th>Total Debt Service Reserve Deposits</th>
<th>Capitalized Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Case</td>
<td>$19,683,652,391</td>
<td>$20,503,070,000</td>
<td>$3,842,923,874</td>
<td>$55,366,599,874</td>
<td>$1,392,899,921</td>
<td>2068</td>
<td>5.964485%</td>
<td>$696,464,274</td>
<td></td>
</tr>
<tr>
<td>Best Case</td>
<td>$14,810,461,835</td>
<td>$15,369,620,000</td>
<td>$21,009,278,634</td>
<td>$36,378,898,614</td>
<td>$922,527,211</td>
<td>2068</td>
<td>4.948723%</td>
<td>$461,274,774</td>
<td></td>
</tr>
<tr>
<td>Worst Case</td>
<td>$25,168,828,982</td>
<td>$26,444,420,000</td>
<td>$63,672,053,427</td>
<td>$90,071,473,427</td>
<td>$2,244,643,240</td>
<td>2071</td>
<td>7.998919%</td>
<td>$1,122,332,156</td>
<td></td>
</tr>
</tbody>
</table>

* Note that the 10% decrease and 30% increase in construction costs refers to the change in pre-contingency construction costs, as explained in the report.
Construction Cost Inflation Measures

For our analysis we have used an annual construction cost inflation rate of 3% based on a review of a number of construction cost index series from the U.S. Bureau of Reclamation, the United States Army Corps of Engineers (USACE), and the California Department of Transportation (Caltrans). We looked specifically at those large infrastructure projects most comparable to the proposed BDCP tunnels, such as tunnels, dams, pumping plants, and in the case of the Caltrans, bridges. We estimated the annual inflation over a 10-year, 20-year, and 28-year period (28 years being the longest period available from all three sources). In addition, the construction cost data from the Army Corps of Engineers included forecasts through 2037. A summary of these inflation estimates is provided in Figure 26 below. As the table shows, the average construction cost inflation rate from the three sources for the past 28 years are all very close to 3%, varying from 2.8% to 3.1%. The more recent 20-year period has seen a somewhat higher inflation rate (from 3.0% to 4.6%), and the past 10 years even higher (3.6% to 4.9%). The Army Corps of Engineers was the only source that also included a forecast, forecasting annual inflation rates of around 2% over both the next 10 years and the next 25 years. Because of the extended time period involved and the fact that the 2% forecast inflation rate from the ACE is considerably lower than the historical average, we have used the historical 3% annual inflation rate as a conservative estimate of the expected inflation rate over the course of the BDCP tunnel construction period.

Figure 26: Construction Cost Inflation Estimates

<table>
<thead>
<tr>
<th>Source</th>
<th>Detail</th>
<th>Historical Index Values and Annual Growth Rate</th>
<th>Forecast Values and Annual Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Past 10 yrs</td>
<td>Past 20 yrs</td>
</tr>
<tr>
<td>US Bureau of Reclamation</td>
<td>Tunnels (Forecast: none)</td>
<td>261 377 3.7%</td>
<td>198 377 3.3%</td>
</tr>
<tr>
<td>(Historical: 1984Q1 thru 2013Q2)</td>
<td>Dam structure</td>
<td>188 304 4.9%</td>
<td>148 304 3.7%</td>
</tr>
<tr>
<td></td>
<td>Pumping plants</td>
<td>241 349 3.8%</td>
<td>188 349 3.1%</td>
</tr>
<tr>
<td></td>
<td>Composite Trend</td>
<td>242 368 4.3%</td>
<td>188 368 3.4%</td>
</tr>
<tr>
<td>Army Corps of Engineers</td>
<td>CHANNELS &amp; CANALS (Forecast: 2013 thru 2017)</td>
<td>553 789 3.6%</td>
<td>438 789 3.0%</td>
</tr>
<tr>
<td>(Historical: 1968 thru 2012)</td>
<td>PUMPING PLANT</td>
<td>486 769 4.7%</td>
<td>399 769 3.3%</td>
</tr>
<tr>
<td></td>
<td>DAMS</td>
<td>519 763 3.9%</td>
<td>410 763 3.2%</td>
</tr>
<tr>
<td></td>
<td>COMPOSITE INDEX (WTD AVG)</td>
<td>517 774 4.1%</td>
<td>415 774 3.2%</td>
</tr>
<tr>
<td>CA DOT - Bridge Construction Index</td>
<td>Quarterly Index (Q4)</td>
<td>286 406 3.6%</td>
<td>166 406 4.6%</td>
</tr>
<tr>
<td>(Historical: 1984Q1 thru 2013Q1)</td>
<td>Annual Avg of Quarterly Data</td>
<td>258 400 4.5%</td>
<td>198 400 3.6%</td>
</tr>
<tr>
<td>(Forecast: none)</td>
<td>4-Qtr Moving Avg (Q4)</td>
<td>259 384 4.0%</td>
<td>201 384 3.3%</td>
</tr>
</tbody>
</table>

Sources for Construction Cost Index Data

<table>
<thead>
<tr>
<th>Cost Indices</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>USBR Construction Cost Indices</td>
<td><a href="http://www.usbr.gov/pmts/estimate/cost_trend.html">http://www.usbr.gov/pmts/estimate/cost_trend.html</a></td>
</tr>
</tbody>
</table>
General Inflation Measures

We have also used a general annual inflation rate of 3% based on the historic inflation rate as estimated using the Consumer Price Index (CPI) for the US and for California. As shown in Figure 27, the average annual inflation rate as measured by the CPI has been approximately 2.4% for both California and the nation as a whole for the most recent 10 and 20 year period, while the average annual inflation over the past 30 years was approximately 2.9% for the entire US and 3.0% for the state. The Department of Finance has also forecast an annual inflation rate of 2.0% for the nation and 2.1% for California over the next four years. However, because of the extended time period analyzed here, we have used the 30-year historical California annual inflation rate 3.0% as a conservative estimate of the expected average general inflation rate for our analysis.

Figure 27: General Inflation Rate Estimates

<table>
<thead>
<tr>
<th>Data Description</th>
<th>Data Series</th>
<th>Historical Index Values and Annual Growth Rate</th>
<th>Forecast Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>California Department of Finance (Historical: 1970 thru 2013) (Forecast: 2014 thru2017)</td>
<td>CPI - US</td>
<td>184</td>
<td>233</td>
</tr>
<tr>
<td></td>
<td>CPI - California</td>
<td>190</td>
<td>242</td>
</tr>
</tbody>
</table>

Source: California Department of Finance, Consumer Price Index (http://www.dof.ca.gov/html/fs_data/latestecondata/documents/BBCYCIPI.xls)
## Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>acre-foot (AF)</strong></td>
<td>The volume of water that would cover 1 acre of land to a depth of 1 foot. Equal to 1,233.5 cubic meters (43,560 cubic feet) or 325,851 gallons.</td>
</tr>
</tbody>
</table>

**Bay Delta Conservation Plan (BDCP or the Plan)**

The joint habitat conservation plan and natural community conservation plan prepared in accordance with the Planning Agreement and approved by the fish and wildlife agencies under Section 10 of the ESA and Section 2835 of the Fish & Game Code. The BDCP supports the Section 7 consultation and the integrated biological opinion and related incidental take statements issued concurrently.\(^{69}\)

**California Department of Transportation (Caltrans)**

The State of California, Department of Transportation (Caltrans) is responsible for the design, construction, maintenance, and operation of the California State Highway System, as well as that portion of the Interstate Highway System within the state's boundaries. Alone and in partnership with Amtrak, Caltrans is also involved in the support of intercity passenger rail service in California, and is a leader in promoting the use of alternative modes of transportation.\(^{70}\)

**California Natural Community Conservation Planning Act (NCCPA)**

A California state Act authorizing the Natural Community Conservation Plan program designed to use an ecosystem approach to conserve natural communities at the ecosystem scale while accommodating compatible land use.\(^{71}\)

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\(^{69}\) Source: BDCP Chapter 12 (Glossary), 12/06/2013 (http://baydeltaconservationplan.com/PublicReview/PublicReviewDraftBDCP.aspx)  
\(^{70}\) Source: http://www.dot.ca.gov/hq/paffairs/faq/faq53.htm.  
\(^{71}\) Source: http://www.fws.gov/stockton/afrp/acronym_template.cfm?code=101
## Glossary

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| CALSIM II                     | CALSIM II is a peer-reviewed generalized water resources simulation model for evaluating operational alternatives of large, complex river basins. It currently uses historical hydrologic conditions from 1922 through 2002 to simulate SWP/CVP operations under various scenarios. The model is a product of joint development between DWR and Bureau of Reclamation.  
| Central Valley Project (CVP)  | The federally authorized water management and conveyance system, operated by the Bureau of Reclamation, provides water to agriculture, urban, and industrial users in California.  
| Conservation Measure 1 (CM1)  | Each action detailed in the BDCP’s conservation strategy is currently grouped into one of 22 “conservation measures.” Conservation Measure 1 (CM1), “Water Facilities and Operation,” includes the new water intakes, fish screens, a new 40 acre forebay, and two 30-mile tunnels to transport the water to the existing pumping facilities in the south Delta.  
Glossary

<table>
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| Department of Water Resources (DWR)       | DWR was established in 1956 by the California Legislature, and currently operates and maintains the California State Water Project (SWP), which provides water for 25 million residents, farms, and businesses. Other programs work to preserve the natural environment and wildlife, monitor dam safety, manage floodwaters, conserve water use, and provide technical assistance and funding for projects for local water needs. DWR’s major responsibilities include overseeing the statewide process of developing and updating the California Water Plan (Bulletin 160 series); protecting and restoring the Sacramento-San Joaquin Delta; regulating dams, providing flood protection, and assisting in emergency management; educating the public about the importance of water and its proper use; providing technical assistance to service local water needs; and planning, designing, constructing, operating and maintaining California’s State Water Project.  

early long-term (ELT)                      | The BDCP implementation period that extends 11 to 15 years after the BDCP permit term is initiated.                                                                                                                                                                                                                                                                                                                                                                           |
| evaluated starting operations (ESO)       | As part of the BDCP planning process, various scenarios were modeled to analyze the impact on the Delta ecosystem of higher and lower flows of water through the Delta in the Spring and the Fall. The ESO scenario assumes low outflow in the Spring but high outflow in the Fall.                                                                                                                                                                                                                             |
| Exceedance level                          | The exceedance level represents the percent of years in which the amount of water exports is equaled or exceeded, and is often used to illustrate the probability of water deliveries meeting or exceeding a specific level. For example, if a value of 4 million AF is associated with an exceedance level of 70%, that indicates that 70% of the time annual water exports will be at or above 4 million AF.                                                                                                                                         |

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74 Source: http://www.water.ca.gov.  
## Glossary

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<th>Term</th>
<th>Definition</th>
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<tr>
<td><strong>Federal Endangered Species Act (ESA)</strong></td>
<td>The Endangered Species Act of 1973 was designed to protect critically imperiled species from extinction as a &quot;consequence of economic growth and development untempered by adequate concern and conservation.&quot; The Act is administered by two federal agencies, the United States Fish and Wildlife Service (FWS) and the National Oceanic and Atmospheric Administration (NOAA).</td>
</tr>
<tr>
<td><strong>High Outflow Scenario (HOS)</strong></td>
<td>As part of the BDCP planning process, various scenarios were modeled to analyze the impact on the Delta ecosystem of higher and lower flows of water through the Delta in the Spring and the Fall. The High Outflow Scenario (HOS) assumes higher outflows in both the Spring and Fall, resulting in the lowest expected water for export to water users via the SWP and CVP.</td>
</tr>
<tr>
<td><strong>late long-term (LLT)</strong></td>
<td>Refers to the BDCP implementation period that extends 16 to 50 years after the BDCP permit term is initiated.</td>
</tr>
<tr>
<td><strong>Low Outflow Scenario (LOS)</strong></td>
<td>As part of the BDCP planning process, various scenarios were modeled to analyze the impact on the Delta ecosystem of higher and lower flows of water through the Delta in the Spring and the Fall. The Low Outflow Scenario assumes low outflows in both the Spring and Fall, resulting in the highest expected level of water for export to water users via the SWP and CVP.</td>
</tr>
<tr>
<td><strong>Metropolitan Water District (MWD)</strong></td>
<td>The Metropolitan Water District of Southern California (MWD) is a consortium of 14 cities and 12 municipal water districts. It was created by an act of the California Legislature in 1928, primarily to build and operate the Colorado River Aqueduct, and in 1960 became the first (and largest) contractor to the State Water Project. MWD currently provides drinking water to nearly 19 million people, delivering an average of 1.7 billion gallons of water per day to a 5,200-square-mile service area that includes parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino and Ventura counties.</td>
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### Glossary

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<tr>
<td>municipal and industrial (M&amp;I)</td>
<td>Municipal and industrial (M&amp;I) water users include residential, commercial, industrial and government water users. Such water users typically require potable water that has been treated to a level appropriate for human consumption, as distinguished from agricultural water users who primarily use untreated water for irrigation purposes.</td>
</tr>
<tr>
<td>Municipal Market Data (MMD)</td>
<td>The Municipal Market Data is a Thomson-Reuters proprietary database that tracks municipal bond offerings nationwide. This database is used to generate numerous municipal bond indexes published by Thomson-Reuters. For this report, the MMD index for AA-rated general revenue bonds was used to estimate the expected interest rate for the general revenue bonds that will be issued to fund the water contractors’ share of the BDCP costs.</td>
</tr>
<tr>
<td>No Action Alternative (NAA)</td>
<td>One of the BDCP’s water export scenarios. This scenario assumes that no BDCP would be adopted and implemented.</td>
</tr>
<tr>
<td>operating and maintenance (O&amp;M) costs</td>
<td>Costs associated with the operation and maintenance of water supply and conveyance facilities, as opposed to the cost of constructing the facilities themselves.</td>
</tr>
<tr>
<td>Peak Annual Costs</td>
<td>The average annual estimated costs across the ten years of the BDCP construction and financing period with the highest estimated annual costs.</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>---------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>San Luis &amp; Delta Mendota Water Authority (SLDMWA)</td>
<td>The San Luis &amp; Delta-Mendota Water Authority was established in January of 1992 and consists of water agencies representing approximately 2,100,000 acres of 29 federal and exchange water service contractors within the western San Joaquin Valley, San Benito and Santa Clara counties. One of the primary purposes of establishing the Authority was to assume the operation and maintenance (O&amp;M) responsibilities of certain United States Bureau of Reclamation (USBR) Central Valley Project (CVP) facilities, and do so at an optimum level and at a lower cost than the USBR. The governing body of the Authority consists of a 19-member Board of Directors classified into five divisions with directors selected from within each division. Each Director, and respective Alternate Director, is a member of the governing body or an appointed staff member of his or her agency.</td>
</tr>
<tr>
<td>Spring High Outflow (SprHOS)</td>
<td>As part of the BDCP planning process, various scenarios were modeled to analyze the impact on the Delta ecosystem of higher and lower flows of water through the Delta in the Spring and the Fall. The Spring High Outflow Scenario assumes high outflow in the Spring but lower outflow in the Fall.</td>
</tr>
<tr>
<td>State and Federal Contractors Water Agency (SFCWA)</td>
<td>The State and Federal Contractors Water Agency was formed in August of 2009 as a Joint Powers Authority under California law by various water agencies that receive water transported across the Sacramento-San Joaquin River Delta by the State Water Project (SWP) and Central Valley Project (CVP). The organization’s mission is to assist its member agencies in assuring a sufficient and reliable high-quality water supply for their customers from the State Water Project and federal Central Valley Project. The core focus of activities in pursuing this mission is centered on facilitating habitat conservation measures and research related to the restoration of the Delta ecosystem while assuring sufficient and reliable export water supplies.</td>
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</table>

76 Source: http://www.sldmwa.org/learn-more/about-us/.
77 Source: http://www.sfcwa.org/about/.
### Glossary

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>State Water Project (SWP)</strong></td>
<td>The state-authorized and operated water storage and delivery system of reservoirs, aqueducts, power plants and pumping plants that provides and distributes water and urban and agricultural water suppliers in Northern California, the San Francisco Bay Area, the San Joaquin Valley, the Central Coast, and southern California.</td>
</tr>
<tr>
<td><strong>United States Army Corps of Engineers (USACE)</strong></td>
<td>The United States Army Corps of is a U.S. federal agency under the Department of Defense with approximately 36,500 civilian and military personnel, making it one of the world's largest public engineering, design, and construction management agencies. Although generally associated with dams, canals and flood protection in the United States, USACE is involved in a wide range of public works throughout the world. The Corps' mission is to &quot;Deliver vital public and military engineering services; partnering in peace and war to strengthen our Nation’s security, energize the economy and reduce risks from disasters.&quot;[78]</td>
</tr>
<tr>
<td><strong>year-of-expenditure dollars ($YOE)</strong></td>
<td>Year of expenditure dollars ($YOE) are dollars that are adjusted for inflation from the present time to the year in which the money is expected to be spent.</td>
</tr>
</tbody>
</table>

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March 18, 2015

Attention: Imported Water Committee

Metropolitan Water District Storage Programs Update (Information).

Purpose
To update the status of the Metropolitan Water District’s storage programs.

Background
California’s 2014 water year was the third-driest in recorded state history. Even though the 2015 water year started with several significant precipitation events in December, the state experienced one of the driest Januaries on record. A survey conducted in late-January at Echo summit in the Sierra Nevada Mountains, which normally constitutes the state's largest surface runoff area, showed the snow pack at just 12 percent of normal. Lake Oroville, which is the State Water Project’s principal reservoir, is about 69 percent of normal for this time of year. The Metropolitan Water District (MWD) ended 2014 by depleting about half of the dry-year storage reserves, starting 2015 with 1.17 million acre-feet. In preparation for potential continued dry conditions, this month, MWD initiated discussions on a potential water supply allocation. Key issues in these discussions are how much storage reserves are available, how much storage should be used to help meet projected 2015 demands, and where those demands occur in the MWD’s service territory.

A more comprehensive discussion of MWD’s storage programs and the evolution of its reliance on storage is attached (see Attachment).

Discussion
Calendar Year 2014. MWD began 2014 with 2.33 million acre-feet of total dry-year storage. As dry conditions persisted and record temperatures continued, the Department of Water Resources (DWR) issued its final 2014 State Water Project (SWP) allocation at 5 percent. Similarly, the Colorado River Basin was in its 14th year of drought, although no shortage was declared on the River. In California, Governor Brown declared a state of emergency in January urging Californians to increase water conservation efforts and in April, he again asked Californians to redouble their efforts. The MWD Board responded by taking several actions to further its conservation objectives. However, despite the efforts, member agencies’ demand on MWD increased compared with 2013. Statewide, 2014 ended as the warmest year on record. Member agencies’ demand on MWD (including the Water Authority’s Quantification Settlement Agreement (QSA) transfer supplies), along with MWD’s obligations and system losses totaled 2.1 million acre-feet. More than half of MWD’s demand – 1.16 million acre-feet -- was met by storage reserves (See Table 1), reducing the dry-year storage reserves to about 1.17 million acre-feet.

---

1 Excluding emergency storage of 626,000 acre-feet.
Table 1: 2014 MWD Water Supply and Demand Balance

<table>
<thead>
<tr>
<th>2014 Water Supply and Demand Balance</th>
<th>(Acre-Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Demands, Obligations, and Losses *</td>
<td>-2,103,000</td>
</tr>
<tr>
<td>Available Supplies</td>
<td>945,000</td>
</tr>
<tr>
<td>SWP Supplies</td>
<td>108,000</td>
</tr>
<tr>
<td>CRA Supplies *</td>
<td>837,000</td>
</tr>
<tr>
<td>Net Water Supply and Demand Balance (Gap)</td>
<td>-1,158,000</td>
</tr>
<tr>
<td>Dry-Year Storage Withdrawn</td>
<td>1,158,000</td>
</tr>
<tr>
<td>WSDM Storage as of January 1, 2015</td>
<td>1,174,000</td>
</tr>
</tbody>
</table>

*(includes the Water Authority’s 180,000 AF of QSA Transfer and Lining Water)

Calendar Year 2015. The significant withdrawals from storage, and where the remaining storage reserves are located, have made availability of 2015 SWP supplies critical. This section examines MWD’s potential supplies for 2015.

Transfers. In MWD’s 2015 supply and demand analysis presented in February, an additional 265,000 acre-feet of dry-year transfers was assumed on the Colorado River and SWP systems. In contrast, MWD obtained 12,000 acre-feet of dry-year transfers in 2014.

Colorado River Aqueduct. Although there is a slight probability of shortage declaration in 2016 on the Colorado River due to the prolonged drought experienced in that basin, no shortage declaration is expected on the River for 2015. For 2015, MWD reported it anticipates a base Colorado River Aqueduct supply of about 930,000 acre-feet – 93,000 acre-feet more than its 2014 supply.

State Water Project. Last December, DWR announced its initial allocation of 10 percent for 2015, and later, in January, increased it to 15 percent after a series of storms in December. However, despite December’s storms, and expected heavy rainfall in northern California this month, DWR has indicated it would take three to four months of above normal precipitation to pull California out of the lingering drought. MWD can expect 286,725 acre-feet of SWP supplies under the current 15 percent allocation. Depending upon hydrology over the next several months, the final allocation may be higher or lower.

In an operations study update (January 21), DWR projected an 18 percent SWP allocation under dry conditions, and between 27 percent and 39 percent SWP allocation under median conditions, depending on pumping restrictions. In February, MWD presented scenario analyses for SWP allocations at 20, 30 and 40 percent, reflecting its interpretation of DWR modeling results for SWP allocation under dry and median conditions. At these allocations, MWD reported between

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2 In February 2015, the MWD board authorized pursuing up to 100,000 acre-feet of additional dry-year transfer supplies on the SWP system
3 No details were provided on MWD’s project 2015 Colorado River supplies, however, it may involve additional programs similar to the Southern Nevada exchange which allows MWD to take the water now and return it in the future.
4 The Operations Study conducted by DWR relies on reservoir conditions, precipitation data and operation restrictions, among other things, to develop the probability of allocation levels. The study result changes as the water year unfolds and precipitation measurements and runoff predictions are better known. For example, the median condition based on January 5 Operations Study was between 45 and 55 percent, depending on pumping restrictions.
500,000 and 540,000 acre-feet of water from storage is available, as withdrawal capacity increases slightly (although not proportionally) with increased SWP allocation.

**Demand Gap.** Table 2 summarizes MWD’s 2015 potential supply and demand scenarios, assuming a repeat of 2014 demands in 2015 and under the current SWP allocation and potential SWP allocations based on current projected dry and median conditions, as well as a SWP allocation where available supplies balance with assumed demands.

<table>
<thead>
<tr>
<th>State Water Project Allocation</th>
<th>15% SWP (AF)</th>
<th>20% SWP (AF)</th>
<th>30% SWP (AF)</th>
<th>40% SWP (AF)</th>
<th>50% SWP (AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWP Supplies Total</td>
<td>286,725</td>
<td>382,300</td>
<td>573,450</td>
<td>764,600</td>
<td>955,750</td>
</tr>
<tr>
<td>CRA Supplies Total*</td>
<td>930,000</td>
<td>930,000</td>
<td>930,000</td>
<td>930,000</td>
<td>930,000</td>
</tr>
<tr>
<td>Transfers/Exchanges Total</td>
<td>265,000</td>
<td>265,000</td>
<td>265,000</td>
<td>265,000</td>
<td>265,000</td>
</tr>
<tr>
<td><strong>Supplies Total</strong></td>
<td><strong>1,481,725</strong></td>
<td><strong>1,577,300</strong></td>
<td><strong>1,768,450</strong></td>
<td><strong>1,959,600</strong></td>
<td><strong>2,150,750</strong></td>
</tr>
<tr>
<td>2015 Demands and System Losses*</td>
<td>2,103,000</td>
<td>2,103,000</td>
<td>2,103,000</td>
<td>2,103,000</td>
<td>2,103,000</td>
</tr>
<tr>
<td><strong>Net Water Supply and Demand Balance</strong></td>
<td><strong>-621,275</strong></td>
<td><strong>-525,700</strong></td>
<td><strong>-334,550</strong></td>
<td><strong>-143,400</strong></td>
<td><strong>47,750</strong></td>
</tr>
</tbody>
</table>

*(includes the Water Authority’s 180,000 acre-feet of QSA Transfer and Lining Water)

**Storage Supplies.** For SWP allocations between 20 and 40 percent, out of the 1.17 million acre-feet of dry-year storage reserves, MWD reported it has 500,000 and 540,000 acre-feet of storage supply accessible to augment supply in 2015. MWD now is faced with the question whether to withdraw almost half of its remaining dry-year storage thus leaving minimal storage reserves for future years, or whether to take actions to manage demand, including allocating water, to reduce potential storage take and preserve storage reserves in anticipation of potential continuation of dry year impacts to supply availability.

**SWP-Exclusive Area.** Under normal operations, one-third of MWD’s service area can receive only SWP supplies. In 2014, due to limited SWP supplies, MWD took actions to reconfigure its operations to facilitate the use of Colorado River supplies in some of the previously SWP-exclusive areas. MWD withdrew 495,000 acre-feet of storage from SWP system in 2014, depleting its DWR “flex storage” account and almost all of its “carryover” storage. Under agreement, MWD must pay back the 219,000 acre-feet of its “flex storage” take within five years. Withdrawal of this unprecedented amount of water from the SWP system was necessary largely to meet MWD’s SWP-exclusive areas’ needs. Together with the SWP base supply, in 2014, MWD delivered 608,000 acre-feet of SWP supplies, – of which about 550,000 acre-feet was consumed by the SWP-exclusive

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5 Based on MWD’s interpretation of potential SWP allocations, which differ slightly from DWR’s modeling results.  
6 Under the 10 percent initial SWP allocation, the total storage reserves available is up to 491,000 acre-feet.  
7 Per the Monterey Amendments, the Flexible Storage Program provides SWP water contractors participating in the repayment of the capital costs of Castaic Lake and Lake Perris the option to withdraw water in excess of approved deliveries. Participating SWP water contractors are given five years to replace stored water withdrawn with approved SWP or non-SWP water. MWD has access to up to 219,000 acre-feet of water in DWR’s terminal reservoirs.  
8 Includes a small amount of transfers, and advance delivery program with Desert Water Agency and Coachella Valley Water District
areas. In other words, even with operational changes, MWD still has an annual SWP need of 550,000 acre-feet, without additional demand management. An added complexity MWD must consider when its SWP system storage is low is how it will meet its SWP-exclusive area needs.

Table 3 illustrates potential available 2015 SWP supplies under the same scenarios analyzed above. It also offers a perspective on MWD’s ability to meet its SWP-exclusive areas’ demand. The table shows a severe limitation for MWD to serve water to its SWP-exclusive areas if allocation is below 20 percent. Until MWD regains access to DWR’s “flex” storage and “carryover” water and if dry conditions continue, how MWD would meet its SWP-exclusive area’s demands remains a challenge.

### Table 3: Available SWP Supplies including System Storage

<table>
<thead>
<tr>
<th></th>
<th>15% SWP (AF)</th>
<th>20% SWP (AF)</th>
<th>30% SWP (AF)</th>
<th>40% SWP (AF)</th>
<th>50% SWP (AF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWP Base (Table A)</td>
<td>286,725</td>
<td>382,300</td>
<td>573,450</td>
<td>764,600</td>
<td>955,750</td>
</tr>
<tr>
<td>SWP System Storage</td>
<td>141,000</td>
<td>151,000</td>
<td>171,000</td>
<td>191,000</td>
<td>191,000</td>
</tr>
<tr>
<td>Carryover</td>
<td>26,000</td>
<td>26,000</td>
<td>26,000</td>
<td>26,000</td>
<td>26,000</td>
</tr>
<tr>
<td>DWR Flex</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Central Valley programs*</td>
<td>115,000</td>
<td>125,000</td>
<td>145,000</td>
<td>165,000</td>
<td>165,000</td>
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<tr>
<td>DWCV Advance Delivery Account</td>
<td>28,650</td>
<td>38,200</td>
<td>57,300</td>
<td>76,400</td>
<td>95,500</td>
</tr>
<tr>
<td><strong>SWP Total</strong></td>
<td><strong>456,375</strong></td>
<td><strong>571,500</strong></td>
<td><strong>801,750</strong></td>
<td><strong>1,032,000</strong></td>
<td><strong>1,242,250</strong></td>
</tr>
</tbody>
</table>

* Central Valley programs include: Arvin Edison, Semitropic, Kern Delta and Mojave

Storage Use. The large gap between supply and demand if SWP allocation stays at 20 percent will force MWD to allocate water because it does not have access to adequate storage reserves to meet demands. Even if the SWP allocation improves, there is still important policy considerations relating to how MWD should meet its demands:

- How does MWD balance the amount of water to keep in storage and how much should it withdraw to meet demand and lessen the impacts of shortage? This requires considering:
  - What’s the proper reserve balance to keep for future use if dry conditions continue?
  - How does an allocation affect the region’s economy?
- If MWD calls for an allocation too soon, would that be an unnecessary burden to its ratepayers if wetter weather returns in late spring?
- If MWD allocates its supplies, is there a priority on any “excess” supplies resulting from demand reductions? Should MWD reserve the supplies in storage, or should it share the supplies for member agencies to store in their groundwater basins or reservoirs?

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9 MWD reported that through its operational changes, it was able to reduce its SWP-exclusive area demand from about 700,000 acre-feet to 550,000 acre-feet in 2014.
In addition to the storage withdrawals, in recent years, MWD has been utilizing supplies from programs that contain “pay-back” provisions. The use of DWR’s flex storage is an example. MWD has also exchanged 162,000 acre-feet of water with Southern Nevada Water Authority, which must be paid back in future years. MWD must consider these pay-back obligations and the future impacts of continuing to utilize supplies with these provisions on its ability to meet its member agencies’ future demands.

**Next Steps.** The Water Authority’s Delegates have long urged the MWD Board to have a policy discussion on storage use to develop a comprehensive storage management strategy that includes adaptive put and take operational parameters as well as a funding plan. This month, MWD began the discussion on storage use and demand management. Staff will report to the Water Authority’s Imported Water Committee on the discussions held at MWD’s committee and Board meetings.

Prepared by: Debbie Discar-Espe, Senior Water Resources Specialist
Reviewed by: Amy Chen, Director of the MWD Program

Attachment: Metropolitan Water District Storage Programs, dated June 18, 2014
June 18, 2014

Attention: Imported Water Committee

Metropolitan Water District Storage Programs (Information).

Purpose
To review Metropolitan Water District’s storage programs and how the use of storage influences MWD’s ability to meet demand.

Background
California is in the third consecutive year of drought, with 2013 being the direst year on record statewide. Governor Brown declared a state of emergency in January urging Californians to increase water conservation efforts and he again asked Californians in April to redouble their effort. The Metropolitan Water District (MWD) board responded by taking actions to further its conservation results in February, March, and again in May; but persistent dry conditions and hotter than normal temperatures continue to increase demands on MWD.1 The worsening drought is causing MWD to withdraw an unprecedented amount of water from storage reserves this year to meet demands. Potentially, more than 1 million acre-feet of water may be withdrawn from storage for 2014, representing almost half of MWD’s current available dry-year storage supplies.

MWD’s storage management strategies were developed in earlier years, following the droughts of 1976-77 and 1987-1992, and the region’s need for storage has since evolved. For example, MWD increased its reliance on the more hydrologically variable State Water Project (SWP) supplies in 2003 when it lost access to a significant amount of surplus Colorado River, a core supply. The pumping restrictions placed on the SWP since 2007 threaten to cause MWD’s SWP supplies to be short seven out of 10 years,2 versus three out of 10 years historically. These changed conditions have progressively increased MWD’s reliance on storage reserves to meet supply gaps – both in terms of frequency and degree of reliance. This reality, combined with the current depth of the drought, makes it an opportune time to review and update MWD’s storage programs and its management strategy.

To facilitate a more in-depth understanding of MWD’s storage programs and how its reliance on storage has evolved, please refer to Attachment 1.

Discussion
Over the past two decades, MWD increased its total storage capacity to about 6 million acre-feet to meet emergency and dry-year supply needs. By 2012, MWD accumulated storage reserves to its highest level and ended the year with about 2.7 million acre-feet of dry-year supplies in storage.3 With

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1 The Water Authority board took action in February 2014, activating its Drought Response Plan, seeking increased voluntary conservation. In March 2008, the Water Authority approved a Model Drought Response Ordinance as a guide for member agencies. It identifies four levels of drought response with progressive water-use restrictions.
2 According to MWD, modeling results conducted immediately following the pumping restrictions showed that the SWP would be short seven out of 10 years; but more recently, staff said as a result of overall reduction on MWD demand, the frequency of shortage is not as severe, but remains higher than the three out of 10 years.
3 Not including an additional 626,000 acre-feet of emergency storage supplies. The amount of storage supplies set aside for emergency use may differ one year to another, because the amount is adjusted according to the projected needs.
2013 in the books as California’s driest year on record, MWD drew its storage reserves down by 358,000 acre-feet, closing the year with about 2.3 million acre-feet of total dry-year storage.

MWD entered 2014 with a dismal 5 percent SWP initial allocation. As dry conditions persisted – for the first time ever – the Department of Water Resources (DWR) decreased the allocation to an unprecedented zero percent, an amount that was subsequently increased back to 5 percent where it currently stands. With more than 2 million acre-feet of water in storage, MWD management decided early on to avoid allocations and meet the projected demand in 2014 by withdrawing from storage reserves.

Although the MWD Act affords each member agency a “preferential right” to MWD water, the MWD board in 2008 adopted a Water Supply Allocation Plan (WSAP) that describes how the board may choose to allocate water during a shortage. To impose an allocation, the WSAP specifies that the board take an action in April with July 1 as the implementation date. Making a decision in April allows MWD to see how the “water year” has developed so the decision could better reflect developing conditions. This past April, the MWD board did not take action to impose a WSAP allocation for fiscal year 2015.

However, in response to Governor Brown’s call to increase conservation, the MWD board has taken several actions since February intended to increase conservation and therefore reduce demand. Yet, these actions have not slowed member agencies’ demands for MWD water, due to the hotter than normal weather. The 12-month rolling demands on MWD continue to increase and now, with system losses included, stand at 1.94 million acre-feet. (Often, MWD includes its obligation to transfer the Water Authority’s Quantification Settlement Agreement supplies as part of its demand and when that amount is included, the total stands at more than 2.1 million acre-feet.) For 2014, MWD has adequate storage reserves to meet the projected supply gap of about 1.1 million acre-feet. But if 2015 is dry, and MWD demand continues to track at current levels, MWD may need to implement its WSAP to manage demands and maintain prudent storage reserves so that it may minimize the severity of future supply cuts should dry conditions persist.

Although there are discussions of an El Niño condition forming in 2015, the potential effect of an El Niño condition on MWD supplies is unknown. Given the uncertainty of SWP allocation for 2015 and that certain parts of MWD’s service area have limited access to Colorado River supplies, MWD would benefit by conducting multi-year scenario planning with its member agencies to better understand available options for the region should dry conditions continue beyond 2014.

When MWD entered the last drought of 2007-2009, MWD staff kept the board apprised as conditions evolved and provided frequent written reports. It also communicated extensively with member agency staff and held numerous meetings informing member agencies of the developing conditions. Through that effort, the MWD board adopted the WSAP and used it to manage storage reserves. Member agencies responded by taking actions locally and reversed the demand trends. In contrast, during the current multi-year drought, MWD staff has not actively engaged member agency managers in any process or dialog to jointly strategize on how the region may best respond to the current situation and

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4 Although MWD has taken actions to enable the delivery of Colorado River supplies to traditionally SWP exclusive areas, Calleguas and Las Virgenes municipal water districts are especially vulnerable, as they have the least access to the Colorado River supplies.
what to do should dry conditions persist.\(^5\) Although MWD is communicating the drought messaging with member agencies’ public information staff, it has not engaged the managers in a dialog on the development of strategies to best manage potential water shortage allocations in the coming years.

As MWD’s reliance on storage increased due to changed conditions, the Water Authority’s delegates have repeatedly suggested having a comprehensive policy review and discussion on MWD’s storage management strategy, including the put and take operations as well as a funding strategy. MWD management has maintained that its resource management strategy is current and provides flexibility for staff to manage resources. In recent months, as California faced continued unprecedented supply challenges, the delegates have also suggested that MWD begin scenario planning should dry conditions continue. Last month, MWD staff presented a written report that provided more details on imported water supply gaps and identified potential storage reserves that may be withdrawn. The MWD board has taken actions so areas previously served by SWP supplies exclusively\(^6\) could receive Colorado River supplies. MWD staff indicated this month that during the summer, it plans to begin a review process of the WSAP and involve the member agency managers in this process, and consider adjustments to the WSAP this fall.

While it is crucial for MWD to conduct scenario planning on options for withdrawals in the event of continued dry conditions beyond 2014, it would also be prudent for MWD to prepare a fill plan – both operationally and financially – so it may capture the maximum amount of supplies and begin to replenish its storage reserves.

A successful storage program depends on not just having an adequate capacity, but also on having the operational and financial capability to fill the storage space when water is available and the operational land financial capacity to withdraw and deliver water to where it is needed. A comprehensive storage plan therefore addresses the capacity and operational needs, and also the funding strategy. Last year, faced with excess unrestricted reserves over the maximum limit, MWD created a restricted reserve fund intended for water transfers and costs associated with storage replenishment and drought response activities, and transferred some of the excess reserves fund to fill the fund initially. However, MWD has not adopted a policy on how this fund will be replenished or for what type of activities this fund should be used.

**Next Steps**

The Water Authority’s delegates will continue to advocate prudent resources management at MWD. Water Authority staff will actively engage in the review process to help explore options. It will also continue to monitor and analyze MWD’s storage programs as it relates to MWD supplies and demand and will report back to the Imported Water Committee.

Prepared by: Debbie Discar-Espe, Senior Water Resources Specialist
Reviewed by: Amy Chen, Director of MWD Program

Attachment 1: MWD’s Storage Development: How Storage Reserves Are Used To Meet Supply Gaps

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\(^5\) MWD has cancelled six of the member agency managers meeting over the past 14 months – including this May and June -- where MWD had historically communicated and held dialog with agency managers to tackle regional water supply challenges.

\(^6\) Historically, certain parts of MWD service areas were served with SWP supplies exclusively to avoid pumping costs for MWD.
MWD’s Storage Development: How Storage Reserves Are Used To Meet Supply Gaps

As Metropolitan Water District’s (MWD) imported water supplies become less stable and demand on MWD continues to grow and surpass budgeted projections, storage is playing an increasing role in MWD’s overall supply strategy. This report supplement contains a summary of MWD’s storage development and changed conditions that impacted the reliance of its storage resources over the past 40 years. Also included are a status of MWD’s current storage conditions and a snapshot of potential impacts to the storage reserves under a range of potential 2015 State Water Project (SWP) allocations.

Role of Storage
During the 1976-1977 drought, when statewide runoff hit an all-time low, it became clear that storage could play a larger role to augment imported supplies. MWD modified its water resources plans to rely more on carryover storage and continued to encourage its member agencies to better utilize their groundwater basins. In the late 1980s, extended dry conditions again threatened California’s water supply. Both MWD’s imported sources – the State Water Project (SWP) and the Colorado River Aqueduct (CRA) – were faced with prolonged dry hydrologic conditions. By 1991, even though MWD was able to maintain a full CRA by using Arizona’s and Nevada’s unused apportionments, the limited SWP supplies severely hindered MWD’s ability to meet demand. It resorted to supply allocation to manage member agencies’ demands on MWD. For more than one year, the Water Authority’s MWD supplies were cut by 31 percent; deeper delivery cuts of 50 percent were only averted by “Miracle March” rains.

Water Surplus and Drought Management Plan
Following the drought of 1987-1992, the MWD Board adopted its first Integrated Resources Plan (IRP) in 1996. The plan was updated in 2004 and again in 2010. The foundation of the IRP was incorporated into MWD’s wholesale reliability goal, “to provide 100 percent of full service demands at the retail level under all foreseeable hydrologic conditions.” To fully effectuate the plan’s objectives, local actions are required.

As part of the implementation of the 1996 IRP, in April 1999 MWD adopted the Water Surplus and Drought Management (WSDM) Plan, which defines “the resource management policy necessary to achieve the region’s reliability goal.” The WSDM Plan outlines potential resource management actions during various stages of surplus and shortage conditions (See Figure 1 for WSDM Plan Stages and Actions matrix).

* Replenishment and agricultural deliveries were phased out by December 2012.
When the WSDM Plan was first adopted, it did not include an allocation plan. The Water Supply Allocation Plan (WSAP) was subsequently adopted in 2008 and added to the WSDM Plan matrix, as the last step in management of supply resources. Although the WSDM Plan matrix in Figure 1 identifies surplus and shortage “stages,” they are not meant to be used prescriptively, but rather, as an illustration of general management actions. Other than the implementation of supply allocation, which requires a board action, MWD management maintains flexibility in deciding how supplies would be managed. When the WSDM Plan matrix was first adopted, probably its most interesting concept from a member agency’s perspective was the understanding of the actions available to MWD in the event drought conditions increase and how member agency services, such as discounted replenishment or agricultural programs, may be impacted. As imported supplies have become less stable and demands on MWD’s full service water continued, both discounted water programs have been phased out. How MWD manages its storage resources plays an ever increasing role in managing the frequency and severity of potential supply allocations.

**Shifting of Imported Supplies**

When MWD adopted the 1996 IRP, it assumed its Colorado River Aqueduct (CRA) would be full and any reliance on storage was mainly to offset the anticipated demand gap due to the variability of annual SWP supplies. In 2003, MWD lost access to surplus Colorado River supplies it had relied upon for many decades, when Nevada and Arizona’s increased demand on Colorado River water. The loss of 662,000 acre acre-feet of surplus Colorado River supplies, which MWD previously assumed would be available every year, significantly impacted its supply planning. The decrease in such a large core supply assumption made MWD’s storage programs even more important, as the SWP supplies are more susceptible to annual hydrologic variations. In 2007, the SWP pumping was limited by a federal judge, which led to subsequent regulatory restrictions, causing MWD to further increase its dependence on its storage programs.

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1 Although the MWD board has used different methods to allocate supplies, these allocation plans do not supersede member agency’s preferential right. During the 1990’s, the MWD board instituted the Incremental Interruptible Conservation Plan to allocate supplies. WSAP, adopted in 2008, is the current allocation plan.
2 Storage has always played an important role in surface water supplies. The Colorado River system has about 60 million acre-feet of system storage. The abundant storage capacity in the Colorado River system for carry over uses and the Law of the River that favors California water users, make MWD supplies from this system less sensitive to annual hydrologic variations. In contrast, the SWP system has only about 5.8 million acre-feet of storage and its supplies are far more sensitive to annual hydrologic variation.
3 MWD has since developed several programs to replace the surplus water, but not at a level that fully replaced the lost annual surplus. The Water Authority’s water transfer with the Imperial Irrigation District and the supplies from the lining of All American and Coachella canals comprise 180,000 acre feet of supplies conveyed by MWD through the CRA.
Storage Capacity Growth
Since the 1987-1992 drought, MWD has steadfastly built up its water storage capacity from around 1 million acre-feet in the early 1990s to about 6 million acre-feet by 2014. Other than water that is stored and set aside for emergency use, the remaining capacity is intended to be managed and utilized when MWD’s imported sources are insufficient to meet demands. (See Figure 2 for MWD’s storage capacity growth).

MWD’s storage portfolio includes both surface reservoirs (MWD-owned, and reservoirs owned and operated by others that are accessible to MWD through agreements), and groundwater storage (in-region groundwater storage with member agencies via conjunctive use agreements and out-of-region groundwater storage via exchange and storage agreements). These storage facilities are located along the SWP, the CRA, and within MWD’s service area.

MWD’s storage strategy was originally developed based on the amount of storage needed to fill supply gaps for three out of 10 years -- matching the historical drought frequency and the potential SWP may not produce adequate supplies to meet annual demand. With pumping restrictions on SWP, the frequency of supply gaps increased. MWD initially reported that modeling results showed SWP supplies shifted to being “short” seven out of 10 years, but more recently said the “short” is not as dire, due to decreases in MWD demand.

Historic Use of Storage Reserves
As MWD built up its storage capacity, it has utilized storage resources to mitigate supply shortages. Figure 3 shows MWD’s end of year storage for the last decade and the impact of the SWP’s variability on storage. By the end of 2006, MWD had about 2.2 million acre-feet dry year storage in its various facilities and accounts. As dry conditions continued, and later court-imposed pumping restrictions further curtailed SWP supplies, MWD drew down more than half of its stored water in two years (2007 and 2008) to meet the gap between water supply and regional demand, ending calendar year 2008 with about 1.1 million acre-feet in its dry-year storage reserves.

Figure 3: MWD’s Storage Reserves – Estimated End of Year Balances
(Source: MWD)

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4 The amount of MWD supply set aside for emergency use (as a result of a major earthquake damage to the region’s imported supply systems, including SWP, CRA and the Los Angeles Aqueduct) is based on the criteria that it would have sufficient supply to meet 75 percent of member agencies’ retail demand under normal hydrologic conditions for six months. As such, the amount is adjusted depending on projected member agencies’ retail demand.

5 Excluding 670,000 acre-feet of supply in storage set aside, which was the estimated emergency storage need in 2006. For 2014, the emergency storage water set aside is 626,000 acre-feet, reflecting projected reduced MWD demands.
The trend began to reverse when MWD implemented the WSAP in 2009. MWD was able to manage its demand and withdrew only about 100,000 acre-feet from storage in 2009. The supply curtailment and corresponding MWD and retail water rates increases, coupled with a down economy, started the trend of lower water demand on MWD and allowed it to again begin putting water in storage starting in 2010. In 2011, favorable water supply conditions resulted in MWD’s board lifting the WSAP, but the trend of lower MWD sales continued. By the end of 2012, with continued low demand, MWD increased its dry year storage to about 2.7 million acre-feet.

Current Storage Levels
With hydrology on the SWP again worsening, and 2013 the driest year on record, MWD withdrew 358,000 acre-feet out of the dry-year storage to meet demand, bringing its dry-year storage reserve levels to approximately 2.3 million acre-feet. MWD began calendar year 2014 with 1.05 million acre-feet storage along the SWP system, including 607,000 acre-feet in the Central Valley and 442,000 acre-feet in SWP carryover and flexible storage. The remaining stored supplies are located in Colorado River system, including about 475,000 acre-feet in Lake Mead and 260,000 acre-feet in the Desert Water and Coachella Valley account; MWD’s own surface reservoirs (759,000 acre-feet); and in-region storage programs with member agencies (73,000 acre-feet). See Table 1 for MWD’s 2014 WSDM Storage details.

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<thead>
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<th>Table 1: MWD’s 2014 WSDM Storage Detail</th>
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<th>WSDM Storage</th>
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<th>CY 2014 Put Capacity*</th>
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<tr>
<td>Colorado River Aqueduct System</td>
<td>475,000</td>
<td>475,000</td>
<td>200,000</td>
<td>1,590,000</td>
</tr>
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<td>Lake Mead</td>
<td>385,000</td>
<td>385,000</td>
<td>200,000</td>
<td>1,550,000</td>
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<tr>
<td>Drop 2 Reservoir and Yuma Desalting</td>
<td>90,000</td>
<td>90,000</td>
<td>0</td>
<td>90,000</td>
</tr>
<tr>
<td>State Water Project System</td>
<td>1,049,000</td>
<td>541,000</td>
<td>154,000</td>
<td>1,829,000</td>
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<tr>
<td>MWD SWP Carryover</td>
<td>223,000</td>
<td>223,000</td>
<td>47,000</td>
<td>270,000</td>
</tr>
<tr>
<td>Castaic Lake (DWR Flex Storage)</td>
<td>154,000</td>
<td>154,000</td>
<td>0</td>
<td>154,000</td>
</tr>
<tr>
<td>Lake Perris (DWR Flex Storage)</td>
<td>65,000</td>
<td>65,000</td>
<td>0</td>
<td>65,000</td>
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<tr>
<td>Arvin Edison Storage Program</td>
<td>161,000</td>
<td>17,000</td>
<td>45,000</td>
<td>350,000</td>
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<td>Semitropic Storage Program</td>
<td>238,000</td>
<td>32,000</td>
<td>32,000</td>
<td>250,000</td>
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<td>Kern Delta Storage Program</td>
<td>169,000</td>
<td>50,000</td>
<td>30,000</td>
<td>250,000</td>
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<td>Mojave Storage Program</td>
<td>39,000</td>
<td>0</td>
<td>0</td>
<td>390,000</td>
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<td>In-Region Storage</td>
<td>832,000</td>
<td>504,000</td>
<td>297,000</td>
<td>1,491,000</td>
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<tr>
<td>Diamond Valley Lake</td>
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<td>0</td>
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<td>Lake Mathews</td>
<td>139,000</td>
<td>61,000</td>
<td>43,000</td>
<td>182,000</td>
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<tr>
<td>Lake Skinner</td>
<td>36,000</td>
<td>2,000</td>
<td>8,000</td>
<td>44,000</td>
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<tr>
<td>IEUA/TVMWD (Chino Basin)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100,000</td>
</tr>
<tr>
<td>Long Beach (Cent. Basin)</td>
<td>6,000</td>
<td>4,000</td>
<td>0</td>
<td>13,000</td>
</tr>
<tr>
<td>Long Beach (Lakewood)</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
<td>4,000</td>
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<tr>
<td>Foothill (Raymond and Monkhill)</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
<td>9,000</td>
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<td>MWDOC (Orange County Basin)</td>
<td>49,000</td>
<td>20,000</td>
<td>16,000</td>
<td>66,000</td>
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<tr>
<td>Three Valleys (Live Oak)</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
<td>6,000</td>
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<tr>
<td>Three Valleys (Upper Claremont)</td>
<td>2,000</td>
<td>0</td>
<td>0</td>
<td>3,000</td>
</tr>
<tr>
<td>Compton</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2,000</td>
</tr>
<tr>
<td>Western</td>
<td>8,000</td>
<td>4,000</td>
<td>3,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Cyclic - Upper San Gabriel</td>
<td>5,000</td>
<td>5,000</td>
<td>0</td>
<td>40,000</td>
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<tr>
<td>Cyclic - Three Valleys</td>
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<td>Cyclic - Inland Empire Utilities Agency</td>
<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td>Other Programs</td>
<td>594,000</td>
<td>14,000</td>
<td>236,000</td>
<td>1,134,000</td>
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<tr>
<td>Other Emergency Storage</td>
<td>334,000</td>
<td>334,000</td>
<td>0</td>
<td>668,000</td>
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<td>DWCV Advance Delivery Account</td>
<td>260,000</td>
<td>260,000</td>
<td>0</td>
<td>260,000</td>
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<tr>
<td>Total</td>
<td>2,950,000</td>
<td>1,534,000</td>
<td>887,000</td>
<td>6,048,000</td>
</tr>
<tr>
<td>Total WSDM Storage**</td>
<td>2,324,000</td>
<td>1,334,000</td>
<td>604,000</td>
<td>4,224,000</td>
</tr>
</tbody>
</table>

* Put and take capacity assumed under a 5 percent SWP Table A Allocation
** Exchanges up to 216,000 acre-feet of Colorado River water with MWD’s SWP water; however, in any year, MWD may recall up to 100,000 acre-feet of SWP Table A allocated water
*** Total WSDM Storage level is subject to change based on accounting adjustments

As part of the Monterey Agreement, MWD gained access to 219,000 acre-feet of “flexible” storage on the SWP system, which MWD may utilize at any time; MWD is required to return the water within five years. Desert Water Agency and Coachella Valley Water District are SWP contractors that do not have a physical connection to the SWP. In lieu of a SWP connection, the two agencies have an agreement with MWD to exchange a like amount of their SWP supplies with MWD’s Colorado River water. MWD also has an advance delivery agreement with the two agencies that allows MWD to deliver water in advance (store) in its account. MWD’s access to the water, similar to its programs in the Central Valley, is limited by available SWP Table A allocation.
Ingredients of Successful Storage Programs

The success of any storage program depends not just on the capacity of the program, but also on the operational and financial capability to fill the storage space when water is available and operational capability to withdraw and deliver water to where and when it is needed. A comprehensive storage strategy would address all these components including fill, put, and funding sources. Although MWD was able to increase its storage, it was not without challenges. It did not always fully take advantage of excess supplies and store water in its programs. Filling the storage while its sales were down tested MWD’s ability to manage finances; during the recent three “fill” years (2010 and 2012), MWD expenses exceeded revenues two out of three years because it does not have a funding strategy.

Issues

While MWD’s dependence on storage has evolved, the MWD board has not reviewed its storage policy comprehensively in recent years. For example, it is unclear how MWD’s storage practice has changed – or not – as a result of less surplus SWP supplies being available. It is also unclear how the fill strategy distinguishes local or regional priorities, nor is its withdrawal strategy clear on how quickly and deeply storage may be used before engaging the board on policy discussions. MWD also does not have a comprehensive funding strategy for storage management. Without a comprehensive policy that ties resource management, operational priorities and funding strategy, the MWD board may make decisions that conflict with a sound overall strategy. In 2011 for example, in part due to cash flow concerns, MWD sold water at a discount for member agencies to replenish their own storage, while its own storage was not full and could have benefitted from placing more water in its own regional storage. Similarly, this year, MWD finds itself potentially diminishing storage reserves close to the levels when MWD last began implementing an allocation in 2009, but neither its board nor its member agencies have yet seen any scenario planning on how its storage reserves may be impacted if dry conditions continue beyond 2014. Equally unclear is what plans are in place should 2015 turn out to be a wet year. Last year, faced with having excess unrestricted reserves beyond maximum limit, MWD moved some of the excess unrestricted reserves to establish a restricted Water Management Fund. The board however has not developed a policy regarding what activities this fund should be used for and how the fund is to be maintained. This month, money from the fund was used to pay for programs associated with increased conservation efforts.

Calendar Year 2014

MWD’s SWP contract allows for the purchase of up to 1.9 million acre-feet of water per year. MWD currently is allocated 5 percent of its SWP contract amount. Including other SWP supplies, MWD anticipates receiving about 103,000 acre-feet of from SWP in 2014, and about 755,000 acre-feet from the Colorado River, totaling about 858,000 acre-feet for its use. MWD estimates member agency demand, including its system losses, to be approximately 1.94 million acre-feet. It plans on meeting all demand by drawing down its storage. A summary of MWD’s 2014 projected water

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8 In contrast, the Water Authority’s Urban Water Management Plan describes the guidelines for storage use and how water balance is developed, and the Facilities Master Plan describes the approach to storage utilization. In anticipation of the filling of San Vicente dry-year storage, the Water Authority also established a Stored Water Fund to prefund filling to avoid a spike in rates in years when supplies are purchased for storage.

9 In June 2013, MWD created a restricted reserve fund – Water Management Fund (replacing the existing Water Transfer Fund) – for water transfers and costs associated with storage replenishment and drought response activities. However, MWD does not have any prescribed parameters on how this account is funded or how the funds may be utilized. Should the Fund be replenished with excess reserves only? Should the fund be used to purchase water supply or should it be used for any water management purposes?
supply and demand balance is found in Table 2. If demand continues at the current trend, MWD reported it will need to withdraw about 1.08 million acre-feet of its storage reserves, unless it could augment with additional supplies. In May, staff reported that although it had participated in transfer discussions, it had not purchased any supplies due to high costs. By end of 2014, MWD’s dry-year storage could drop to 1.245 million acre-feet (as low as the pre-2010 levels).

In response to Governor Brown’s call for Californians to conserve water, the MWD board took several actions in early 2014 to increase its conservation spending and intensify conservation messaging. It is unclear how the region may ultimately respond. Due to hotter than normal weather, demands for MWD water continue to increase more than MWD’s projection as recent as May.

Looking Ahead
Table 3 provides estimated potential MWD WSDM storage levels in 2015, based on an evaluation by Water Authority staff of current supply and demand trends, and storage take limitations.

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It was reported at the Colorado River Board that Senior Water Users are trending to use more Colorado River supplies, which may increase MWD’s storage withdrawal to about 1.18 million acre-feet. As reported in by MWD, it assumes assumed zero adjustment as a result of increased senior water use in its WSDM report.
Agencies more critically impacted from continued low SWP allocation are Las Virgenes and Calleguas municipal water districts. Because their limited access to the CRA system and MWD’s access to the Central valley storage programs due to take limits, these agencies may find themselves facing unique challenges not shared in other areas, should 2015 SWP allocation repeats 2014.

If 2015 turns out to be dry, the MWD board would most likely need to take additional actions. For example, if 2015 turns out to be a repeat of 2014’s dry-year—assuming MWD demands drop by 10 percent due to increased conservation messaging, and it has the same imported supplies from the SWP and CRA as 2014, storage levels will decline significantly to meet demand. Under this scenario, MWD may have only about 240,000 acre-feet of water from the SWP system, assuming similar take

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11 Historically on the SWP, there has never been two consecutive years with a 5 percent allocation.
limitations exist from its Central Valley storage programs (see Table 3). On the other hand, MWD would avoid taking water from storage in 2015 entirely, if it has a SWP allocation of 55 percent or higher and it reduces demand by 10 percent and CRA supplies remain the same as 2014. Using the same demand and CRA assumptions, with SWP allocation at 30 percent, MWD would need to withdraw about 407,850 acre-feet, about one-third of dry-year storage reserves.

Table 4 illustrates potential withdrawals under a 5-, 30-, and 50-percent SWP allocation scenarios – all scenarios assume that the region has been successful in reducing the demand by 10 percent.

<table>
<thead>
<tr>
<th>Table 4: MWD’s 2015 Potential Water Supply and Demand Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
<td>Potential Storage Reserves, January 2015</td>
</tr>
<tr>
<td>SWP Supply</td>
</tr>
<tr>
<td>SWP Total</td>
</tr>
<tr>
<td>CRA Supply</td>
</tr>
<tr>
<td>CRA Total</td>
</tr>
<tr>
<td>2015 Demands, Obligations, and Losses</td>
</tr>
<tr>
<td>MWD demands and losses</td>
</tr>
<tr>
<td>Net Water Supply and Demand Balance</td>
</tr>
<tr>
<td>Potential Storage Reserves, December 2015</td>
</tr>
</tbody>
</table>

Clearly SWP allocation will drive storage and allocation discussion in 2015. If 2014 continues to be dry, especially if it enters the fall being dry and system reservoirs are low, DWR will begin 2015 with a low initial SWP allocation. Although no one can predict where 2015 will end up, it is clear member agencies will benefit as MWD conducts scenario planning and provides guidance on potential options available to manage demands if dry conditions continue for 2015 and beyond.

After repeated requests by the Water Authority’s MWD delegates to review MWD’s storage policy and conduct scenario planning, MWD staff this month indicated it will begin a member agency process to review the WSAP this summer and in the fall make potential adjustments to the WSAP. As MWD conducts the review process, it would be helpful for it to develop a multi-year storage use plan that looks beyond just 2015, in the event of continued dry conditions. Conversely, it would also be useful for MWD to develop a fill plan to it could capture as much supplies for storage as possible should 2015 turn out to be wet.

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12 Assumes MWD could deliver CRA water to previously SWP exclusive areas without limitations.
March 18, 2015

Attention: Imported Water Committee

Metropolitan Water District Program Report (Information)

Purpose
This report summarizes activities associated with the Metropolitan Water District of Southern California and other imported water related agencies and organizations.

Discussion

Metropolitan Water District (MWD). This section provides a summary of key actions at the March 9 and 10 meetings of the MWD Board of Directors. A companion report, included in the board supplemental materials – the MWD Delegates Report – provides information on discussions that occurred at the MWD Board and committee meetings as well as the Water Authority Delegates’ positions. The next committee and Board meetings will take place April 13 and 14.

2015 Water Awareness and Conservation Outreach Campaign.
The MWD Board authorized a one-year contract not to exceed $5.5 million with Los Angeles-based Quigley-Simpson & Heppelwhite, Inc. for advertising and outreach services related to MWD’s 2015 water awareness and conservation outreach campaign. This contract replaced the three-year contract with Fraser Communications that MWD entered into in 2014.

The 2015 campaign will be funded with $3 million from the External Affairs departmental budget and $2.5 million from MWD’s Water Management Fund.¹ It is unclear why staff requested partial funding from the Water Management Fund since the former contract with Fraser had an annual amount of $5.5 million, which was presumed to be included in the departmental budget. The 2015 campaign will strive to increase water conservation efforts, promote water awareness, and communicate the value of a “permanent Southern California water-conserving lifestyle.” MWD staff also reported that the campaign will be “adaptable” to changing, and still developing, hydrologic and water supply conditions, including the possibility that the MWD Board may implement its Water Supply Allocation Plan.

Water Storage Programs.
The Board authorized two agreements related to improving the return capability for two of MWD’s water storage accounts. The first agreement, with the Arvin-Edison Water Storage District (Arvin-Edison), will improve the return capacity of Arvin-Edison’s groundwater basin by replacing aging wells. MWD will make an upfront payment of $3 million from the Water Management Fund to construct three wells to enhance MWD’s available storage supplies by 2,500 acre-feet in 2015. With this additional capacity, MWD will be able to withdraw 23,500 acre-feet from its Arvin-Edison storage account. Arvin-Edison will reimburse MWD’s upfront cost through Program fee credits.

¹ MWD’s Water Management Fund was created in 2013 and is funded with revenues that exceeded expenditures in fiscal years 2013 and 2014, including revenues from MWD’s System Access and System Power rates (which are part of MWD’s wheeling rate).
The second agreement is with the Kern-Delta Water District (Kern-Delta) for $2.5 million to help fund the construction of a pipeline to bypass the Kern River by connecting two existing Kern-Delta Program facilities. Currently, some water exchanged through the Program is lost to groundwater basin recharge as it is conveyed along the Kern River. In 2014, MWD estimates, that these losses were around 40 percent, or about 20,000 acre-feet. Funding for this agreement is also from the Water Management Fund, and MWD staff reported that the MWD’s expenditures will be recovered through the elimination of put fees for the next 20,000 acre-feet of water that MWD stores in the Program.

Sacramento Valley Water Transfers.
The Board authorized the General Manager to enter into one-year transfer agreements with several Sacramento Valley water districts for up to 100,000 acre-feet of transfer supplies in 2015 as well as to enter into the necessary conveyance and storage agreements with the Department of Water Resources (DWR) and Sacramento Valley Water Districts to facilitate the transfer of the water. This action also authorized MWD’s General Manager to pay up to $71 million for these transfer supplies and to decide to proceed with the transfers. These water transfers are the result of the Board’s January 2015 action to enter into an agreement with the State Water Contractors, Inc., (SWC) to pursue Sacramento Valley water transfers. (The SWC is a nonprofit association of 27 public agencies, including MWD, with contracts to purchase water from the State Water Project.) As a liaison between the interested SWC buyers and potential sellers, the SWC coordinates transfer negotiations as well as manages related environmental documentation, water accounting with DWR, and the collection and disbursement of payments. This year, the SWC has identified potential 115,000 acre-feet of Sacramento Valley Water Transfers from nine sellers that are to be proportionately allocated, based on Table A allocations, to the Program’s nine participating SWC members.

Although the action authorizes the purchase of up to 100,000 acre-feet of transfer supplies, currently MWD only has the right to purchase 70,000 acre-feet of the water secured by the SWC because of participation by other SWC members. MWD’s share could go up if fewer than anticipated SWC members participate. The cost of the water is $700 per acre-foot, plus an additional DWR administrative fee of $10 per acre-foot. MWD will use funds from the Water Management Fund to pay for water transfers secured through these agreements.

The MWD Committees and Board also:
- Inducted Director Michele Martinez from the city of Santa Ana;
- Approved and authorized the execution and distribution of Remarketing Statements in connection with the remarketing of the Water Revenues Refunding Bonds (Index Mode), 2011 Series A2 and A4 and 2012 Series B-1 and B-2;
- Received a presentation on internal controls;
- Received a presentation on outstanding debt;
- Heard a report on Water Supply Drought Management Plan, and discussed SWP allocation scenarios that balance supplies and demands with various storage withdrawals and allocation levels for 2015 and 2016;
- Received an update on the Water Savings Incentive Program;
- Heard a closed session report on cyber security;
- Held a closed session related to salary reopener negotiations;
Appropriated $1.07 million, and authorized replacement of flow meters on the Casa Loma and San Diego Canals (Approp. 15480);
- Received an update on Colorado River source water protection;
- Received an update on Diamond Valley Lake property;
- Authorized an increase in the maximum amount payable under contract with Van Ness Feldman LLP for legal services related to the Bay Delta Conservation Plan by $150,000 to an amount not to exceed $250,000; and
- Heard a closed session report on water diversions in the Bay-Delta, and authorized an increase in the amount payable under contract with Duane Morris LLP by $500,000 to a maximum amount of $600,000 in connection with the filing of an administrative claim with the State Water Resources Control Board or other legal action related to water diversions in the Bay-Delta.

MWD Member Agencies.

West Basin Municipal Water District (West Basin).

At West Basin’s March 4 MWD Caucus meeting, MWD staff provided reports on current supply and demand conditions, MWD’s March Board action item to purchase water transfer supplies from Sacramento Valley water districts, and MWD’s Conservation Program. MWD staff said that based on State Water Project allocations between 25 and 35 percent, MWD’s demands (projected to be 2.1 million acre-feet) would exceed anticipated supplies by 300,000 to 500,000 acre-feet.

In relation to Sacramento Valley transfer supplies, MWD staff reported that there are a total of nine SWC parties that are participating in the SWC administered program. MWD is expected to have access to 70,000 acre-feet of the program’s 115,000 acre-feet of transfer supplies. Additionally, MWD staff reported, due to estimated Delta carriage losses of 20 percent, these transfer supplies are expected to cost about $850 per acre-foot. (70,000 acre-feet of transfer supplies purchased north of the Delta for $700 per acre-foot and after Delta conveyance, MWD will receive 56,000 acre-feet of transfer water.)

MWD staff reported that in April it will present the fiscal year 2016 Conservation Program budget as well as proposed modifications to its Turf Replacement Program. MWD expects to expend $100 million in fiscal year 2015 and plans to seek an additional $100 million in 2016 for its Conservation Program. Staff reported that the recommended changes to the Turf Replacement Program will focus on establishing an annual subsidy cap per participating property of $500,000. This cap would impact projects seeking to replace more than seven acres of turf. MWD estimated that in 2014, if this cap were implemented, only 30 applicants (less than 0.2 percent of all applicants) would have been impacted but MWD could have reduced expenses by $56 million. Under these proposed modifications, participants would be able to phase in projects larger than seven acres over multiple years.

Prepared by: Liz Mendelson, Water Resources Specialist
Reviewed by: Amy Chen, Director of MWD Program
March 18, 2015

Attention: Imported Water Committee

CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: SDCWA v Metropolitan Water District of Southern California;
Case Nos. CPF-10-510830; CPF-12-512466; and CPF-14-514004

Purpose
This memorandum is to recommend a closed session, pursuant to Government
Code §54956.9(d)(1), to discuss the above-referenced matters at the March 26, 2015 meeting.

A closed session has also been included on the agenda of the formal Board of Directors’
meeting. Unless the Board desires additional discussion, it is not staff’s intention to ask for a
closed session with the full Board at that time, but staff may request action to confirm directions
given or action recommended by the committee.

Prepared by: Daniel S. Hentschke, General Counsel
March 18, 2015

Attention: Imported Water Committee

CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: State Water Resources Control Board
    Petition of Imperial Irrigation District for
    Modification of Revised Water Rights Order 2002-0013

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(1), to discuss the above-referenced matter at the March 26, 2015 meeting.

A closed session has also been included on the agenda of the formal Board of Directors’ meeting. Unless the Board desires additional discussion, it is not staff’s intention to ask for a closed session with the full Board at that time, but staff may request action to confirm directions given or action recommended by the committee.

Prepared by: Daniel S. Hentschke, General Counsel
1. Roll call – determination of quorum.

2. Additions to agenda (Government Code Section 54954.2(b)).

3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.

4. Chair’s report.
   4-A Directors’ comments.

I. CONSENT CALENDAR

1. Adopt positions of various state bills.
   Staff recommendation:
   1. Adopt a position of Support if Amended on AB 88 (Gomez).
   2. Adopt a position of Support on AB 401 (Dodd).
   3. Adopt a position of Support if Amended on AB 585 (Melendez).
   4. Adopt a position of Support on AB 603 (Salas).
   5. Adopt a position of Support and Seek Amendments on AB 606 (Levine).
   6. Adopt a position of Support on SB 385 (Hueso).
   7. Adopt a position of Support and Seek Amendments on SB 553 (Wolk). (Action)
II. ACTION/DISCUSSION

   Committee Chair and Vice Chairs’ Recommendation:
   Adopt the Legislation, Conservation and Outreach Committee Work Plan for Calendar Years 2015 and 2016. (Action)
   Chair Croucher

2. Legislative Issues.
   2-A Washington Report by Ken Carpi. (supplemental materials)
   2-B Sacramento Report by Steve Cruz - Gonzalez, Quintana & Hunter.

3. Adopt position on AB 291 (Medina).
   Staff Recommendation:
   1. Adopt a position of Support and Seek Amendments on AB 291 (Medina). (Action)
   Glenn Farrel

III. INFORMATION

1. Presentation on drought response communications and outreach update. Jason Foster
3. Small Contractor Outreach and Opportunities Program Committee Quarterly Report. Teresa Penunuri
6. Government Relations Update. Glenn Farrel
7. NewlyIntroduced Bills. Glenn Farrel

IV. CLOSED SESSION
V. ADJOURNMENT

NOTE: This meeting is called as a Legislation, Conservation, and Outreach Committee meeting. Because a quorum of the Board may be present, the meeting is also noticed as a Board meeting. Members of the Board who are not members of the Committee may participate in the meeting pursuant to Section 2.00.060(g) of the Authority Administrative Code (Recodified). All items on the agenda, including information items, may be deliberated and become subject to action. All public documents provided to the committee or Board for this meeting including materials related to an item on this agenda and submitted to the Board of Directors within 72 hours prior to this meeting may be reviewed at the San Diego County Water Authority headquarters located at 4677 Overland Avenue, San Diego, CA 92123 at the reception desk during normal business hours.
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Adopt positions on various state bills. (Action)

**Staff recommendation**

1. Adopt a position of Support if Amended on AB 88 (Gomez)
2. Adopt a position of Support on AB 401 (Dodd)
3. Adopt a position of Support if Amended on AB 585 (Melendez)
4. Adopt a position of Support on AB 603 (Salas)
5. Adopt a position of Support and Seek Amendments on AB 606 (Levine)
6. Adopt a position of Support on SB 385 (Hueso)
7. Adopt a position of Support and Seek Amendments on SB 553 (Wolk)

**Alternatives**

1. Do not adopt one or more of the recommended positions.
2. Modify one or more of the positions.

**Fiscal Impact**

There is no direct fiscal impact associated with the consideration of adopting policy positions on legislation.

**Water Use Efficiency Legislation**

Water conservation is a core element of the Water Authority’s long-term strategy to improve the reliability of the region’s water supply by diversifying water sources. Since 1991, the Water Authority’s water use efficiency programs and initiatives cumulatively have conserved nearly 800,000 acre-feet of water. In fact, water use in the San Diego region today is less than water consumption in 1990, even though the region has grown by more than 700,000 residents during those two decades. Water savings in the San Diego region have been achieved through measures ranging from incentives on water-efficient devices, to legislative efforts, to outreach campaigns and programs. At 161 gallons per capita per day, water use this year is below the state’s 2020 target of 167 gallons per capita per day in San Diego County.

The Water Authority and its member agencies offer numerous programs to help achieve water savings – both indoors and outdoors. The following represent several of the rebate programs available today through Metropolitan Water District’s SoCal Water$mart, a region-wide program that offers rebates for devices that improve water use efficiency at residential properties:

- High-efficiency clothes washer rebates
- High-efficiency toilet rebates
- Rotating irrigation nozzle rebates
- Residential smart controller rebates
- Residential rain barrel rebates
- Soil moisture sensor system rebates
- Turf replacement incentives
As the state moves into the fourth consecutive year of a prolonged drought, several measures have been introduced in the Legislature to improve the state’s drought-response capabilities. The Water Authority is among the interests sponsoring legislation in the area of water conservation, with AB 349 introduced by Assemblymember Lorena Gonzalez. AB 349 would allow a homeowner within a common interest development to install artificial turf or synthetic grass, as long as it meets reasonable design and aesthetic standards imposed by the homeowners’ association and the product complies with all municipal codes, ordinances, or regulations relating to stormwater runoff.

Following are five measures that have been introduced to advance the water conservation ethic in California through a variety of means.

**AB 88 (Gomez) – Sales and Use Taxes: Exemption: Energy or Water Efficient Home Appliances**

Existing law imposes a tax on retailers measured by the gross receipt from their sales of tangible personal property sold at retail in the state. Existing law also provides an exclusion from gross income for any amount received as a rebate from a local water agency or supplier for the purchase of a water conserving toilet, energy efficient clothes washers, and plumbing devices. In addition, as a result of legislation enacted in 2014 (which was supported by the Water Authority), existing law, for taxable years beginning on or after January 1, 2014, and before January 1, 2019, provides an exclusion from gross income for any amount received as a rebate, voucher, or other financial incentive issued by a local water agency or supplier for participation in a turf removal water conservation program.

AB 88 would exempt from sales taxes the sale of an energy- or water-efficient home appliance purchased by a public utility that is provided at no cost to a low-income participant in a federal, state, or ratepayer-funded energy efficiency program for use by that low-income participant in the energy efficiency program.

A sales tax exemption for many water use efficiency rebate programs has largely been granted through prior legislation targeted at substantial water conservation at the residential level. AB 88 would help broaden the range of water efficiency or energy incentives that would be excluded from gross income, and would remove tax liabilities that could dilute the efficacy of these programs.

However, water saving devices that are purchased by the public agency for public agency direct-install programs within the community are not currently provided a sales tax exemption, nor are those devices proposed to be addressed in AB 88 as it is currently drafted. As written, AB 88 would only provide a sales tax exemption for energy or water efficient home appliances that are part of a ratepayer-funded energy efficiency program. The measure should be expanded to also provide coverage for devices utilized primarily to achieve water savings that could be encompassed within a water use efficiency direct-install program.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:
• Provides incentives, funding, and other assistance where needed to facilitate market transformation and gain wider implementation of water-efficient indoor and outdoor technologies and practices.

• Provides incentives, funding, and other assistance to facilitate water use efficiency partnerships with the energy efficiency sector.

(2015 Legislative Policy Guidelines, Water Use Efficiency, Support, Page 17, item 16 and 19).

Staff recommends a position of Support if Amended on AB 88.

Suggested Amendments Include:
AB 88 should be amended to also provide a sales tax exemption for water-saving devices that are purchased by a public utility for use in a direct-install water efficiency program.

AB 585 (Melendez) – Outdoor Water Efficiency Act of 2015: Income Tax Credits: Outdoor Water Efficiency

Existing law – the Personal Income Tax Law – allows various credits against income taxes from which taxpayers may benefit during annual income tax preparation.

AB 585 would, for taxable years from 2015 through 2020, allow a credit equal to 25 percent of the amount paid or incurred by a qualified taxpayer for water-efficiency improvements made to outdoor landscapes on real property in this state, not to exceed $2,500 per taxable year.

Income tax credits are one approach to incentivize action; the credit embodied in AB 585 is focused on improving outdoor water use efficiency. AB 585 is based on the experience that a homeowner may be more willing to make material modifications to landscaping to reduce water use if there are financial incentives available to offset the costs of those improvements. AB 585 would define “water-efficiency improvements” to mean expenditures paid or incurred to meet a locally adopted, water-efficient landscape ordinance, regulation, or established outdoor landscape efficiency program.

The manner in which AB 585 is crafted would essentially provide a tax credit for compliance with existing ordinances and regulations that a homeowner would be obligated to achieve even without the proposed tax credit. AB 585 could provide more meaningful water use efficiency achievements if it was amended to provide a tax credit only for landscape retrofits and modifications that are not already mandated by existing local ordinance or regulations, to encourage water conservation that would not otherwise occur.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:

• Provides incentives, funding, and other assistance where needed to facilitate market transformation and gain wider implementation of water-efficient indoor and outdoor
technologies and practices.


Staff recommends a position of Support if Amended on AB 585.

Suggested Amendments Include:
AB 585 should be amended to apply the tax credit to only those situations where water efficiency landscape improvements or retrofits were undertaken that were not mandated by existing local ordinance or regulations. In addition, a certification process would need to be established to enforce the income tax credit mechanism.

AB 603 (Salas) – Income Taxes: Turf Removal Tax Credit
Existing law – the Personal Income Tax Law – allows various credits against income taxes from which taxpayers may benefit during annual income tax preparation.

AB 603 would, for taxable years beginning on January 1, 2015, allow an income tax credit for a taxpayer participating in a lawn replacement program, in an amount equal to $2 per square foot of conventional lawn removed from the taxpayer’s property.

Income tax credits are one approach to incentivize action; the credit embodied in AB 603 is focused on improving outdoor water use efficiency. AB 603 is based on the experience that a homeowner may be more willing to make material modifications to landscaping to reduce water if there are financial incentives available to offset the costs of those improvements. For the purposes of AB 603, “lawn replacement program” means a local water agency program that offers incentives to customers encouraging the replacement of conventional lawns with artificial turf, synthetic grass, drought-resistant plants, or other water-efficient landscaping.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:

- Provides incentives, funding, and other assistance where needed to facilitate market transformation and gain wider implementation of water-efficient indoor and outdoor technologies and practices.


Staff recommends a position of Support on AB 603.

AB 606 (Levine) – Water Conservation
SB 553 (Wolk) – Water Conservation
Existing law requires the Department of General Services (DGS) to provide planning, acquisition, construction, and maintenance of state buildings and property. Existing law also requires DGS to identify each public building in the state property inventory where it is feasible
for that building to reduce energy consumption and achieve energy efficiencies.

AB 606 and SB 553 would require DGS to identify each public property added to the state property inventory as of January 1, 2015 where it is feasible for water consumption to be reduced and water efficiencies to be achieved through replacement of landscaping, irrigation timers, or spray sprinkler heads, and would require the appropriate replacements where feasible.

Given that landscape irrigation represents approximately 43 percent of urban water use, according to the Department of Water Resources, and that California is prone to cycles of drought and water shortage, such as the prolonged multi-year drought the state is presently experiencing, AB 606 and SB 553 would ensure the state takes an important leadership role in implementing water efficient landscape practices.

While AB 606 and SB 553 would focus on reducing water consumption on state properties, an additional beneficial approach to improving water use efficiency on state properties would be to create opportunities for utilizing recycled water, when it is available and feasible to do so. Under existing law, CalTrans is required to use recycled water for irrigation of freeway landscaping when it finds and determines that all of the following conditions exist:

- The recycled water is of adequate quality and is available in adequate quantity for the proposed use.
- The proposed use of the recycled water is approved by the California regional water quality control board having jurisdiction.
- There is a direct benefit to the state highway program for the proposed use of recycled water.
- The recycled water is supplied by a local public agency or water public utility able to contract for delivery of water and the installation, maintenance, and repair of facilities to deliver the water.
- The installation of the water delivery facilities does not unreasonably increase any hazard to vehicles on the freeway or create unreasonable problems of highway maintenance and repair.

AB 606 and SB 553, and the focus on improving water use efficiency on state properties, present an opportunity to advance the water use efficiency ethic through expanded use of recycled water, where it is available and its use is determined to be feasible and appropriate. AB 606 and SB 553 should be amended to achieve that objective.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:

- Authorizes and facilitates expanded use of local water resources including water recycling, potable reuse, graywater, and rainwater harvesting (e.g., cisterns and rain
barrels), and brackish groundwater.

- Encourages the use of recycled water in commercial, industrial, institutional, and residential settings.

- Encourages reasonable tracking of water use and improved efficiency in the commercial, industrial, and institutional (CII) sector.

(2015 Legislative Policy Guidelines, Local Water Resources, Support, Page 10, items 8 and 12; and Water Use Efficiency, Support, Page 17, item 18).

**Staff recommends a position of Support and Seek Amendments on AB 606 and SB 553.**

**Suggested Amendments Include:**
AB 606 and SB 553 should be amended to expand opportunities for greater use of recycled water on state properties, modeled after the existing statute relating to the use of recycled water for irrigation of freeway landscaping.

**Water Rate Legislation**

*AB 401 (Dodd) – Low-Income Water Rate Assistance Program*
Under existing law, the Public Utilities Commission (PUC) has regulatory authority over public utilities, including private water companies, and existing law authorizes the PUC to fix the rates and charges for every private water company, and requires that those rates and charges be just and reasonable. Existing law also requires the PUC to consider, and authorizes the PUC to implement, programs to provide rate relief for low-income ratepayers of water corporations. Existing law establishes the Department of Community Services and Development (DCSD) and vests with that agency various powers and authority regarding the implementation and administration of programs to assist low-income individuals in the state.

AB 401 would require DCSD, by January 1, 2017, in collaboration with the State Board of Equalization and relevant stakeholders, to develop a plan for the funding and implementation of a statewide Low-Income Water Rate Assistance Program. AB 401 would also require DCSD to report to the Legislature on its findings regarding the feasibility and desired structure of the program, including any recommendations for legislative action that may need to be taken.

During the 2014 legislative session, the Water Authority Board of Directors adopted an Oppose Unless Amended position on similar legislation, AB 1434 (Yamada), which would have required the DCSD to establish a program to **require** water service providers to provide water bill discounts and subsidies to eligible low-income residential water ratepayers. In May 2014, AB 1434 was amended to remove the mandate upon water service providers, and would have then only required the DCSD to report to the Legislature regarding the feasibility and desired structure of a low-income water rate assistance program by January 1, 2016 without imposing any mandates upon retail water service providers. AB 1434 eventually failed passage in the Legislature. AB 401 reflects the same approach as was embodied in the final May 2014
amended version of AB 1434, on which the Water Authority had removed its opposition.

The introduction and advancement of low-income water rate assistance legislation during the 2014 legislative session garnered attention throughout the state. Many retail water agencies expressed an interest in exploring opportunities to implement low-income water rate assistance programs that meet their own individual community needs and circumstances. In fact, there was such an interest in the issue that the Association of California Water Agencies (ACWA) created a Low-Income Water Rate Assistance Working Group within its State Legislative Committee (both the Water Authority and the City of San Diego are participants within the ACWA working group).

The ACWA working group, which began meeting in August 2014, has spent the past eight months examining the legal framework for retail water rates, the experiences of other water and energy providers in California that have implemented low-income rate assistance programs, researching information about the alternatives available to retail water suppliers for implementing these programs, and exploring whether a legislative solution is necessary in 2015.

One of the lingering concerns regarding the advancement of a low-income water rate assistance program legislatively – and one of the key concerns that resulted in the Water Authority’s Board of Directors adopting an Oppose Unless Amended position on AB 1434 (Yamada) – is the possibility that stakeholders interested in these programs will propose and attempt to advance a mandated water user fee or public goods charge on water to generate revenues that can be used by the state to implement low-income water rate assistance programs on a statewide basis. There are discussions under way to examine options relating to creating voluntary authority for water agencies to implement these low-income programs within the context of Proposition 218, but it remains unclear whether legislation could successfully navigate the Legislature on that issue.

At this time, AB 401 would only advance a study and development of a plan within the DCSD. With stakeholder participation identified within AB 401, there will be opportunity for retail and wholesale water agencies to engage administratively if the measure is enacted into law.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:

- Maintains the authority of water agencies to establish water rates locally, consistent with cost-of-service requirements of the law.
- Maximizes the ability of water agencies to design rate structures to meet local water supply goals and that conform to cost-of-service requirements of the law.


**Staff recommends a position of Support on AB 401.**
Water Quality Legislation

SB 385 (Hueso) – Primary Drinking Water Standards: Variances: Hexavalent Chromium

Existing law, the California Safe Drinking Water Act, provides for the operation of public water systems and imposes on the State Water Resources Control Board (SWRCB) various duties and responsibilities for the regulation and control of drinking water in California. Existing law requires the SWRCB to adopt primary drinking water standards for contaminants in drinking water. Existing law also requires a primary drinking water standard to be established for hexavalent chromium (often referred to as Chromium-6), and authorizes the SWRCB to grant a variance from a primary drinking water standard to a public water system.

SB 385 would authorize, until January 1, 2020, the SWRCB to grant a variance from the primary drinking water standard for hexavalent chromium if the public water system prepares and submits a compliance plan, the SWRCB approves the compliance plan, the public water system provides notice requirements regarding the compliance plan to its customers, and the public water system sends annual reports to the SWRCB that updates the status of the approved compliance plan. SB 385 would require the compliance plan to describe the actions the public water system is taking and will take to comply with the primary drinking water standard for hexavalent chromium by the earliest feasible date, include the public water system’s best estimate of the funding required for compliance, and identify the actions the public water system will take to secure funding.

The drinking water standard for Chromium-6 took effect on July 1, 2014. It established a maximum contaminant level of 10 parts per billion (ppb) for Chromium-6 in drinking water, and is the only drinking water standard for Chromium-6 in the nation. The regulations establishing the drinking water standard requires public water systems to begin monitoring for Chromium-6 by January 1, 2015. However, many affected water systems have not been able to take all of the necessary steps to achieve compliance with the standard, which could include designing appropriate treatment systems, securing financing, and building and testing new treatment facilities. Those processes can take multiple years and cost millions of dollars, in some instances. Many affected water systems will be deemed in violation of the new standard this year, even though it may not have been feasible for some systems to install appropriate treatment systems to comply with the drinking water standard.

SB 385 – which is sponsored by the Association of California Water Agencies (ACWA), and which is designated as an urgency statute, subject to a 2/3 vote in each house of the Legislature, to take effect immediately upon enactment – would provide a time-limited process for a water system to work toward compliance with the Chromium-6 standard without being deemed in violation, as long as strict safeguards and progress towards compliance are being met. Important to protection of public health, SB 385 would not exempt any water systems from compliance or delay steps a water system must take to achieve compliance. The measure would simply create a process whereby water systems can reasonably implement a plan to fully comply with the Chromium-6 standard.

While the Water Authority and its member agencies are not directly impacted by the Chromium-
6 drinking water standard, the policy direction and compliance plan approach embodied in SB 385 to provide adequate and reasonable time for compliance with emerging drinking water standards should be the model for implementing newly-adopted drinking water standards in the future.

The Water Authority’s legislative policy guidelines state that the Water Authority shall support legislation that:

- Establishes appropriate quality standards, testing procedures, and treatment processes for emerging contaminants.


**Staff recommends a position of Support on SB 385.**

Prepared by: Glenn A. Farrel, Government Relations Manager
Approved by: Dennis A. Cushman, Assistant General Manager
March 18, 2015

Legislation, Conservation and Outreach Committee

Legislation, Conservation and Outreach Committee Work Plan for 2015 and 2016 (Action)

Legislation, Conservation and Outreach Committee Chair and Vice Chairs’ recommendation:
Adopt the Legislation, Conservation and Outreach Committee Work Plan for 2015 and 2016.

Alternative
Modify the recommended Work Plan.

Background
The Legislation, Conservation and Outreach Committee is responsible for matters relating to legislation, lobbying and intergovernmental relations; community relations; media relations; water conservation programs; and the Small Contractor Outreach and Opportunities Program (SCOOP). During the next two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

Discussion
The attached report lists the Legislation, Conservation and Outreach Committee’s Work Plan for 2015 and 2016. The Work Plan were prepared under the direction of the Legislation, Conservation and Outreach Committee chair and vice chairs and were provided for Committee review at the February 26, 2015 Committee meeting. The Work Plan will be formally reviewed at the end of each calendar year to measure progress.

Prepared by: Jason Foster, Director of Public Outreach and Conservation  
Reviewed by: Gary Croucher, Chair, Legislation, Conservation and Outreach Committee

Legislation, Conservation and Outreach Committee Work Plan
for Calendar Years 2015 and 2016

Business Plan Items

Water Use Efficiency
1. **Per Capita Water Consumption** – Encourage efforts by the Water Authority and member agencies to maintain or improve the region’s overall per capita water use goal of 174 gallons per person per day through December 2015 and at or below 167 gallons per person per day through 2020. (December 2016 – Goals #2, 5)
2. **External Funding** – Provide input on external funding program goals, appropriate resources to support these activities, and reporting frequency to the Board. Encourage funding agreements (grants, utility funding, other) to minimize operational funds needed for current and future water use efficiency programs. (December 2016 – Goals #1, 4, 8)
3. **Partnerships** – Review and encourage partnerships with private or nonprofit organizations that generate value-added to regional conservation initiatives. (December 2016 – Goal #3)
4. **MWD Conservation Funding** – Review and support outreach and other efforts to increase the number of rebates issued to Water Authority service area customers. (June 2016 – Goal #6)

Water Shortage and Drought Response Management
1. **Drought Response Outreach** – Review, evaluate and provide direction with regard to preferred outreach strategies, programs and partnerships that raise regional awareness and compliance with any mandatory water use restrictions in effect and that keep water use at a level that meets or is below shortage allocations or other agency-set targets and avoids financial penalties. (December 2016 – Goals #3, 4)

Government Relations Outreach
1. **Legislative Policy Guidelines** – Review, provide input and consider approval of Legislative Policy Guidelines for the following calendar year. (December 2015 and December 2016 – Goal #3)
2. **Bay-Delta** – Continue to evaluate, advocate and encourage Bay-Delta solutions that are consistent with the Board’s Bay Delta Policy Principles. (December 2015 – Goal #2)
3. **Water Bond** – Evaluate proposals to implement Proposition 1, including funding appropriations to ensure that funding for local supply development, conservation, storage and other investments is equitable to the San Diego region. (December 2016 – Goal #2)
4. **State Appropriations** – Review and support efforts to pursue and secure state funding, including water bond funding, to support regional and local projects and programs including water recycling, potable reuse, conservation, and seawater and brackish groundwater desalination. (December 2016 – Goal #2)
5. **Federal Funding Authorizations** – Review and encourage efforts for the region to work together to pursue and secure federal funding authorizations through the Water Resources Development Act or through other federal financing programs, such as the National Infrastructure Bank or the Water Infrastructure Finance and Innovation
Authority (WIFIA) for Water Authority and member agency projects. (October 2016 – Goal #4)

6. **Relationship Building** – Encourage staff efforts to host at least two Legislative Roundtable events in San Diego during the 2015 calendar year and conduct at least one legislative advocacy trip to Sacramento during 2015. Participate in Legislative Roundtables if available. (July 2016 – Goals #6, 7)

**Public Affairs Outreach**

1. **Public Support for Supply Reliability Efforts** – Encourage the development and implementation of regional outreach and communications initiatives designed to increase awareness and support for the Water Authority’s diversification strategy and related issues, including:
   a. Communications and outreach activities that raise the percentage of the public who view water service as a utility with “good” value to 67 percent by April 2017;
   b. Communications and outreach activities that achieve or sustain at least 80 percent support for the Water Authority’s long-term overall water supply diversification strategy through June 2017;
   c. Programs and outreach activities that help sustain 90 percent or greater public agreement that water use efficiency is an important civic duty by June 2017;
   d. Communications and outreach activities that sustain a 67 percent or greater awareness among residents that indirect potable reuse is a safe and acceptable part of the region’s drinking water supply by June 2017.
   (December 2016 – Goals #3-12, 14)

2. **Small-Business Outreach** – Review and encourage efforts that enable Water Authority to achieve or exceed the Board’s established target for small-business participation percentage of total procurement dollars. (The current Board target is 30 percent.) (June 2016 – Goal #3)

3. **School Education** – Review and encourage school education programs and initiatives designed to help reach more than 1,200 teachers and 40,000 students in the San Diego region annually. (June 2016 – Goal #13)

**Metropolitan Water District**

1. **MWD Issues Outreach** – Review and encourage outreach efforts locally and statewide to inform public officials, the media and other stakeholders on the issues at stake in the Water Authority’s rate litigation against MWD, and achieve 50 percent or greater public awareness of the litigation by December 2017. (December 2016 – Goal #9)

**Other Items**

1. **Legislation** – Consider and adopt positions on legislation and/or sponsor legislation that affects the Water Authority’s interests and the attainment of the Water Authority’s Business Plan goals. (Annually)

2. **Polling Review** – Review findings of public opinion polls and provide direction on future polling to help achieve the Water Authority’s Business Plan goals and any other goals the Board may set. (December 2016)

3. **SCOOP Metrics** – In collaboration with SCOOP Committee, evaluate small-business participation target to ensure it is still appropriate; consider setting new SCOOP participation target as applicable. (June 2016)
March 18, 2015

**Attention: Legislation, Conservation and Outreach Committee**

**Adopt position on AB 291 (Medina). (Action)**

**Staff recommendation**
1. Adopt a position of Support and Seek Amendments on AB 291 (Medina)

**Alternatives**
1. Do not adopt the recommended position.
2. Modify the position.

**Fiscal Impact**
There is no direct fiscal impact associated with the consideration of adopting policy positions on legislation.

**CEQA Reform Legislation**

*AB 291 (Medina) – California Environmental Quality Act: Local Agencies: Notice of Determination: Waiver*

Existing law, the California Environmental Quality Act (CEQA), requires a lead agency to prepare and certify the completion of an environmental impact report (EIR) on a project that it proposes to carry out or approve that may have a significant effect on the environment, or to adopt a negative declaration if the lead agency finds that the project will not have a significant effect. CEQA requires a lead agency that approves or determines to carry out a project subject to CEQA to file a notice of the approval or determination with the county clerk of each county in which the project will be located, and requires the county clerk to make the notice available for public inspection.

AB 291 would authorize a local agency, for certain water projects, to file the notice with the county clerk of the county in which the local agency’s principal office is located, in lieu of the county clerk of each county in which the project is located. AB 291 would also require the local agency to file the notice with the Office of Planning and Research.

Agencies approving multi-county water projects face a myriad of different submission requirements from each county, often posing substantial and unnecessary logistical challenges. In some instances, technical errors in a county clerk’s posting process have resulted in additional CEQA litigation, even when the errors were not caused by the local agency that adopted the CEQA notice.

AB 291, which is sponsored by the Association of California Water Agencies (ACWA), would streamline the filing of CEQA notices of determination for multi-county water projects, and improve public access to these notices by giving local agencies the option to post these notices on the state’s CEQAnet website (through the Office of Planning and Research) and with the county clerk in the agency’s home county. This would simplify local agencies’ filing of these notices and improve public access by making notices for many water projects available statewide.
One provision of the measure indicates that “If the lead agency files a notice pursuant to this section, the local agency shall also file the notice with the Office of Planning and Research.” The use of two different phrases – lead agency and local agency – within the same provision could create uncertainty and confusion as to whether there is an additional step of filing with the Office of Planning and Research by some local agency other than the lead agency. While likely a technical drafting error, AB 291 should be amended to maintain consistency in terminology so no confusion or uncertainty would be added to the new filing provision.

The Water Authority does not have legislative policy guidelines relating to CEQA reform. However, the staff recommended position on this measure would be consistent with the Board’s previous policy positions on similar CEQA reform legislation in previous years.

Staff recommends a position of Support and Seek Amendments on AB 291.

Suggested Amendments Include:
AB 291 should be amended to maintain consistency in terminology as it relates to the provision in the measure that would require the lead agency to file a notice with the Office of Planning and Research.

Prepared by: Glenn A. Farrel, Government Relations Manager
Approved by: Dennis A. Cushman, Assistant General Manager
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Drought Response Communications and Outreach Update (Information)

Purpose
This report provides an update on drought management communications and outreach activities to promote increased conservation as part of the Water Authority’s Water Shortage and Drought Response Plan.

Background
On February 13, 2014, the Water Authority Board authorized entering into the Voluntary Supply Management stage of its Water Shortage and Drought Response Plan, which calls for increased voluntary water conservation. The Board also approved notifying the Water Authority’s 24 member agencies that the region was at the Drought Watch condition of the region’s Model Drought Response Ordinance. Following several months of worsening drought conditions and record-breaking heat, the Water Authority Board authorized entering into the Supply Enhancement stage of its Water Shortage and Drought Response Plan on July 24, 2014. The Board also declared a Drought Alert condition of the region’s Model Drought Response Ordinance, which calls for the implementation of mandatory water use restrictions to help manage available supplies. The Water Authority Board’s actions aim to help preserve stored water reserves in Southern California, and they are designed to help the region’s retail water agencies comply with emergency mandatory conservation measures imposed by the State Water Resources Control Board, which took effect on August 1, 2014.

The Water Shortage and Drought Response Plan includes a communications strategy to help achieve increased water conservation by the public, and to enhance public understanding of how ratepayers’ investments in projects and their commitment to water conservation has reduced the region’s vulnerability to shortages from drought conditions.

Discussion
This reporting period covers mid-February through mid-March, 2015. Staff conducted a variety of activities including media relations, advertising, community partnerships, coordination with member agencies, community events and presentations, as well as posting social media and online content. Highlights include the introduction of a newspaper column entitled “Dear Drought Fighter” in partnership with the U-T San Diego, staging a series of regional plant fairs in collaboration with The Home Depot, and securing a partnership to promote national “Fix a Leak Week” with the Plumbing, Heating and Cooling Contractors Association of San Diego (PHCC).
Community Events and Presentations:
Staff participated in a variety of events in the community or with industry groups to share
drought-related information on water supplies, water-use restrictions and conservation rebates.
Event outreach included:
- A rainwater harvesting open house at the home of Director Steiner
- The Sustainable Urban Turf and Landscape Seminar at Cuyamaca College
- The San Diego Chinese Center’s Chinese New Year Food and Cultural Fair
- Five San Diego County Garden Friendly Plant Fairs (at locations in San Diego, Oceanside and Poway)
- The St. Patrick’s Day Festival at Balboa Park
- The “H2Overview – How Low Can You Go” water conservation seminar hosted by The Equinox Center
- A roundtable discussion with the commercial real estate industry co-hosted by the San Diego Regional Economic Development Corporation

Staff delivered drought-related presentations to the following organizations:
- Wednesday Club
- Daughters of the American Colonists, Torrey Pines Chapter
- Alpha Phi sorority at San Diego State University
- International Society of Pharmaceutical Engineers
- Past Grand Jurors’ Association of San Diego
- National Active & Retired Federal Employees Association
- Building Owners and Managers Association
- University Community Planning Group
- Sustainable Scripps Ranch
- Professional Women in Insurance

Media Relations:
As part of the Water Authority’s drought outreach, staff issued four news releases:
- “Storms Give Region Another Opportunity to Turn Sprinklers Off”
- “Countywide Water Use Shrinks 28 Percent in January”
- “Spring Plant Fairs Offer Big Discounts on Low-Water-Use Plants”
- “Water Authority Partners with Companies to Offer Discounts on Artificial Turf”

Staff also partnered with San Diego Gas & Electric on a news release related to the completion of SDG&E’s WaterSmart landscaping project. The release included a quote from Chair Weston. Media relations staff also fielded numerous drought-related calls from local media and also helped to initiate coverage of drought issues with interviews related to water supplies and conservation on several TV stations.

Advertising:
Staff continued with targeted advertising using the “How Low Can You Go” creative to promote keeping water use as low as possible this winter. Tactics employed included advertising via radio, online and social media, TV and radio weather report sponsorships, and Spanish-language
radio and television ads. The current round of advertising is projected to run through the end of March. The Water Authority is using drought response grant funds awarded by the State to partially support the campaign. It is also coordinating advertising efforts with other water agencies to leverage resources and minimize duplication.

As part of an added-value piece to its digital advertising buy with Cox Communications, a January interview with Chair Weston at the Water Conservation Garden was featured on “Cox San Diego Connection,” the company’s public affairs talk show on Channel 4 that addresses important issues in San Diego County. Chair Weston’s discussion touched on drought conditions, conservation, water supplies and the region’s water supply diversification strategy. The 30-minute talk show began airing in early March and will continue every Wednesday and Saturday at 5 p.m. through the end of March. It is also available online at Cox San Diego Connection’s website: [http://www.4sd.com/main/cox-san-diego-connection_2.html](http://www.4sd.com/main/cox-san-diego-connection_2.html).

Community Partnerships:
Chair Weston and staff attended a ribbon-cutting ceremony on February 26 to celebrate SDGE’s new WaterSmart landscaping project at its Century Park headquarters in Kearny Mesa. The previous landscape at this highly visible site was 71 percent turf grass. Turf areas were replaced with WaterSmart landscaping, including a succulent garden and a walking path – amenities aimed at supporting health, wellness and safety. These WaterSmart Landscape upgrades are projected to save up to 4 million gallons of water per year.

The first installment of the Water Authority’s “Dear Drought Fighter” column in the U-T San Diego was published Feb. 21, and it continues to run each Saturday in the Home & Garden section of the U-T in both print and online versions. During its first three weeks, the column has generated nearly 30 queries and comments sent to a special agency email address, and staff has started selecting questions and issues raised in those emails for answering in subsequent columns.

Staff introduced a new partnership with the Plumbing Heating Cooling Contractors Association of San Diego to promote Fix a Leak Week, a nationwide event held March 16-22 under the auspices of the United States Environmental Protection Agency’s WaterSense Program. During “Fix a Leak Week,” PHCC Contractors will offer a 10 percent discount on services (up to $100) for customers that mention the promotion and the Water Authority. The Water Authority and PHCC will promote the event through media relations, websites and social media channels.

Westfield North County has agreed to run updated “When in Drought” campaign messages on its digital sign next to Interstate 15 in Escondido at no cost to the Water Authority. The new messages began running on February 27 and are scheduled to run through June 1.

The San Diego County Apartment Association featured an article in its RentalOwner magazine highlighting ways to save water in rental communities. Typical subscribers are owners or managers of rental properties throughout the county.
Coordination with Member Agencies:
The Water Authority continues to coordinate with member agencies on drought response outreach campaign issues. Staff hosted its monthly Joint Public Information Council/Conservation Coordinators meeting with member agency representatives on March 2.

Social Media and Online Resources:
During this reporting period, staff made more than 60 Twitter posts to spread awareness of drought conditions, promote conservation programs and events, and to call attention to water supply reliability efforts. Members of the public tweeted and re-tweeted more than 125 messages related to drought management actions, water conservation-related events and promotions, and other topics related to conservation or drought. These messages came from civic organizations, public officials, media outlets, and individuals. Staff also posted more than 60 drought and conservation-related messages to Facebook.

The Water Authority’s drought web portal landing page, www.whenindrought.org, has received more than 44,800 page views since the site’s launch on April 29, 2014 through March 6, 2015. Its water conservation portal, www.WaterSmartSD.org, had more than 3,600 visits during the month of February.

In coming months, staff will continue drought management communication activities and will provide regular updates to the Board.

Prepared by: Carlos Michelon, Principal Water Resources Specialist  
Prepared by: Jason Foster, Director, Public Outreach and Conservation  
Reviewed by: Dennis A. Cushman, Assistant General Manager
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Small Contractor Outreach and Opportunities Program (SCOOP) Committee Quarterly Report (Information)

Background
The purpose of SCOOP is to maximize small-business participation on the San Diego County Water Authority’s contracts and procurements. SCOOP provides small businesses with resources and information through training, networking, and technical assistance. This report provides a summary of SCOOP program metrics and activities from July 1, 2014 through December 31, 2014.

Discussion

Outreach Activities
During the second quarter Water Authority representatives participated in events with 13 business organizations and other government agencies.

A highlight of the outreach activities was the San Diego County Regional Airport Authority Construction Outreach event. It was held at the McMillan Events Center in Liberty Station with nearly 250 individuals interested in regional construction opportunities.

SCOOP Training
SCOOP training focuses exclusively on how to do business with the Water Authority. No classroom workshops were held as the in-person training program is being evaluated. The online course system had an average of 204 page views per month. Ratings from the course evaluations indicated continued high levels of satisfaction with online training program.

Program Measurements
The Water Authority’s cumulative contract and purchase order awards through the second quarter was approximately $56.5 million. Small businesses received approximately $38.5 million, or 68 percent, of total dollars awarded. Small businesses received awards in several procurement sectors, with approximately $16 million awarded in construction, $19 million awarded for professional services, and $200,000 awarded for purchase orders. Minority- and women-owned businesses received approximately $7.8 million.

The number of companies receiving contract or purchase order awards was 308. Of those, 123, or 40 percent, were small businesses. Forty-three, or 14 percent, were minority- and women-owned businesses.

Further details of SCOOP statistics are given in the attached exhibits. Information on minority-owned and women-owned businesses is made available to the Board for statistical purposes only.
Legislation, Conservation and Outreach Committee
March 18, 2015
Page 2 of 9

Prepared by: Teresa Penunuri, Public Affairs Supervisor
Approved by: Jason Foster, Director of Public Outreach and Conservation

Attachments
1. Exhibit A – SCOOP Program Measurements Summary
2. Exhibit B – SCOOP Measurements Detail
3. Exhibit C - SCOOP Outreach Activities
## EXHIBIT A

**SCOOP Measurements Summary**

**July 1, 2014 – December 31, 2014**

### A-1. Small Business Measurements for

**July 1, 2014 – December 31, 2014**

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>FY 2014 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>1. Number of qualified small businesses capable of bidding on Water Authority projects</td>
<td>3104</td>
</tr>
<tr>
<td>2. Number of bidders submitting bids and proposals for contracts</td>
<td>238</td>
</tr>
<tr>
<td>3. Number of businesses participating on Water Authority procurements (contracts and purchase orders)</td>
<td>308</td>
</tr>
<tr>
<td>4. Number of contracting opportunities</td>
<td>46</td>
</tr>
<tr>
<td>5. Amount committed to small businesses</td>
<td>$56,489,150</td>
</tr>
</tbody>
</table>

### A-2. Minority/Women-Owned Business Measurements for

**July 1, 2014 – December 31, 2014**

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>FY 2014 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total M/W</td>
</tr>
<tr>
<td>1. Number of qualified M/W businesses capable of bidding on Water Authority projects</td>
<td>3104</td>
</tr>
<tr>
<td>2. Number of bidders submitting bids and proposals for contracts</td>
<td>238</td>
</tr>
<tr>
<td>3. Number of businesses participating on Water Authority procurements (contracts and purchase orders)</td>
<td>308</td>
</tr>
<tr>
<td>4. Number of contracting opportunities</td>
<td>46</td>
</tr>
<tr>
<td>5. Amount committed to minority and women-owned businesses</td>
<td>$56,489,150</td>
</tr>
</tbody>
</table>
EXHIBIT B
SCOOP Measurements Detail
July 1, 2014 – December 31, 2014

1. Number of qualified small businesses capable of bidding on Water Authority projects.

“The Network” is the Water Authority’s SCOOP database and online vendor registration, notification, and solicitation system. This measurement forms a baseline of small businesses that are interested in working with the Water Authority on the types of procurements we issue.

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Amount of qualified businesses</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>3104</td>
<td>1037</td>
<td>33%</td>
</tr>
<tr>
<td>Minority- or Women-owned</td>
<td>3104</td>
<td>752</td>
<td>24%</td>
</tr>
</tbody>
</table>

Information taken from The Network’s Business Classification and Minority Company Statistics as of 01/13/2015

2. Number of businesses submitting bids and proposals.

This metric measures bidders on contract opportunities. During the first two quarters, 127 (53 percent) of businesses bidding or proposing on Water Authority contracts were small businesses. For those small businesses that did bid, 63 (33 percent) of small bidders received contracts or subcontracts.

Sixty (25 percent) of bidders and proposers were minority- and women-owned businesses.
B-2. Number of bidders submitting bids and proposals for contracts.

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>Total</th>
<th>Small</th>
<th>% Small</th>
<th>M/W</th>
<th>% M/W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Build</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>3</td>
<td>2</td>
<td>67%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>12</td>
<td>7</td>
<td>58%</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Design Build Subtotal</strong></td>
<td>15</td>
<td>9</td>
<td>60%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>7</td>
<td>5</td>
<td>71%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>54</td>
<td>29</td>
<td>53%</td>
<td>9</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Construction Subtotal</strong></td>
<td>61</td>
<td>34</td>
<td>56%</td>
<td>9</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Professional Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>47</td>
<td>21</td>
<td>45%</td>
<td>11</td>
<td>23%</td>
</tr>
<tr>
<td>Subs</td>
<td>98</td>
<td>60</td>
<td>61%</td>
<td>36</td>
<td>37%</td>
</tr>
<tr>
<td><strong>Prof. Services Subtotal</strong></td>
<td>145</td>
<td>81</td>
<td>56%</td>
<td>47</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>16</td>
<td>3</td>
<td>19%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Subs</td>
<td>1</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Other Subtotal</strong></td>
<td>17</td>
<td>3</td>
<td>18%</td>
<td>2</td>
<td>12%</td>
</tr>
<tr>
<td><strong>Total Bidders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>73</td>
<td>31</td>
<td>42%</td>
<td>13</td>
<td>18%</td>
</tr>
<tr>
<td>Subs</td>
<td>165</td>
<td>96</td>
<td>58%</td>
<td>47</td>
<td>28%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>238</td>
<td>127</td>
<td>53%</td>
<td>60</td>
<td>25%</td>
</tr>
</tbody>
</table>
3. Number of businesses participating on Water Authority procurements.

The total number of small companies doing business with the Water Authority was 123, or 40 percent. This measurement indicates the volume of Water Authority procurement opportunities. Small businesses often pursue and are awarded contracts and purchase orders that are smaller in value, so the number of businesses commencing work on our procurements is an important measurement of small-business success. The number of minority- and woman-owned businesses doing business with the Water Authority was 43, or 14 percent.

B-3. Number of businesses participating on Water Authority procurements (contracts and purchase orders)

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>Total</th>
<th>Small</th>
<th>% Small</th>
<th>M/W</th>
<th>% M/W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Build</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>5</td>
<td>3</td>
<td>60%</td>
<td>1</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Design Build Subtotal</strong></td>
<td>6</td>
<td>4</td>
<td>67%</td>
<td>1</td>
<td>17%</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>3</td>
<td>3</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>25</td>
<td>14</td>
<td>56%</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Construction Subtotal</strong></td>
<td>28</td>
<td>17</td>
<td>61%</td>
<td>6</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Professional Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>27</td>
<td>16</td>
<td>59%</td>
<td>6</td>
<td>22%</td>
</tr>
<tr>
<td>Subs</td>
<td>38</td>
<td>20</td>
<td>53%</td>
<td>14</td>
<td>37%</td>
</tr>
<tr>
<td><strong>Prof. Services Subtotal</strong></td>
<td>65</td>
<td>36</td>
<td>55%</td>
<td>20</td>
<td>31%</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>15</td>
<td>3</td>
<td>20%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Subs</td>
<td>1</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Other Subtotal</strong></td>
<td>16</td>
<td>3</td>
<td>19%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td><strong>Contracts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>46</td>
<td>23</td>
<td>50%</td>
<td>8</td>
<td>17%</td>
</tr>
<tr>
<td>Subs</td>
<td>69</td>
<td>37</td>
<td>54%</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Contracts Subtotal (Design Build, Construction and Professional Services)</strong></td>
<td>115</td>
<td>60</td>
<td>52%</td>
<td>29</td>
<td>25%</td>
</tr>
<tr>
<td><strong>Vendors</strong></td>
<td>193</td>
<td>63</td>
<td>33%</td>
<td>14</td>
<td>7%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>308</td>
<td>123</td>
<td>40%</td>
<td>43</td>
<td>14%</td>
</tr>
</tbody>
</table>
4. **Number of contracting opportunities.**

This measurement reflects the number of prime contractors and consultants that have a direct contract with the Water Authority. Small businesses received 23, or 50 percent, of the 46 total contracts awarded through the end of the second quarter.

Procurements valued at $10,000 through $150,000 form the basis for the new Sheltered Market Program. Small businesses received 11, or 44 percent, of the 25 procurements in this dollar value range. Of those, two were identified as sheltered market opportunities.

<table>
<thead>
<tr>
<th>B-4. Number of contracting opportunities</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>Total Contract(s)</th>
<th>Small Primes</th>
<th>% Small</th>
<th>M/W Primes</th>
<th>% M/W</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-$10,000</td>
<td>2</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>$10,001-$150,000</td>
<td>25</td>
<td>11</td>
<td>44%</td>
<td>6</td>
<td>24%</td>
</tr>
<tr>
<td>$10,000-$50,000</td>
<td>12</td>
<td>5</td>
<td>42%</td>
<td>2</td>
<td>17%</td>
</tr>
<tr>
<td>$50,001-$150,000</td>
<td>13</td>
<td>6</td>
<td>46%</td>
<td>4</td>
<td>31%</td>
</tr>
<tr>
<td>$150,001-$250,000</td>
<td>2</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>$250,001 - $1,000,000</td>
<td>7</td>
<td>3</td>
<td>43%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>$1,000,001 - $50,000,000</td>
<td>10</td>
<td>9</td>
<td>90%</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>23</td>
<td>50%</td>
<td>8</td>
<td>17%</td>
</tr>
</tbody>
</table>
### 5. Amount committed to small businesses.

The overall small-business participation goal on initial contract and purchase awards for fiscal year 2015 year-to-date is 30 percent. Through the end of the second quarter, the amount committed to small businesses was approximately $38.5 million, or 68 percent, of total procurement dollars awarded.

<table>
<thead>
<tr>
<th>FY 2015 YTD</th>
<th>Total</th>
<th>Small</th>
<th>% Small</th>
<th>M/W</th>
<th>% M/W</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design Build</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>$2,098,000</td>
<td>$2,098,000</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>$1,584,000</td>
<td>$758,000</td>
<td>48%</td>
<td>$380,000</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Design Build Subtotal</strong></td>
<td>$3,682,000</td>
<td>$2,856,000</td>
<td>78%</td>
<td>$380,000</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>$11,172,638</td>
<td>$11,172,638</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Subs</td>
<td>$12,713,529</td>
<td>$4,905,241</td>
<td>39%</td>
<td>$543,325</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Construction Subtotal</strong></td>
<td>$23,886,167</td>
<td>$16,077,879</td>
<td>67%</td>
<td>$543,325</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Professional Services</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>$20,757,288</td>
<td>$18,164,988</td>
<td>88%</td>
<td>$6,159,836</td>
<td>30%</td>
</tr>
<tr>
<td>Subs</td>
<td>$2,140,117</td>
<td>$822,015</td>
<td>38%</td>
<td>$460,015</td>
<td>21%</td>
</tr>
<tr>
<td><strong>Prof. Services Subtotal</strong></td>
<td>$22,897,405</td>
<td>$18,987,003</td>
<td>83%</td>
<td>$6,619,851</td>
<td>29%</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>$1,376,928</td>
<td>$200,443</td>
<td>15%</td>
<td>$150,443</td>
<td>11%</td>
</tr>
<tr>
<td>Subs</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Other Subtotal</strong></td>
<td>$1,376,928</td>
<td>$200,443</td>
<td>15%</td>
<td>$150,443</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Contracts</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primes</td>
<td>$35,409,225</td>
<td>$31,636,069</td>
<td>89%</td>
<td>$6,310,279</td>
<td>18%</td>
</tr>
<tr>
<td>Subs</td>
<td>$16,433,275</td>
<td>$6,485,256</td>
<td>39%</td>
<td>$1,383,340</td>
<td>8%</td>
</tr>
<tr>
<td><strong>Contracts Subtotal</strong> (Design Build, Construction and Professional Services)</td>
<td>$51,842,500</td>
<td>$38,121,325</td>
<td>74%</td>
<td>$7,693,619</td>
<td>15%</td>
</tr>
<tr>
<td><strong>Vendors</strong></td>
<td>$4,646,650</td>
<td>$364,745</td>
<td>8%</td>
<td>$81,920</td>
<td>2%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>$56,489,150</td>
<td>$38,486,070</td>
<td>68%</td>
<td>$7,775,539</td>
<td>14%</td>
</tr>
</tbody>
</table>
EXHIBIT C

**SCOOP Outreach Activities**

*July 1, 2014 – December 31, 2014*

Water Authority representatives attended outreach events with 13 small business, trade, and community organizations as indicated in the following chart.

<table>
<thead>
<tr>
<th>ORGANIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Association of General Contractors</td>
</tr>
<tr>
<td>Caltrans</td>
</tr>
<tr>
<td>City of San Diego</td>
</tr>
<tr>
<td>Elite San Diego Veteran-Owned Business Network</td>
</tr>
<tr>
<td>Mexican American Business Professionals Association</td>
</tr>
<tr>
<td>Navy Gold Coast</td>
</tr>
<tr>
<td>North County Small Business Development Center</td>
</tr>
<tr>
<td>Public Agency Consortium</td>
</tr>
<tr>
<td>Regional Construction Procurement Committee</td>
</tr>
<tr>
<td>San Diego Minority Supplier Development Council</td>
</tr>
<tr>
<td>San Diego Supplier Development Council</td>
</tr>
<tr>
<td>South County Economic Development Council</td>
</tr>
<tr>
<td>Women’s Construction Coalition</td>
</tr>
</tbody>
</table>
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Quarterly report on Public Outreach and Conservation activities (Information)

Background
From December 2014 through February 2015, the Public Outreach and Conservation Department supported Water Authority conservation and outreach programs and projects, assisted member agencies, worked with communities directly affected by Water Authority construction projects, conducted media relations activities, worked on education programs, and supplied information through various means, including publications and online communications.

Discussion
During the quarter, Public Outreach and Conservation staff worked on a variety of projects. They included communication and outreach activities to support the “When in Drought: Save Every Day, Every Way” campaign to increase water conservation (specific activities are provided in the monthly Drought Response Communications and Outreach Update report), recruiting and preparing for the second class of the Citizens Water Academy, continuing to implement a suite of water-use efficiency programs, delivering school education programming and conducting community relations related to a variety of capital improvement projects.

Highlights of department activities are listed below.

Media Relations

During the quarter, the Water Authority distributed 10 news releases. The subjects were:

- Time to Let Mother Nature Do the Watering for a Change
- Water-Saving Superstar Promotion Winners Honored
- Resolve to Save Water in 2015 by Turning off Sprinklers after Rainstorms
- Customer Demand Exhausts Funds for Water Authority’s Turf Replacement Program
- Countywide Water Use Decreases 29 Percent in December
- Future and Emerging Civic Leaders Sought for Citizens Water Academy
- Water Authority Partners with Companies to Offer Discounts on Artificial Turf
- Spring Plant Fairs Offer Big Discounts on Low-Water-Use Plants
- Countywide Water Use Shrinks 28 Percent in January
- Storms Give Region Another Opportunity to Turn Sprinklers Off

Staff also solicited several media interviews related to drought and conservation, and it responded to numerous queries from local, state and national media outlets on topics such as drought and the Carlsbad Desalination Project. In addition, staff wrote an article for the California Special Districts Association magazine about the Water Authority’s partnership with San Diego Zoo Global that was published in the February edition, and it periodically provided
updated key points about drought conditions to member agencies through the Joint Public Information Council.

**Water-Use Efficiency Programs**

**WaterSmart Turf Replacement Program**
This program offers eligible residential and commercial customers a grant-funded incentive of $1.50 per square foot to replace existing turf with water-efficient landscaping. In January 2015, turf replacement grant funding was exhausted and the Water Authority suspended accepting new applications. However, the program continues to process applications that were received before the program was suspended. From December 2014 to February 2015, more than $183,000 in rebates were approved for 99 completed projects. Since the program’s launch in December 2012, more than $837,000 in grant-funded incentives have been approved to replace approximately 582,000 square feet of turf. Staff continues to promote that incentives are still available through the Metropolitan Water District of Southern California’s turf removal program, which is funded in part by the Water Authority and its ratepayers through water rates paid to MWD. Staff also submitted an application to the Bureau of Reclamation for $300,000 in new funding via the agency’s WaterSMART water and energy efficiency grant program.

**WaterSmart Landscape Makeover Workshops**
The workshops provide homeowners with a comprehensive overview and the basic hands-on skills necessary to transform a traditional turf yard into a beautiful WaterSmart showcase. Four series of classes were held this quarter. The locations were the SDG&E Energy Innovation Center in Clairemont, the San Diego Botanic Garden in Encinitas, Hunter Industries in San Marcos, and Southwestern College in Chula Vista. Eighty-six homeowners participated in the workshops. In total, 11 workshop series have been completed since April 2014, with more than 260 participants.

**California Friendly Landscape Training (CFLT) Classes**
The Water Authority and its member agencies have partnered with the Metropolitan Water District of Southern California to offer free training classes on WaterSmart landscaping. The CFLT classes introduce residential customers to a holistic approach to landscape design and maintenance that emphasizes water-use efficiency. The Water Authority and its participating member agencies hosted five CFLT classes during the quarter with more than 200 participants. Additional classes are scheduled for this spring.

**San Diego County Garden Friendly Plant Fairs**
The Water Authority, participating member agencies and The Home Depot kicked off the spring plant fair season with two events in February at select The Home Depot locations. Events offer discounts on a variety of water-wise plants and information about water-efficient irrigation systems. Ten more plant fairs are scheduled between March and May 2015.

**Conservation Action Committee**
The Conservation Action Committee was created in 2003 to encourage industry, government, and communities to conserve water and develop tools, programs, and systems to promote water-use efficiency in the San Diego region. Seminars are held quarterly on a variety of topics. The February meeting was entitled, “Trickle Down: The Changing State of Drought Management,”
and featured presentations by Water Authority, city of San Diego and Rincon del Diablo MWD staff on drought management measures, sustainability issues and tactics. Approximately 50 industry professionals attended this free seminar.

MWD Programs and Funding
Demand for MWD program incentives increased during this reporting period. For example, participation in the SoCal WaterSmart Program increased by 266 percent compared to the previous quarter. Part of the increase can be attributed to an increase in the turf removal rebate in July 2014 from $1 per square foot to $2 per square foot of turf removed. Since the increase took place, $4.9 million in turf rebates have been paid to customers in the Water Authority’s service area.

San Diego Gas & Electric Partnerships
The Water Authority partnered with SDG&E and the city of Escondido to implement a California Public Utilities Commission-funded leak loss control program. The results of the water audit and component analysis of program’s final report identified opportunities for the city of Escondido to implement pressure-management measures and made recommendations for repair, rehabilitation or replacement of system components. An amendment to the partnership agreement between SDG&E and the Water Authority was recently approved to increase funding by $339,640 and add an additional year to the agreement. The additional CPUC funding will allow a second member agency to participate in the program. The year extension will also allow the WaterSmart Landscape Efficiency Program to perform an analysis of the program’s water savings.

Publications and Online Communications
Eight issues of WaterSource e-newsletter were distributed during this time period. The “2015 Water Issues” video was posted to the www.sdcwa.org website.

Staff worked on digital and video production for the Water Authority’s 2014 Annual Report. The report will be published in March.

Local Legislative Relations and Civic Engagement
Staff conducted recruitment and planning for the spring session of the Citizens Water Academy, which will be held in March. The academy is designed to develop the next generation of leaders who understand our region’s water history and water issues, and thus are prepared to help the region take on the water challenges of the future. The Water Authority received more than 90 applications for the spring academy and selected 58 for participation. Given the high demand for the program, staff is already planning for the third session of the Citizens Water Academy, which is scheduled to begin in late May.

In addition, the Water Authority worked to involve business leaders in a new stakeholder outreach program. The purpose of the Business Alliance for Water is to increase the knowledge and awareness of regional water issues and to assist with strategic advocacy as needed. Staff secured The San Diego Foundation’s commitment to sponsor the group and to host an initial meeting in March. Kris Michell, president and CEO of the Downtown San Diego Partnership,
Legislation, Conservation and Outreach Committee  
March 18, 2015  
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and Mark Cafferty, president and CEO of the San Diego Regional Economic Development Corporation, will serve as co-chairs.

Staff participated in meetings of the policy committees of regional business and community groups, including the San Diego Regional Chamber of Commerce, the San Diego North Chamber of Commerce and the South County Economic Development Council.

Staff also conducted a roundtable on water issues with East County leaders in coordination with the San Diego Regional Economic Development Corporation in February.

Board members and staff attended several events in the community, including the San Diego Regional Chamber of Commerce’s 144th Anniversary Celebration Dinner and the Asian Business Association Lunar New Year Event. Other events staff attended to promote Water Authority programs included the San Diego County Taxpayers Association Elected Officials mixer, the California Water Agencies ConservaCon event at its fall 2014 conference, North County Beer Festival, Mexican-American Business Professionals elected officials mixer, The Home Depot Home Renovation Day in Santee, San Diego Chinese New Year Food and Cultural Fair, and San Diego County Garden Friendly Plant Fairs at two locations within the city of San Diego.

Twenty-five presentations were made to groups throughout the region during the quarter on water issues, drought and conservation.

**Education Programs**

During the quarter, the Water Authority reached 1,157 teachers and 29,346 students through its distribution of free water-related posters, school visits by the Splash Mobile Science Lab and the Water Authority’s water-themed school assembly programs, “H2O, Where Did You Go?” and “Waterology.”

**Member Agency Outreach Coordination**

Staff held meetings in December, January and February with the Joint Public Information Council/Conservation Coordinators group to discuss drought outreach, conservation programs and other topics.

The Water Authority is also working with member agencies pursuing or evaluating potable reuse projects to coordinate regional potable reuse outreach. The goal of the Potable Reuse Coordination Committee is to ensure that information communicated to the public regarding the advantages of water produced through a potable reuse process is consistent, accurate and helpful for member agencies considering such projects, and that regional and local outreach efforts are complementary. The committee met several times during the quarter to develop a proposed outreach plan and to discuss concepts for outreach materials.
CIP Projects

Nob Hill Pipeline Improvements Project
Staff continued discussions and held one meeting with Scripps Nob Hill Homeowners Association Board members to discuss the new access road required for the project. Staff also met with representatives from Supervisor Dave Roberts and city of San Diego Councilmember Mark Kersey’s office to discuss the need for the project and new access road. Staff attended two Miro/Ravel Circle Homeowners Association board meetings to provide project introductory briefings and answer questions about the need for a temporary construction easement.

San Vicente Dam Raise
Staff conducted project tours for LEAD San Diego and the AWWA Student Chapter from Cuyamaca College, highlighting the Water Authority’s investments in water reliability. Staff continued to respond to inquiries about the timeline for reopening the reservoir to recreation and referred callers to the city of San Diego for further information.

Seawater Desalination Plant and Conveyance Pipeline
Staff facilitated a tour for ACWA’s Director of State Relations to the desalination project site as well as the city of San Diego’s Advanced Water Purification Facility. As the conveyance pipeline approached completion, staff continued to assist Poseidon Water in responding to stakeholder concerns about parking and other issues near the Pipeline Interconnect Facility at the Second Aqueduct in the city of San Marcos.

Pipeline 3 Desalination Relining
The project team coordinated on-site restoration activities within the city of San Marcos and near the Twin Oaks Valley Water Treatment Plant, including roadway inspections and hydroseeding. The team was able to modify hydroseeding activities in accordance to property owners’ requests.

Twin Oaks Valley Water Treatment Plant Service Area Expansion
Staff prepared and mailed a project notice to more than 400 property owners and residents near the two project sites to provide information about the work schedule, timeline for construction and points of contact for questions and concerns. Staff also placed phone calls to establish or maintain direct contact with some of the stakeholders closest to the project sites.

Prepared by: Denise Vedder, Public Affairs Manager
Jeff Stephenson, Principal Water Resources Specialist
Reviewed by: Jason Foster, Director of Public Outreach and Conservation
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Status Report on Legislation and Legislative Positions. (Information)

Background
Water Authority staff is currently reviewing 191 bills in the Legislature for potential impact on the organization and its member agencies. Some of these bills are spot bills, or placeholder bills, that do not propose substantive changes in the law, but which may be amended to propose more substantive policy change in the future.

The Water Authority’s staff and legislative advocates review each bill in the context of the adopted 2015 Legislative Policy Guidelines. The Legislative Policy Guidelines provide direction to staff and the Water Authority’s legislative advocates to communicate support of, or opposition to, legislation and amendments. Bills for which staff recommends a position are brought before the Legislation, Conservation and Outreach Committee and the Board for consideration of a Water Authority position.

Discussion
As of March 18, 2015, the Water Authority is sponsoring three bills in the Legislature:

- AB 149 (Chavez) – Urban Water Management Plans
- AB 349 (Gonzalez) – Common interest developments: property use and maintenance
- SB 208 (Lara) – Integrated regional water management plans: grants: advanced payment

On February 26, the Board adopted a position of Oppose on SB 143 (Stone). That is the only measure, as of March 18, on which the Board has adopted a policy position in 2015.

Water Authority staff and legislative advocates will continue to track and monitor bills throughout the legislative session to ensure consistency with Board policies, positions, and the 2015 Legislative Policy Guidelines. Attached is a list of substantive legislation under review by Water Authority staff as of March 18, 2015.

Prepared by: Ivy Ridderbusch, Assistant Management Analyst
Reviewed by: Glenn Farrel, Government Relations Manager

Attachment: List of substantive legislation under review by Water Authority staff as of March 18, 2015
<table>
<thead>
<tr>
<th>Bill Number</th>
<th>Author</th>
<th>Title</th>
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<td>Garcia E.</td>
<td>Public utilities: renewable resources.</td>
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<td>02/19/15</td>
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<td>Rendon</td>
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<td>AB 936</td>
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<td>AB 1325</td>
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<td>Delta Smelt.</td>
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<td>SB 13</td>
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<td>SB 113</td>
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<td>Sen. Environmental Quality</td>
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<td>SB 173</td>
<td>Nielsen</td>
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<td>SB 188</td>
<td>Hancock</td>
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<td>02/09/15 Introduced</td>
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<td>Lara</td>
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<td>02/11/15</td>
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<td>SB 215</td>
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<td>SB 228</td>
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<td>Climate Action Team.</td>
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<td>SB 385</td>
<td>Hueso</td>
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<td>SB 637</td>
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</table>
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Government Relations Update. (Information)

Discussion
This report is an update of the Water Authority’s government relations program.

The Legislature
The Legislature’s bill introduction deadline occurred on February 27. Nearly 2,300 bills were introduced in the Legislature by the deadline date. Many of the measures introduced are “spot bills” – placeholders for later substantive amendments – and the staff is closely monitoring any modifications that will occur during the course of the legislative session.

Assembly and Senate budget subcommittees are actively working on shaping the Legislature’s version of the State Budget, and will continue working through May, with action on the budget anticipated by the Legislature in mid-June. In addition, Assembly and Senate policy committees will also begin meeting and deliberating on legislation near the end of March and throughout April.

Sponsored Legislation
At the November 20, 2014 Board of Directors’ meeting, the Board approved Water Authority sponsorship of three bills for the 2015 legislative session.

- Assemblymember Rocky Chavez has introduced AB 149 on behalf of the Water Authority. AB 149 would permanently change the urban water management plan approval deadline to December 31 in years ending in “1” and “6.”

- Assemblymember Lorena Gonzalez has introduced AB 349 on behalf of the Water Authority. AB 349 would authorize homeowners within common interest developments to install synthetic grass or artificial turf, within reasonable design, aesthetic, and environmental protection standards, in lieu of conventional turf.

- Senator Ricardo Lara has introduced SB 208 on behalf of the Water Authority. SB 208 would streamline the process by which non-governmental organizations and disadvantaged communities can be provided funding – through a combination of advanced payment and reimbursement – within the structure of the integrated regional water management program.
**Lobbyist Activities**

Steve Cruz of Gonzalez, Quintana & Hunter reports that he performed the following lobbying activities on behalf of the Water Authority over the past month:

- Provided strategic advice and information regarding the Water Authority’s legislative interests.
- Advocated the Water Authority’s interests relative to the QSA water transfers with the San Diego legislative delegation, legislative leadership, and the Administration.
- Worked with the Water Authority Government Relations Manager to develop background materials and secure authors for the Water Authority’s three sponsored bills.
- Represented the Water Authority in a variety of venues on Water Authority issues.
- Coordinated with V. John White, Bob Giroux, and Water Authority staff on various legislative issues of importance to the Water Authority.

Bob Giroux of Lang, Hansen, O’Malley & Miller reports that he performed the following lobbying activities on behalf of the Water Authority over the past month:

- Provided strategic advice and information regarding the Water Authority’s legislative interests.
- Coordinated with V. John White, Steve Cruz, and Water Authority staff on various legislative issues of importance to the Water Authority.
- Conferred with the Assembly Speaker and the Senate President pro tem regarding the Water Authority’s interests.

V. John White reports that he performed the following lobbying activities on behalf of the Water Authority over the past month:

- Provided strategic advice and information regarding the Water Authority’s legislative interests.
- Coordinated with Bob Giroux, Steve Cruz, and Water Authority staff on various legislative issues of importance to the Water Authority.
- Met and discussed several Water Authority issues of interest with key environmental groups, including Sierra Club, Planning and Conservation League, and the California League of Conservation Voters.
Washington, D.C.
Ken Carpi of Carpi & Clay will provide a separate written report of the firm’s monthly activities in Washington, D.C.

Prepared by:  Glenn A. Farrel, Government Relations Manager
Reviewed by:  Dennis A. Cushman, Assistant General Manager
March 18, 2015

Attention: Legislation, Conservation and Outreach Committee

Newly Introduced Bills. (Information)

Discussion
This report describes bills of interest to the Water Authority that have recently been introduced in the California Legislature.

The deadline for introducing bills in the California Legislature for the 2015 legislative session was February 27. Water Authority staff has compiled a list of bills that may be of interest to the Water Authority. The list includes bills that were introduced as of January 1, 2015. The bills in the list are primarily focused on issues of water, local government, public employees, and environmental laws. Staff is continuing to follow and analyze newly introduced legislation and will bring recommended positions to the Board, as warranted.

The following are bills introduced since January 1, 2015 that staff has identified as being of potential interest to the Water Authority:

Assembly

AB 197 (Garcia) Public Utilities: Renewable Resources
AB 197 would set a renewable goal or renewable portfolio standard (RPS) of 50% for electrical corporations or local publicly owned electric utilities, and would require electrical corporations to procure all available cost-effective, reliable, and feasible energy efficiency, demand response, and renewable energy resources, and to consider procuring available cost-effective energy storage technologies.

AB 300 (Alejo) – Safe Water and Wildlife Protection Act of 2015
AB 300 would establish an Algal Bloom Task Force under the Coastal Conservancy, consisting of representatives from the Department of Public Health, the Department of Fish and Wildlife, and the State Water Resources Control Board.

AB 307 (Mathis) – Graywater: Groundwater Recharge
AB 307 would allow the use of residential, commercial and industrial graywater for the recharge of a groundwater basin and aquifer.

AB 341 (Achadjian) – Financial Affairs: Reports
AB 341 would extend the deadline for a local agency submitting financial reports to the State Controller from 110 days to 210 days.
AB 349 (Gonzalez) – Common Interest Developments: Property Use and Maintenance
AB 349 would prohibit a homeowners’ association from restricting a homeowner’s installation of low water-using landscape that requires an amount of water that is equivalent to or less than the amount of water required by low water-using plants. AB 349 is sponsored by the Water Authority.

AB 478 (Harper) – Desalination
AB 478 is a spot bill intended to address the Cobey-Porter Saline Water Conservation Law, which allows desalination projects to apply for state funding as water supply and reliability projects.

AB 603 (Salas) – Income Taxes: Turf Removal Tax Credit
AB 603 would allow an income tax credit for taxpayers participating in a lawn replacement program in an amount equal to $2 per square foot of conventional lawn removed from the taxpayer’s property.

AB 1095 (Garcia) – Restoration Funding: Salton Sea
AB 1095 would appropriate an unspecified sum of Proposition 1 water bond funds to be used for restoration of the Salton Sea.

Senate

SB 208 (Lara) – Integrated Regional Water Management Plans: Grants: Advanced Payment
SB 208 would create an IRWM payment structure whereby the Department of Water Resources would provide 50 percent advance payment of a project award for an IRWM project that satisfies two criteria:

- The project proponent is a non-profit organization or a disadvantaged community, or the project benefits a disadvantaged community.
- The grant award for the project is less than $1 million

The proposed legislation would also include provisions that prohibit a project proponent from benefitting from the accrual of interest on the advanced payment. SB 208 is sponsored by the Water Authority.

SB 246 (Wieckowski) – Climate Action Team
SB 246 would create an 11-member Climate Action Team to identify unavoidable climate change impacts, develop and implement mitigation and adaptation plans, coordinate effective use of state resources, and identify and disseminate information to local governments.
SB 385 (Hueso) – Primary Drink Water Standards: Hexavalent Chromium
SB 385 would provide a variance for water agencies attempting to meet the recently-established hexavalent chromium drinking water standard in order to not be deemed out of compliance.

SB 555 (Wolk) – Water Suppliers
SB 555 would require the Department of Water Resources to adopt rules for conducting a water loss audit by July 1, 2016, and would require water suppliers to complete and submit an audit by July 1, 2017.

SB 772 (Stone) – Bay Delta Conservation Plan: Judicial Review
SB 772 is a spot bill intended to establish judicial review procedures for the Bay Delta Conservation Plan.

Prepared by: Ivy Ridderbusch, Assistant Management Analyst
Reviewed by: Glenn Farrel, Government Relations Manager
The mission of the San Diego County Water Authority is to provide a safe and reliable supply of water to its member agencies serving the San Diego region.

MARCH 26, 2015

3:00 p.m.

1. Call to Order.

2. Salute to the flag.

3. Roll call, determination of quorum.
   3-A Report on proxies received.

4. Additions to Agenda. (Government code Sec. 54954.2(b)).

5. Approve the Minutes of the Special Engineering and Operations Committee Meeting of February 12, 2015 and Formal Board of Directors’ meeting of February 26, 2015.

6. Opportunity for members of the public who wish to address the Board on matters within the Board’s jurisdiction.

7. PRESENTATIONS & PUBLIC HEARINGS
   7-A Recognition of Wade Griffis, Employee of the 2nd Quarter.
   7-B Retirement of Director. Adopt Resolution honoring Barbara Wight upon her retirement from the Board of Directors.
   7-C Santa Fe Irrigation District Overview – Mike Bardin, General Manager.

8. REPORTS BY CHAIRS
   8-A Chair’s Report: Chair Weston

   8-B Report by Committee Chairs
       Administrative and Finance Committee
       Water Planning Committee
       Engineering and Operations Committee
       Imported Water Committee
       Legislation, Conservation and Outreach Committee
       Director Arant
       Director Tu
       Director Williams
       Director Watton
       Director Croucher
9. **CONSENT CALENDAR**

9- 1. **Treasurer’s Report.**
   Note and file the monthly Treasurer’s report.

9- 2. **Adopt an ordinance amending chapter 2.08 of the Administrative Code.**
   Adopt Ordinance No. 2015- ___, an ordinance of the board of directors of the San
   Diego County Water Authority amending chapter 2.08 of the Administrative
   Code relating to the office of the General Counsel.

9- 3. **Administrative and Finance Committee Work Plan for Calendar Years 2015 and 2016.**
   Adopt the Administrative and Finance Committee Work Plan for Calendar Years
   2015 and 2016.

9- 4. **Water Planning Committee Work Plan for Calendar Years 2015 and 2016.**
   Adopt the Water Planning Work Plan for calendar years 2015 and 2016.

9- 5. **Intake Testing Program for a Proposed Camp Pendleton Desalination Project.**
   Approve Camp Pendleton Intake Testing Program and accept grant funding for
   up to $1.4 million from the California Department of Water Resources and the
   U.S. Bureau of Reclamation to conduct an intake testing program; and
   Approve a $1.25 million project budget transfer from the Carlsbad Desalination
   Project to the Camp Pendleton Desalination project.

9- 6. **Resolution declaring the fee interest in San Diego County Water Authority Parcel
   Number 4E2-199-B is surplus to Water Authority needs.**
   Adopt Resolution No. 2015- _____ declaring the fee interest in San Diego County
   Water Authority Parcel Number 4E2-199-B is surplus to Water Authority needs;
   and Authorize the General Manager to dispose of the fee property for fair market
   value, in accordance with the San Diego County Water Authority Administrative
   Code, Chapter 7, reserving any easements and setbacks necessary for proper
   operation and maintenance of Water Authority facilities.

9- 7. **Engineering and Operations Committee Work Plan for Calendar Years 2015 and 2016.**
   Adopt the Engineering and Operations Committee Work Plan for Calendar Years
   2015 and 2016.
9-8. **Notice of Completion for Pipeline 3 Desal Relining San Marcos to Twin Oaks.** Authorize the General Manager to accept the Pipeline 3 Desal Relining San Marcos to Twin Oaks project as complete, record the Notice of Completion, and release funds held in retention to L.H. Woods & Sons, Inc., following the expiration of the retention period; and Approve the transfer of $376,300 from the Pipeline 3 Desal Relining San Marcos to Twin Oaks project budget to the Post Construction Mitigation Program.


9-10. **Adopt positions of various state bills.**
   1. Adopt a position of Support if Amended on AB 88 (Gomez).
   2. Adopt a position of Support on AB 401 (Dodd).
   3. Adopt a position of Support if Amended on AB 585 (Melendez).
   4. Adopt a position of Support on AB 603 (Salas).
   5. Adopt a position of Support and Seek Amendments on AB 606 (Levine).
   6. Adopt a position of Support on SB 385 (Hueso).
   7. Adopt a position of Support and Seek Amendments on SB 553 (Wolk).


9-12. **Adopt position on AB 291 (Medina).**
Adopt a position of Support and Seek Amendments on AB 291 (Medina).

10. **ACTION / DISCUSSION**
   10-A **Administrative and Finance Committee’s Fiscal Sustainability and Special Agricultural Water Rate Program Recommendations.**
   Approve the Member Agency Managers comprehensive recommendations on fiscal Sustainability:
   - Approve the addition of the Supply Reliability Charge, as defined in the A&N Technical Service, Inc. memorandum, to the Water Authority’s rate and charge structure and direct staff to return with a comprehensive review of implementation of the charge by December, 2020;
   - Approve the allocation of non-commodity revenues to all rate and charge categories including treatment;
   - Approve the permanent application of the debt and equity payments for the Carlsbad Desalination Plant to the Supply Rate; and
   - Approve the extension of the Transitional Special Agricultural Water Rate Program through December 31, 2020.
   (Action)
11. SPECIAL REPORTS
11-A GENERAL MANAGER’S REPORT – Ms. Stapleton
11-B GENERAL COUNSEL’S REPORT – Mr. Hentschke
11-C SANDAG REPORT – Vice Chair Muir
    SANDAG Subcommittee: Borders/Regional Planning Committee –
    Director Saxod
11-D AB 1234 Compliance Reports – Directors

12. CLOSED SESSION(S)
12-A CLOSED SESSION:
    Conference with Labor Negotiator
    Government Code §54957.6
    Agency Designated Representatives: Frank Belock, Sandra Kerl,
    Gretchen Spaniol, Lisa Celaya, Rick Bolanos
    Employee Negotiator: Teamsters Local 911

12-B CLOSED SESSION:
    Conference with Legal Counsel – Existing Litigation
    Government Code §54956.9(d)(1)
    Name of Case: Traylor-Shea Joint Venture v SDCWA;
    San Diego Superior Court Case No. 37-2011-00092666-CU-BC-CTL

12-C CLOSED SESSION:
    Conference with Legal Counsel – Existing Litigation
    Government Code §54956.9(d)(1)
    Name of Case: Shimmick Construction Co., Inc./Obayashi Corp., joint venture
    v. San Diego County Water Authority, San Diego
    Superior Court Case No. 37-2014-00026740-CU-BC-CTL

12-D CLOSED SESSION:
    Conference with Legal Counsel - Existing Litigation
    Government Code §54956.9(d)(1)
    Name of Case: SDCWA v Metropolitan Water District of Southern California;
    Case Nos. CPF-10-510830; CPF-12-512466; and CPF-14-514004

12-E CLOSED SESSION:
    Conference with Legal Counsel - Existing Litigation
    Government Code §54956.9(d)(1)
    Name of Case: State Water Resources Control Board
    Petition of Imperial Irrigation District for Modification of Revised Water Rights
    Order 2002-0013
12-F  CLOSED SESSION:
    Public Employee Performance Evaluation
    Government Code §54957 - Title: General Counsel
    Conference with Labor Negotiators, Government Code §54957.6
    Designated Board Representatives: Chair, Vice-Chair, Secretary
    Unrepresented Employee: General Counsel

13.  Action following Closed Session

14.  OTHER COMMUNICATIONS

15.  ADJOURNMENT

    Kelly L. Walker
    Deputy Clerk of the Board

NOTE: The agendas for the Formal Board meeting and the meetings of the Standing Committees
    held on the day of the regular Board meeting are considered a single agenda. All information or
    possible action items on the agenda of committees or the Board may be deliberated by and become
    subject to consideration and action by the Board.
CALL TO ORDER / ROLL CALL
Chair Williams called the Engineering and Operations Committee meeting to order at 1:30 p.m. Committee members present were Chair Williams, Vice Chairs Miller and Watkins, Directors Arant, Ayala, Brady, Hogan, Linden, Morrison, Olson, and Razak. At that time there was a quorum of the committee.

Staff present included General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Deputy General Counsel Gallien, Director of Engineering Rose, Director of Operations and Maintenance Eaton, Engineering Manager Bousquet, Water Resources Manager Roy, Principal Engineer Rodgers, and Principal Water Resources Specialist Gage. Also present were guest speakers: Kevin Davis, Project Director from Black and Veatch Corporation; Dr. David Victor, Director of Laboratory on International Law and Regulation at UC San Diego; and Jeff Pasek, City of San Diego Water Shed Manager.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no public comments.

I. DISCUSSION
1. San Vicente Pumped Storage Study – Update and Next Steps.

Chair Williams reviewed the meeting agenda and introduced Director Hogan, Chair of the Hydropower Subcommittee. Director Hogan began the presentation by introducing the Hydropower Subcommittee members and continued with recaps of the December 15, 2014 and February 3, 2015 subcommittee meetings.

Mr. Bousquet continued the presentation with an overview of the San Vicente Pumped Storage project, project partners, traditional revenue streams for pumped storage projects, California’s renewable mandate (AB 32), California Independent System Operator renewal resource forecast, excess renewable generation, curtailment, storage benefits, range of project value over 30 years, and project risk assessment. He then introduced Mr. Davis, Black and Veatch Corporation Project Director. Mr. Davis presented information on completed and on-going work, the inlet/outlet structure, upper reservoir alternatives summary, preliminary financial assumptions, and San Vicente pumped storage value and feasibility.
Mr. Bousquet introduced Dr. Victor, Director of Laboratory on International Law and Regulation at UC San Diego, and consultant to the City of San Diego for the project. Dr. Victor reviewed information including the duck curve (energy market projections), critical technical and strategic issues for further exploration, cohesion of partners, project delivery method evaluation, and strategic bargaining.

Mr. Bousquet introduced Mr. Pasek, Water Shed Manager for the City of San Diego. Mr. Pasek gave a presentation on the San Vicente Reservoir studies for Potable Reuse and Pumped Storage including an overview of the Pure Water San Diego project, role of the reservoir in a potable reuse project, density stratification, regulator criteria for reservoir augmentation, study approach, Pure Water model scenarios, key findings, independent advisory panel, CDPH concept approval, modeling for pumped storage project, initial results of modeling, and future San Vicente Reservoir modeling work.

Ms. Gage presented information regarding the regulatory process including regulatory context, Federal Energy Regulatory Commission (FERC) overview, FERC permit timeline and activities review, current status, preliminary permit vs. license, FERC order, and FERC licensing process and steps. Ms. Roy then made a presentation with answers to Board member requests from previous meetings regarding similar projects and emerging technologies. Her presentation included information on plants with similar criteria, pumped storage currently operational in California, projects under development, identified benefits of recent and proposed projects, proposed energy storage, types of energy storage, electrical energy storage capacity worldwide, current alternative to storage in San Diego, and other trends.

Mr. Belock stated that in the interest of time, he would not give his portion of the presentation regarding previous questions from the Board. The questions and answers from the current and previous meetings would be merged into one document/library and provided to the Board at a later date.

Ms. Rodgers concluded the presentation with information regarding previous board actions, work authorized to date, prior and current project phases, future project phases, timelines for each phase, recommended Phase 1 work, City/Water Authority agreement principles, owner’s advisor team and scope, project delivery options, and next steps.

There were several lengthy discussions throughout the meeting with requests for further information. Staff would return to the Board at the next meeting with the requested information.

II. ADJOURNMENT

There being no further business to come before the Engineering and Operations Committee, Chair Williams adjourned the meeting at 4:08 p.m.

Ken Williams, Chairman
MINUTES OF THE FORMAL BOARD OF DIRECTORS’ MEETING
FEBRUARY 26, 2015

ADMINISTRATIVE AND FINANCE COMMITTEE
CALL TO ORDER / ROLL CALL
Chair Arant called the Administrative and Finance Committee meeting to order at 9:00 a.m. Committee members present was Chair Arant, Vice Chairs Razak and Wilson, Directors Gallo, Hilliker, Kennedy, Lewinger, Muir, Verbeke, Watkins, Watkin, Weston, Williams and Wornham. Also present were Directors Ayala, Barnum, Boyle, Brady, Croucher, Evans, Guerin, Hall, Linden, Miller, Murtland, Olson, Saxod, Simpson and Steiner. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Finance Harris, Director of Administrative Services Brown, Director of Water Resources Weinberg, Controller Greek, and Financial Resources Manager Celaya. Also present was Doug Montague of Montague DeRose.

Chair Arant announced at 9:05 a.m. that the meeting would begin with Closed Session and asked General Counsel Hentschke to begin.

IV. CLOSED SESSION
1. CLOSED SESSION:
   Conference with Labor Negotiator
   Government Code §54957.6
   Agency Designated Representatives: Frank Belock, Sandra Kerl, Gretchen Spaniol, Lisa Celaya, Rick Bolanos
   Employee Negotiator: Teamsters Local 911

   Mr. Hentschke brought the Committee out of Closed Session at 9:30 a.m. and announced that there was nothing to report.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no public speakers.

CHAIR’S REPORT
Chair Arant acknowledged the draft committee Work Plan and highlighted Financial Planning, Information Technology, and Workforce Management items, as well as miscellaneous items that staff would be working on during CY 2015 and 2016.
DIRECTORS’ COMMENTS
There were no Directors’ comments.

I. CONSENT CALENDAR
1. Treasurer’s Report.
   Staff recommendation: Note and file the monthly Treasurer’s report.

   Director Gallo moved, Director Williams seconded, and the motion to approve staff recommendation passed unanimously.

II. ACTION/DISCUSSION

   Ms. Harris began the presentation with a review of the agenda and scope of Member Agency discussion including fixed revenue for fixed supply obligations, response to 2013 Cost of Service Study and extension of the Transitional Special Agricultural Water Rate Program (TSAWR).

   Mr. Weinberg discussed the remaining work in the process including finalizing recommendations at the March 3, 2015 Member Agency and Finance Officers’ meeting, extending TSAWR supply differential beyond 2015 and Agricultural demands. He also addressed items including annual member agency perspectives on managing revenue volatility and recognition of the benefit of local supply being developed by member agencies. Mr. Weinberg concluded with an agenda of what would be discussed at the March 12, 2015 Administrative and Finance Workshop.

   2. Presentation on Market Update and Review of the Water Authority’s Refunding Guidelines.

   Ms. Harris began with a review of the agenda, which included a summary of statement of Debt Management, and a review of the refunding guidelines and capital markets overview. Mr. Montague reviewed interest rates highs and lows over the last decade and explained factors that could influence rates. Ms. Harris concluded the presentation with a summary and announced staff would seek board approval for a refunding authorization in April, 2015.

III. INFORMATION

   The following were received and filed:
   1. Controller’s Report; and
   2. Board Calendar.

V. ADJOURNMENT

   There being no further business to come before the Administrative and Finance Committee, Chair Arant adjourned the meeting at 10:00 a.m.
LEGISLATION, CONSERVATION AND OUTREACH COMMITTEE
CALL TO ORDER/ROLL CALL
Chair Croucher called the Legislation, Conservation and Outreach Committee to order at 10:08 a.m. Committee members present were Chair Croucher, Vice Chairs Guerin and Steiner, and Directors Gallo*, Hall, Hilliker, Muir, and Saxod. Committee members absent were Directors Barnum, Madaffer, Morrison, Preciado, Tu and Representative Roberts. Other Board members present were Directors Arant, Ayala, Boyle, Brady, Evans, Kennedy, Lewinger, Linden, Miller, Murtland, Olson, Razak, Simpson, Verbeke, Watkins, Watton, Weston, Williams, Wilson and Wornham. At that time there was not a quorum of the committee. Chair Croucher appointed Director Wornham as a member of the committee and established a quorum of the committee. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present were General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Public Outreach and Conservation Foster, Principal Water Resources Specialist Stephenson, Public Affairs Representative II Lee and Assistant Water Resources Specialist German.

* Director Gallo arrived at 10:11 a.m.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no members of the public who wished to address the Committee.

CHAIR’S REPORT
Chair Croucher reported that the committee’s draft Work Plan was included in the Board Packet and highlighted key items in the Work Plan. He requested that any input be submitted prior to March 6, 2015 and stated the Work Plan would be adopted at the March 26, 2015 Committee meeting.

He reported that on February 9, 2015, the Board Officers traveled to Sacramento for a day-long advocacy visit. The group met with legislative leaders and attended briefings which focused on the Water Authority’s response to the IID petition regarding Salton Sea restoration and QSA water transfers, the BDCP, an overview of the Water Authority’s sponsored legislation and the region’s drought response activities. He announced that a second visit to Sacramento on May 5, 2015 would include the Board Officers and the LCO Chair and Vice Chairs.

He also announced that the next SCOOP Committee meeting was set for March 3, 2015 in the Library Conference Room.
I. CONSENT CALENDAR
   Staff recommendation: Adopt Resolution 2015-05 authorizing and directing the General Manager to apply to the Bureau of Reclamation for water and energy efficiency grant funding and to commit the Water Authority to the financial and legal obligations associated with the receipt of grant funds.

   Director Steiner moved, Director Muir seconded, and the motion to approve staff’s recommendation passed unanimously.

2. Adopt positions of various state bills.
   Staff recommendation:
   1. Adopt a position of Support if Amended on AB 88 (Gomez).

   The Board took no action on AB 88 (Gomez) with direction to return at the March 26, 2015 meeting for further consideration of the bill.

   2. Adopt a position of Oppose on SB 143 (Stone).

   Director Steiner moved, Director Muir seconded, and the motion to approve staff’s recommendation passed unanimously.

II. ACTION/DISCUSSION
1. Legislative Issues.
   1-A Washington Report by Ken Carpi. (supplemental materials)
   1-B Sacramento Report by Steve Cruz – Gonzalez, Quintana & Hunter.
   1-C Adopt Federal Legislative Priorities for 2015.

   Mr. Cushman provided a Sacramento update and an update on the Federal Legislative Priorities for 2015.

   Director Guerin moved, Director Steiner seconded, and the motion passed unanimously.

2. 2015 Public Opinion Poll Content.

   Mr. Lee provided a summary of the Public Opinion Poll content, including a review of the focus areas.

III. INFORMATION
1. Presentation on Drought Response Communications and Outreach Update.

   Mr. Foster provided an update on drought response communications and outreach efforts and highlighted recent activities of the “When in Drought” campaign. He reported that staff had been promoting the new Artificial Turf Discount Program, and had begun a partnership with U-T
San Diego for a weekly feature in the Home and Garden section. The feature was titled “Dear Drought Fighter,” and appeared online and in print. The new feature received strong feedback from the community, who submitted more than 20 questions relating to conservation and Water Authority issues in the first week. Staff was also working with community newspapers to publish conservation and water saving tips in their publications.

Mr. Foster added that staff had secured an agreement for a public/private partnership with the Plumbing, Heating and Cooling Contractors Association of San Diego to help promote Fix A Leak Week, by providing a 10 percent discount off a leak-related service call (up to $100).

Ms. German concluded the presentation by explaining the Water Authority’s landscape educational opportunities coming in Spring 2015, which included the California Landscape Friendly classes, WaterSmart Landscape Makeover Series, and San Diego County Garden Friendly plant fairs in partnership with Home Depot.

The committee received and filed the following items:
2. Government Relations Update.

IV. ADJOURNMENT
There being no further business to come before the Legislation, Conservation and Outreach Committee, Chair Croucher adjourned the meeting at 11:03 a.m.

ENGINEERING AND OPERATIONS COMMITTEE
CALL TO ORDER / ROLL CALL
Chair Williams called the Engineering and Operations Committee meeting to order at 11:10 a.m. Committee members present were Chair Williams, Vice Chairs Miller and Watkins, and Directors Arant, Ayala, Boyle, Brady, Croucher, Linden, Olson, Razak, Saunders, and Simpson. Committee members absent were Directors Hogan and Morrison. Also present were Directors Barnum, Evans, Guerin, Hall, Hilliker, Kennedy, Lewinger, Muir, Murtland, Saxod, Steiner, Tu, Verbeke, Watton, Weston, Wilson, and Wornham. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Deputy General Counsel Gallien, Director of Operations and Maintenance Eaton, Director of Engineering Rose, Director of Water Resources Weinberg, Engineering Manager Bousquet, Water Resource Manager Roy, Principal Engineer Rodgers, and Principal Water Resource Specialist Gage.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no members of the public who wished to speak.
DIRECTORS’ COMMENTS
There were no Directors’ comments.

CHAIR’S REPORT
Chair Williams announced that the E&O draft Committee Work Plan for 2015-2016 was in the Board Packet. He highlighted some of the items and asked Board members to review and comment by March 6, 2015 to be considered at the March 26, 2015 Formal Board Meeting. He also reported that a special meeting of the Engineering and Operations Committee took place on Thursday February 12, 2015 where staff presented extensive information regarding the San Vicente Pumped Storage project.

I. CONSENT CALENDAR
1. Amendment 2 to service contract with Co’s Traffic Control for traffic control services.
   Staff recommendation: Authorize the General Manager to approve Amendment 2 with Co’s Traffic Control for $150,000 to provide additional traffic control services, increasing the contract amount from $150,000 to $300,000.

   Director Brady moved, Vice Chair Miller seconded and the motion to approve staff recommendation passed unanimously.

II. ACTION/DISCUSSION
1. San Vicente Pumped Storage Study.
   Staff recommendation: Approve moving forward with all necessary Phase 1 work within the previously approved $525,000 appropriation, including the submittal of the City of San Diego as a co-applicant to the FERC preliminary permit; approval of the partnership agreement principles with the City of San Diego; and authorization of the General Manager to execute a contract for $150,000 to Harvey Consulting Group and Amendment #4 of the Black & Veatch contract for $250,000.

   Ms. Rodgers provided a presentation on the San Vicente Pumped Storage Study that included a review of the Special Engineering & Operations Committee Meeting, prior project phases, purpose of the recommendations, necessary work to meet the FERC timeline of July 2015, and roles of Harvey Consulting Group, LLC and Black & Veatch Corporation. She included information regarding Phase 1 and 2 work, project delivery options, and concluded with a summary of the staff recommendation.

   Director Brady moved, Director Olson seconded and the motion to approve staff recommendation passed unanimously.

   Director Olson made an additional motion to accelerate the process of selecting an owner’s advisor. Director Watkins seconded the motion. The motion failed with the following vote results Noes: Chair Williams, Vice Chair Miller and Directors Arant, Ayala, Brady,
Croucher, Linden, Razak, Saunders and Simpson; Ayes: Directors Olson and Watkins; Abstained: Director Boyle.

III. INFORMATION
There were no Information items.

IV. CLOSED SESSION
There were no Closed Session items.

V. ADJOURNMENT
There being no further business to come before the Engineering and Operations Committee, Chair Williams adjourned the meeting at 11:51 a.m.

IMPORTED WATER COMMITTEE
CALL TO ORDER / ROLL CALL
Chair Watton called the Imported Water Committee meeting to order at 1:00 p.m. Committee members present were Chair Watton, Vice Chairs Verbeke and Saxod*, Directors Barnum*, Evans, Guerin, Murtland, Olson, Roberts, Saunders, Steiner, Weston, and Wilson. Directors Hogan and Madaffer were absent. Also present were Directors Arant, Boyle, Brady, Croucher, Gallo, Hall, Hilliker, Kennedy, Lewinger, Linden, Miller, Morrison, Muir, Preciado, Razak, Simpson, Tu, Watkins, Williams, and Wornham. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present included General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, MWD Program Director Chen and Colorado River Program Director Denham.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no public comments.

The agenda was taken out of order and at 1:02 p.m. Mr. Hentschke took the Committee into Closed Session.

IV. CLOSED SESSION
1. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   SDCWA v Metropolitan Water District of Southern California; Case Nos. CPF-10-510830; CPF-12-512466; and CPF-14-514004
2. **CLOSED SESSION:**

   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   Name of Case: State Water Resources Control Board
   Petition of Imperial Irrigations District for Modification of Revised Water Rights Order 2002-0013

   Mr. Hentschke brought the Committee out of Closed Session at 2:00 p.m. and stated there was no reportable action.

**CHAIR’S REPORT**

Chair Watton announced that the draft Committee Work Plan was available in the Board Packet for review and comment. He stated that the final Work Plan would be adopted during the March 26, 2015 Board Meeting.

He reported that Governor Brown and Secretary of the Interior Sally Jewell announced the availability of $50 million in drought relief funding by the Bureau of Reclamation. He added that the majority of funding had been allocated for projects and programs within California and the funding would be used for research and development of drought contingency strategies throughout the state. Additionally, $8.6 million of the amount allocated to California was specifically dedicated toward the Lower Colorado River Basin’s drought planning efforts to generate system water in Lake Mead to help prevent a shortage declaration. Staff would report back to the committee as needed.

**DIRECTORS’ COMMENTS**

There were no comments by Directors.

**I. CONSENT CALENDAR**

There were no items on the consent calendar.

**II. ACTION/DISCUSSION**

1. Metropolitan Water District Issues and Activities update.
   1-A Metropolitan Water District Delegates report.

   The delegates reported on discussion and actions taken at the recent MWD board meetings.

2. Colorado River Programs.
   2-A Colorado River Board Representative’s report.

   Director Wilson reported on discussions at the February Colorado River Board meetings.

   3-A State Water Project Contractors Authority Bay Delta Funding.
Mr. Cushman and Ms. Chen made a joint presentation on the State Water Project Contractors Authority’s Bay Delta Funding Discussions. Following the presentation, Directors asked questions and made comments.

3-B  Proposed 2015-2016 Bay-Delta Workplan.
Staff recommendation: Adopt the proposed 2015-2016 Bay-Delta workplan.

Mr. Cushman provided a brief presentation on the proposed Bay-Delta workplan for calendar years 2015 - 2016.

Director Steiner made a motion and Director Murtland seconded the motion. The motion passed unanimously to approve staff recommendation.

III. INFORMATION
1. Presentation on Metropolitan Water District Storage Programs Update.

Information item III-1 was continued to the March 25, 2015 Board Meeting.

The following information item was noted and filed:
2. Metropolitan Water District Program report.

V. ADJOURNMENT
There being no further business to come before the Imported Water Committee, Chair Watton adjourned the meeting at 2:55 p.m.

WATER PLANNING COMMITTEE
CALL TO ORDER/ROLL CALL
Chair Tu called the Water Planning Committee Meeting to order at 3:00 p.m.
Committee members present were Chair Tu, Vice Chairs Brady and Evans, and Directors Ayala, Hall, Kennedy, Lewinger, Linden, Miller, Murtland, Preciado, Simpson and Wornham. Director Boyle was absent. Also present were Directors Arant, Barnum, Croucher, Gallo*, Guerin, Hilliker, Morrison, Muir, Olson, Razak, Saunders, Saxod, Steiner, Verbeke, Watton, Weston, Williams, Wilson, and Supervisor Roberts. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Water Resources Director Weinberg, Acting Water Resources Manager Friehauf, Principal Water Resources Specialist Stadler and Water Resources Specialist Schnell.

PUBLIC COMMENT
There were no public comments.
CHAIR'S REPORT
Chair Tu thanked Vice Chair Brady for presiding over the January 22, 2015 meeting and thanked Board Chair Weston for the opportunity to serve again as the Chair of the Water Planning Committee. She remarked upon the draft committee Work Plan for CY 2015 and 2016, and directed comments be provided by March 6, 2015.

DIRECTORS’ COMMENTS
There were no comments made by Directors.

I. CONSENT CALENDAR
1. Professional services contract with RMC Water and Environment for Integrated Regional Water Management Program services.
   Staff recommendation: Award a professional services contract to RMC Water and Environment for IRWM support services in the amount of $1,674,275 for a contract period from April 1, 2015 to June 30, 2019.

Chair Tu requested Vice Chair Evans to chair the Committee’s consideration of Consent Item I-1 in order to recuse herself from participating due to a prior economic relationship with RMC Environmental, which was a source of income to Chair Tu within the past twelve months.

Vice Chair Evans took the chair and asked for a motion on the item. Director Brady moved and Director Hall seconded a motion to approve the staff recommendation. Following staff response to questions posed by Director Ayala concerning why RMC would be the sole bidder and whether RMC had local staff, the motion passed with Chair Tu not present in the Board Room and not participating in the vote.

Vice Chair Evans invited Chair Tu back into the meeting and Chair Tu resumed the meeting as the Committee Chair.

* Director Gallo arrived at 3:10 p.m.

II. ACTION/DISCUSSION
1. Contracts with Carlsbad Municipal Water District and Vallecitos Water District for member Agency Purchase of Treated Water from the Water Authority-Carlsbad Desalination Project.
   Staff recommendation: Authorize the General Manager to enter into individual contracts with Carlsbad Municipal Water District and Vallecitos Water District for the purchase of treated water from the Carlsbad Desalination project, substantially in the form as presented to the Board.

Mr. Weinberg provided a report on the development of uniform purchase contract terms and the individual agreements with Carlsbad Municipal Water District and Vallecitos Water District for the purchase of desalinated water from the Carlsbad Seawater Desalination Project. He added that next steps would include finalizing FY 2016 projected costs, incorporating those costs into proposed 2016 rates and charges, and providing estimates of charges to Carlsbad and Vallecitos for action by
their respective Boards. Directors Hall and Evans reported they would not vote on this item as members of the Board for Carlsbad Municipal Water District and Vallecitos Water District, respectively. Mr. Hentschke responded to a question posed by Director Lewinger and confirmed he could participate in the vote. Director Kennedy moved, Director Miller seconded, and the motion to approve staff recommendation passed with Directors Hall and Evans not participating in the vote.

III. INFORMATION
1. Presentation on Water Supply and Drought Management Update.

Ms. Schnell gave a presentation that included measurements of precipitation and snowpack for the Northern Sierra; reservoir conditions at Lake Oroville; statewide runoff; Lake Powell inflow; local rainfall and temperature; potable water use; and weather outlook through May 2015. In addition, she reported on two upcoming key dates related to the State Water Resources Control Board’s emergency water conservation regulations: March 3rd for presenting January 2015 production figures; and March 17th 2015 when potential actions could be taken by the State Board to extend and make refinements to its existing regulations. Ms. Schnell concluded her report with a timeline of preparatory steps already taken and which could still be taken through July 1st in response to potential allocations in 2015.

The following report was received and filed:

IV. CLOSED SESSION
There were no Closed Session items.

V. ADJOURNMENT
Chair Tu adjourned the meeting at 3:23 p.m.

FORMAL BOARD OF DIRECTORS’ MEETING OF FEBRUARY 26, 2015
1. CALL TO ORDER Chair Weston called the Formal Board of Directors’ meeting to order at 3:30 p.m.

2. SALUTE TO THE FLAG Director Williams led the salute to the flag.

3. ROLL CALL, DETERMINATION OF QUORUM
Vice Chair Muir called the roll. Directors present were Arant, Ayala, Barnum, Brady, Croucher, Evans, Gallo, Guerin, Hall, Hilliker, Kennedy, Lewinger, Linden, Miller, Morrison, Muir, Murtland, Olson, Preciado, Razak, Saunders, Saxod, Simpson, Steiner, Verbeke, Watton, Weston, Williams, Wilson, Wornham, and Representative Roberts. Directors absent were Boyle, Hogan, Madaffer, Tu, and Watkins.

3-A Report on proxies received. No proxies were received.

4. ADDITIONS TO AGENDA
There were no additions to the agenda.
5. **APPROVAL OF MINUTES**
Director Wornham moved, Director Barnum seconded, and the motion carried at 87.56% of the vote to approve the Minutes of the Formal Board of Directors’ meeting of January 22, 2015. Director Arant abstained.

6. **OPPORTUNITY FOR MEMBERS OF THE PUBLIC WHO WISH TO ADDRESS THE BOARD ON MATTERS WITHIN THE BOARD’S JURISDICTION**
There were no members of the public that wished to speak.

7. **PRESENTATIONS AND PUBLIC HEARINGS**
7-B Appointment of Director. Appointment of Tom Kennedy representing the Rainbow Municipal Water District. Term ending February 16, 2021.
7-C Appointment of Director. Appointment of Brian Boyle representing the City of Oceanside. Term ending July 15, 2016.

Chair Weston announced the re-appointment of Director Morrison representing the City of National City and the appointments of Director Kennedy representing Rainbow Municipal Water District, and Director Boyle representing the City of Oceanside.

7-D City of San Diego Overview – Halla Razak, Director of Public Utilities
Chair Weston introduced Halla Razak, Director of Public Utilities for the City of San Diego. Ms. Razak provided a presentation that included a brief history of the water system, infrastructure overview, branding effort and commitments, and recently received recognition.

8. **REPORTS BY CHAIRS**
8-A Chairs report: Chair Weston acknowledged and congratulated Public Affairs Representative II Lee who was nominated as a candidate to receive an award from the San Diego Society of Professional Journalists.

Chair Weston reported on various meetings and engagements that he attended in the month of February including a two-day Colorado River Aqueduct Tour, an interview with Cox Communications on “Water Supply, Drought and Water Conservation”, Labor Negotiation work group meetings, a trip to the Imperial Irrigation District, the Annual San Diego Regional Chamber of Commerce Dinner, Sacramento legislative trips, San Vicente Hydropower subcommittee meeting, East County Economical Development Corporation Roundtable, a meeting with Michael Jones of “The Maritime Alliance”, Apartment Association meeting, a meeting with Camp Pendleton regarding Desalination efforts, and a meeting with the City of San Diego delegates. He also reported on a presentation he gave to the San Diego Grand Jury on expanding our water supply and drought
response and his attendance at the SDG&E ribbon cutting ceremony for their new low water use landscape.

He also announced that the second round of the Citizens Water Academy would begin March 5, 2015.

8-B Report by Committee Chairs.
Administrative and Finance Committee. Director Arant reviewed the meeting and the action taken.
Legislation, Conservation and Outreach Committee. Director Croucher reviewed the meeting and the actions taken.
Engineering and Operations Committee. Director Williams reviewed the meeting and the actions taken.
Imported Water Committee. Director Watton reviewed the meeting and the action taken.
Water Planning Committee. Director Evans reviewed the meeting and actions taken.

9. CONSENT CALENDAR
Director Muir moved, Director Murtland seconded, and the motion carried at 92.99% of the vote to approve the consent calendar. Directors voting no or abstaining are listed under the item number.

9- 1. Treasurer’s Report.
The Board noted and filed the monthly Treasurer’s report.

The Board adopted Resolution No. 2015-05 authorizing and directing the General Manager to apply to the Bureau of Reclamation for water and energy efficiency grant funding and to commit the Water Authority to the financial and legal obligations associated with the receipt of grant funds.

9- 3. Adopt positions of various state bills.
The Board took no action on AB 88 (Gomez) with direction to return at the March 26, 2015 meeting for further consideration of the bill. The Board adopted a position of Oppose on SB 143 (Stone).

The Board adopted the Federal Legislative Priorities for 2015.

9- 5. Amendment 2 to service contract with Co’s Traffic Control for traffic control services.
The Board authorized the General Manager to approve Amendment 2 with Co’s Traffic Control for $150,000 to provide additional traffic control services, increasing the
contract amount from $150,000 to $300,000.

9- 6. San Vicente Pumped Storage Study.
The Board approved moving forward with all necessary Phase 1 work within the previously approved $525,000 appropriation, including the submittal of the City of San Diego as a co-applicant to the FERC preliminary permit; approval of the partnership agreement principles with the City of San Diego; and authorization of the General Manager to execute a contract for $150,000 to Harvey Consulting Group and Amendment #4 of the Black & Veatch contract for $250,000.

The Board adopted the proposed 2015-2016 Bay-Delta workplan.

9- 8. Professional services contract with RMC Water and Environment for Integrated Regional Water Management Program services.
The Board awarded a professional services contract to RMC Water and Environment for IRWM support services in the amount of $1,674,275 for a contract period from April 1, 2015 to June 30, 2019.

9- 9. Contracts with Carlsbad Municipal Water District and Vallecitos Water District for Member Agency Purchase of Treated Water from the Water Authority-Carlsbad Desalination Project.
The Board authorized the General Manager to enter into individual contracts with Carlsbad Municipal Water District and Vallecitos Water District for the purchase of treated water from the Carlsbad Desalination Project, substantially in the form as presented to the Board.

Director Evans and Director Hall did not participate in the vote on item 9- 9.

10. ACTION/DISCUSSION

11. SPECIAL REPORTS
11-A GENERAL MANAGER’S REPORT – Ms. Stapleton reminded the Board of the Special Administrative and Finance Committee Meeting on Fiscal Sustainability planned for March 12, 2015 at 1:30 p.m.
11-B GENERAL COUNSEL’S REPORT – Nothing to report.
11-C SANDAG REPORT – Vice Chair Muir stated there was nothing to report at that time.
   SANDAG Subcommittee: Borders/Regional Planning Committee – Director Saxod reported on action and discussions at the recent SANDAG Borders/Regional Planning Committee Meeting.
11-D AB 1234 Compliance Reports – No reports were given.

12. CLOSED SESSION(S)
Mr. Hentschke took the Board into Closed Session on item 12-D at 3:58 p.m.
12-A CLOSED SESSION:
Conference with Labor Negotiator
Government Code §54957.6
Agency Designated Representatives: Frank Belock, Sandra Kerl, Gretchen Spaniol, Lisa Celaya, Rick Bolanos
Employee Negotiator: Teamsters Local 911

12-B CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: SDCWA v Metropolitan Water District of Southern California;
Case Nos. CPF-10-510830; CPF-12-512466; and CPF-14-514004

12-C CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: State Water Resources Control Board
Petition of Imperial Irrigation District for Modification of Revised Water Rights Order 2002-0013

12-D CLOSED SESSION:
Public Employee Performance Evaluation
Government Code §54957 - Title: General Counsel
Conference with Labor Negotiators, Government Code §54957.6
Designated Board Representatives: Chair, Vice-Chair, Secretary
Unrepresented Employee: General Counsel

13. ACTION FOLLOWING CLOSED SESSION
There was no reportable action.

14. OTHER COMMUNICATIONS

15. ADJOURNMENT
The meeting was adjourned at 4:15p.m.

Mark Weston, Chair
Mark Muir, Vice Chair

Kelly L. Walker, Deputy Clerk of the Board
RESOLUTION NO. 2015-_______

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
SAN DIEGO COUNTY WATER AUTHORITY
HONORING BARBARA WIGHT
UPON HER RETIREMENT FROM THE BOARD OF DIRECTORS

WHEREAS, Barbara Wight served as a member of the Board of Directors of the San Diego County Water Authority, representing the City of San Diego, from February 11, 2009 to her retirement on January 31, 2015; and

WHEREAS, she served as Chair on the Administrative and Finance Committee, and Water Planning Committee, and as Vice-Chair on the Administrative and Finance Committee; and

WHEREAS, she served as a member on the Administrative and Finance Committee, Audit Committee, Imported Water Committee, and Legislation, Conservation and Outreach Committee; and

WHEREAS, she served as an Alternate on the Water Conservation Garden JPA; and

WHEREAS, her contributions to the community extend beyond the activities with the San Diego County Water Authority; and

WHEREAS, her service, both public and private, has resulted in a benefit to all people of San Diego County.

NOW, THEREFORE, BE IT RESOLVED, that on behalf of its individual members, past and present, its staff, and the people of San Diego County, the Board of Directors offers its most sincere appreciation to Barbara Wight for her dedicated service to the San Diego region.

PASSED, APPROVED, and ADOPTED this 26th day of March, 2015.

Ayes:

Noes:

Abstain:
Absent:

____________________________________
Mark Weston,
Chair

ATTEST:

____________________________________
Jim Madaffer,
Secretary

I, Kelly L. Walker, Deputy Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2015-______ was duly adopted at the meeting of the Board of Directors on the date stated above.

____________________________________
Kelly L. Walker
Deputy Clerk of the Board
March 18, 2015

Attention:  Formal Board

Administrative and Finance Committee’s Fiscal Sustainability and Special Agricultural Water Rate Program Recommendations.

Approve the Member Agency Managers comprehensive recommendations on Fiscal Sustainability

- Approve the addition of the Supply Reliability Charge, as defined in the A&N Technical Service, Inc. memorandum, to the Water Authority’s rate and charge structure and direct staff to return with a comprehensive review of implementation of the charge by December, 2020;
- Approve the allocation of non-commodity revenues to all rate and charge categories including treatment;
- Approve the permanent application of the debt and equity payments for the Carlsbad Desalination Plant to the Supply Rate; and
- Approve the extension of the Transitional Special Agricultural Water Rate Program through December 31, 2020.

Alternative
The Board may choose not to approve the recommendations and request staff to develop an alternative recommendation.

Fiscal impact
There is no fiscal impact associated with these recommendations. These recommendations only impact the method of revenue allocation and collection.

Background
The Board, member agencies and Water Authority staff have been involved in a collaborative process over the last 18 months in identifying issues related to the long term fiscal sustainability of the Water Authority’s revenue structure and evaluating enhancements that would strengthen the Water Authority’s future fiscal health. The Board’s Fiscal Sustainability Task Force (FSTF) completed its work at the March 2014 Board meeting. At that meeting, the Board deferred action on making any of the recommended changes to the existing rate and charge structure for Calendar Year 2015 and directed staff to continue to work with the Administrative and Finance (A&F) Committee and the member agency General Managers on the issues identified by the FSTF. Initial discussions have focused on addressing revenue volatility and the development of a supply reliability charge. The results of these discussions have been reported to A&F Committee at their March 12, 2015 workshop.

With the Board’s goal of addressing the deferred items prior to setting Calendar Year 2016 rates and charges, the A&F Committee and the member agency General Managers and Finance Officers (collectively the Managers) have developed a complete package of recommendations.
Previous Board Action
On June 27, 2013, the Board Accept the Carollo Engineers’ Cost of Service Rate Study, adopted rates and charges for calendar year 2014.

On June 26, 2014 the Board extended the Transitional Special Agricultural Water Rate Program through December 31, 2015, adopted rates and charges for calendar year 2015.

Discussion
On March 12, 2015, the Managers’ comprehensive recommendation was reviewed by the A&F Committee. The Board memorandum for the March 12, 2015 Special A&F Committee Meeting is provided as Attachment A. Consistent with previous Board direction, the Managers developed the recommendations as a comprehensive package that when viewed in their entirety reflect a balanced and equitable approach to changes in the rate and charge structure and achieve the goals of fiscal sustainability. The Managers recommendations are summarized below:

- Implement the Supply Reliability Charge alternative and review in five years as outlined above and in A&N’s report.
- Allocate non-commodity revenues to all rate and charge categories and allocate based on current pro rata share of expenditures.
- Extend the TSAWR program through December 31, 2020, limiting eligibility to existing Board policy, at which time, in conjunction with the evaluation of the new Supply Reliability Charge, the TSAWR program will be evaluated.

After discussions, the A&F Committee formally approved the recommendations and forwarded them to the Board for approval. In addition, the A&F Committee directed the recommendations be forwarded to Carollo Engineers to conduct a cost of service analysis of the recommendations and independently verify their compliance with cost of service principles and California law. In addition, Carollo Engineers will determine the calendar year 2016 rates and charges.

Prepared by: David Shank, Financial Planning Manager
Ken Weinberg, Director of Water Resources
Lisa Marie Harris, Director of Finance

Reviewed by: Sandra L. Kerl, Deputy General Manager

Approved by: Maureen A. Stapleton, General Manager

Attachment A: Board memorandum from the March 12, 2015 Special A&F Committee Meeting
March 6, 2015

Attention: Administrative and Finance Committee

Report of the Member Agency Managers’ Recommendations Regarding Fiscal Sustainability and Special Agricultural Water Rate Program. (Discussion)

Purpose
The Water Authority’s Fiscal Sustainability process provides an opportunity to discuss and make recommendations for changes and additions to the Water Authority’s existing rate and charge structure and financial policies to ensure fair and proportionate recovery of long-term water supply investments. This board memo provides a summary report.

Background

Fiscal Sustainability Process
During the March 2011, Board Planning Retreat, the Board identified maintaining the Water Authority’s future fiscal sustainability as an important directive. Like many other water suppliers, the Water Authority's water supply and business environment had changed in unprecedented ways. Major reductions in water sales, a struggling economy, significant restrictions and future risks on Bay-Delta imported water supplies, increased emphasis on local supply development, and water use efficiency have all contributed to the changing dynamics shaping how the Water Authority conducts its business and manages its finances.

In addition, the Water Authority’s Board has made numerous decisions over the last 20-years to invest in supply diversification and facility improvements to enhance the region’s water supply reliability. These decisions include the Emergency Storage Project (ESP) and Carryover Storage Program (CSP), the Colorado River supplies acquired from the Imperial Irrigation District and canal lining projects, and the Carlsbad Desalination Project. These long-term investments are central to the reliability of the region's future water supply and represent long-term financial obligations of the Water Authority.

In January 2012, the Chairman of the Water Authority’s Board established the Fiscal Sustainability Task Force (FSTF) to implement the Board's directive of securing the Water Authority’s future fiscal sustainability. While initially delayed due to staffing issues, the FSTF began in earnest in January 2013 and met 11 times to discuss a diverse range of issues. In November 2013, the FSTF recommended and the Board adopted the Fiscal Sustainability Guiding Principles (the Principles). The Principles (Attachment C) were developed by the FSTF to guide policy decisions that impact the Water Authority’s fiscal sustainability. The Principles focus on items such as; protection of the Water Authority’s high credit rating, adherence to cost of service principles and California law, the need to balance changes to the rate and charge structure while encouraging member agency local supply development, and consistency with policy positions taken at MWD.

At the January 23, 2014 Administrative and Finance (A&F) Committee meeting, the FSTF presented its initial recommendations to support the long-term fiscal sustainability of the Water
Authority. The recommendations centered on enhancing fixed revenue sources to offset increasing fixed contractual water supply obligations, improving member agency equity by ensuring the costs of supply reliability are equitably allocated to member agencies in a manner that reflects the long-term benefits received and addressing comments contained in the 2013 Cost of Service Study regarding the use of revenues derived from non-commodity charges. In addition, the FSTF recommended that the calculation of the Infrastructure Access Charge (IAC) include debt and equity charges being paid by the Water Authority for the capital costs of the Carlsbad Desalination Plant. Follow-up discussions continued with the Board and member agencies throughout February and March. At the March 27, 2014 A&F Committee meeting, the Board discussed the specific FSTF recommendations.

As a result of A&F committee discussion at the March, 2014 meeting the Board authorized the following actions:

1. Defer the final decision regarding how to apply the debt and equity payment for the Carlsbad Desalination Plant to the A&F Committee for consideration to development of the CY 2016 rates and charges, and adopt an interim policy for the CY 2015 rates and charges that applies the debt and equity payments for the Carlsbad Desalination Plant to the Supply rate; and

2. Maintain the current policy related to the application of non-commodity revenue offsets for CY 2015 rates and charges and defer to the Administration & Finance Committee the application of revenue offsets to all revenue categories, including Treatment, to the development of the CY 2016 rates and charges; and

3. Defer to the Administration & Finance Committee all other Task Force recommendations, including modification of allocation of Storage Charge and consideration of a Supply Reliability Charge concept.

On March 27, 2014, the FSTF was sunset by the Board and the A&F Committee was charged with developing a recommendation that addresses all of the outstanding items in a comprehensive manner. While the A&F Committee is leading the effort, the Committee directed Water Authority staff to work with the member agency General Managers and Finance Officers (collectively “the Managers”) to develop a comprehensive recommendation for the deferred actions. A list of the member agencies that participated in this process and support the recommendations developed is shown in Attachment A. To date staff and the Managers have met eight times since October with additional meetings with individual member agencies as needed. The progress of these ongoing discussions has been reported to the A&F Committee regularly.

**Special Agricultural Water Rate Program**

At the June 2014 Board meeting, the Board extended the supply rate differential of the Transitional Special Agricultural Water Rate (TSAWR) for an additional year. Through previous Board action the supply rate differential of the TSAWR was set to terminate on December 31, 2014. This extension will expire unless the Board takes further action, presumably as part of the development and adoption of the Calendar Year 2016 rates and charges. The supply rate
The differential for TSAWR customers is in exchange for program participants being cutback at the MWD cutback level during a shortage allocation when the TSAWR customer would receive no benefit from the Water Authority QSA or seawater desalination supplies. The TSAWR is designed so that TSAWR customers are cutback a minimum of 5% more than non-agricultural customers. It is estimated in that if MWD implements cutbacks during FY 2016 that the cutback differential between TSAWR and M&I would be 10% or greater in a 20% MWD shortage. In part the Board’s decision to extend the program an additional year was in response to current water supply conditions and the desire to not add firm demand for Water Authority supplies in an uncertain supply situation. When the Board extended the program, it also noted that it would consider the future of the program in conjunction with the fiscal sustainability process.

**Previous Board Action:**
On June 26, 2014, the Board extended the Transitional Special Agricultural Water Rate Program through December 31, 2015, and adopted rates and charges for calendar year 2015.

On June 27, 2013, the Board accepted the Carollo Engineers’ Cost of Service Rate Study, adopted rates and charges for calendar year 2014.

**Discussion**
Charged by the A&F Committee with developing a comprehensive recommendation in time for CY 2016 rates and charges, the Managers have met regularly over a 6-month period and developed a comprehensive set of recommendations.

The discussions have focused on the following areas that the A&F Committee tasked the Water Authority staff and the Managers to address (1) enhancing the Water Authority’s existing fixed charges to provide revenue stability for long term fixed supply cost obligations; (2) ensuring the costs of supply reliability are equitably shared by member agencies (3) allocation of non-commodity revenues to the Treatment Rate; and (4) the future of the TSAWR Program. A summary of each of these discussions is presented below.

**Required Cost of Service Study**
Following the Board’s consideration of the complete package on fiscal sustainability, staff would send the recommendations to a cost of service consultant for review and analysis to ensure compliance with cost of service principles and California law.

**Enhancing Fixed Charges**
The result of the Water Authority's long-term water supply reliability commitments is a changing water cost structure that brings with it the potential for increased revenue volatility. This discussion among Water Authority staff and the Managers focused on several potential ways that the Water Authority’s rate and charge structure could be modified to mitigate the level of revenue volatility. Enhancing fixed charges is a common and relatively simple way to reduce revenue volatility. Since the charge is not impacted by sales volatility, increasing the share of revenue collected on fixed charges reduces revenue volatility.

The input received from a wide cross section of the Managers quickly focused on the fact that enhancing (increasing) the Water Authority’s fixed charges translates into increased revenue volatility at the retail member agency level. This is due to the fact that the member agencies often collect the Water Authority fixed charges on volumetric rates. Therefore, a change from
planned water sales levels means either a revenue shortfall or a surplus. This makes balancing Water Authority and member agency revenue volatility levels a challenge. In addition to enhancing fixed charges, there was a member agency proposal to discuss the potential for fixed purchase contracts to mitigate revenue volatility. However, after a thorough discussion, it was clear that without a high volumetric level of commitment contracts did not achieve the desired level of enhancement to revenue stability.

The general sense of the Managers was that basing the need for enhanced fixed revenue solely on the need to mitigate revenue volatility was not justified and volatility could be addressed through other methods. Although outside the specific scope of the Managers work effort, there was a general consensus among the Managers that the Water Authority should manage revenue volatility with reserves. A more detailed summary of that discussion is provided later in this Memorandum under the section titled “Additional Items Discussed.”

**New Supply Reliability Charge**

Although the Managers did not view revenue volatility on its own as justifying the need for a new fixed charge for supply costs, there was a strong belief by the vast majority of agencies that all member agencies should pay something for the reliability benefit all receive from the Water Authority’s investments in regional supplies such as the IID transfer and the Carlsbad Desalination Project. The focus on beneficiaries paying for the reliability benefit of these supplies led the Managers to concentrate their efforts on the development of an appropriate method to measure and pay for that reliability benefit.

The FSTF recognized the importance of equitably recovering the cost of the Water Authority’s investments in long-term water supply reliability in accordance with cost of service requirements of the law. As such, the concept of a new Supply Reliability Charge emerged. The concept of a fixed charge for supply reliability had been raised early in the Board and member agency discussions over the incorporation of the Carlsbad Desalination Project costs into the Water Authority's rate and charge structure. Ensuring that all member agencies contribute towards these costs over time in a manner that bears a fair or reasonable relationship to the agencies’ burdens on, or benefits received from the reliability is at the center of the issue. By placing reliability costs on a volumetric rate, intermittent or highly cyclical users will only incur the reliability costs when they are making water purchases. This means that depending on the nature of their demands, they may experience periods when they are making little or no contributions to reliability costs. During these times the more constant users would be making a disproportionate contribution to the reliability costs. This phenomenon is a serious problem with the rates and charges at MWD. The FSTF and the Managers quickly determined that reliability like insurance offers benefits to all participants regardless of their demand profile. The critical factor was to determine how to quantify that reliability benefit and then how to allocate the cost among member agencies in a fair and reasonable manner that complies with cost of service principles and California law. Inherent in the Managers approach is the understanding that reliability is only one benefit from these water supplies with the predominant benefit being consumption. Accordingly, the reliability benefit to all member agencies would only recover a fraction of the total cost of the supply.
After discussing the issues and focusing in on quantifying the reliability benefit, the Managers and staff developed four alternatives for a reliability charge including a status quo alternative that didn’t change the rate and charge structure. The three non-status quo alternatives are shown below:

<table>
<thead>
<tr>
<th>Alternative</th>
<th>Description</th>
<th>Methodology</th>
</tr>
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<tbody>
<tr>
<td>Desalination Charge</td>
<td>Fixed charge established to collect a portion of the Carlsbad Desalination Plant costs.</td>
<td>The charge is equal to cost differential between the desalination supply cost and a like amount of water purchased at the MWD Tier 1 rate. The charge is allocated to member agencies based upon their share of the rolling three-year average M&amp;I deliveries.</td>
</tr>
<tr>
<td>Supply Reliability Charge</td>
<td>Fixed charge established to recover a portion of the Carlsbad Desalination Plant and the IID transfer water costs.</td>
<td>The charge is set equal to the difference between the supply cost of desalination and IID transfer water purchases and a like amount of water purchased at the MWD Tier 1 rate multiplied by 25%. The charge is allocated to member agencies based upon their share of the rolling five-year average M&amp;I deliveries.</td>
</tr>
<tr>
<td>Reliability Nexus</td>
<td>Fixed charge based upon a water supply reliability metric for supplies with enhanced reliability. For example, the frequency of shortages or reliance on storage.</td>
<td>The charge is set equal to a share of the fixed desalination and Quantification Settlement Agreement supply costs. The proportion of fixed costs included in the charge is dependent on the magnitude of the reliability metric but was expected to lie within the range of 15-30 percent. The charge is allocated to member agencies based upon their share of the rolling 10-year average M&amp;I deliveries.</td>
</tr>
</tbody>
</table>

After a robust discussion and analysis of the four alternatives, the Managers coalesced around the Supply Reliability Charge alternative. This alternative represents a compromise that balances the impact of fixed costs on member agencies with the allocation of costs associated with long-term investments in supply reliability to member agencies based on a rolling average of M&I deliveries. The preferred charge is tied to the cost differential between the MWD and the Carlsbad Desalination and IID Transfer costs, which was seen as creating a strong nexus between reliability and cost. The revenue to be collected through the new charge was then allocated to member agencies based on a 5-year rolling average of Water Authority M&I deliveries. Since the supply reliability benefit is best determined by how much water supply an agency uses or needs over a hydrologic cycle, allocating the reliability charge based on a long-term average volumetric basis was deemed most appropriate by the Managers. Allocation of these costs to a fixed charge based on historic deliveries is specifically in lieu of adding any of the Desalination Plant costs or IID Transfer costs to the calculation of the IAC. If the new Reliability Charge is adopted by the Board the IAC policy will be amended in June revised to permanently exclude the desalination debt and equity payments from the calculation.
Financial Analysis

Voluminous data and detailed financial projections through 2040 were prepared and distributed to the member agencies. The projections analyzed the total annual financial contributions made by each member agency under multiple scenarios. The scenarios varied key assumptions including the amount of local supply development and inclusion of a new fixed reliability charge. Although the percentages of total financial contributions changed when comparing current assumptions to scenarios with much greater amounts of member agency roll-off and inclusion of a reliability charge the total dollars contributed by member agencies changed very little for the agencies that did not roll off. The variation in member agency financial contributions between these scenarios and the status quo showed only slight differences throughout the forecast period of 2020 through 2040. The average change in the financial contribution by member agencies ranged from 0.4% to 1.3%. This was primarily due to: 1) the projected increase in variable costs associated with MWD rates and charges relative to the member agency fixed charges; 2) member agencies local supply development only partially offset projected water demands during the projection period; and 3) additional local supply development would allow the Water Authority to avoid the increased cost in purchasing MWD water in the future because it is a pass-through variable cost to the Water Authority.

The analysis showed that Water Authority sales levels are expected to remain relatively stable over the long-term and experience some amount of growth even with enhanced local supply development substantially above 2010 Urban Water Management Plan verifiable estimates. The forecasted sales included continuing to meet 20 percent state-mandated conservation goals beyond 2020 until the end of the forecast period. Much of the new planned local supply will offset expected growth in member agency demand while overall Water Authority sales will grow from the current levels. For example, even with the City of San Diego’s implementation of all three phases of the Pure Water Program and the development of approximately 90,000 acre feet of new local supply, the City's estimated demand on the Water Authority in 2035 is expected to be at approximately the current level of sales. The analysis also confirmed the findings of the recent 2013 Regional Water Facilities Master Plan and Optimization Study that showed member agency implementation of local supplies could significantly defer regional investments in supply and infrastructure. While the need for a new fixed supply reliability charge did not receive unanimous agreement during the Managers discussion, it was supported by an overwhelming majority.

The Role of Local Supply Development

It’s important to note that as part of this discussion by the Managers there was a considerable dialogue over the benefits of local supplies developed by the Water Authority and the member agencies. Although there was agreement that local supplies may benefit the region, most of the agencies did not believe that a member agency's financial obligation to pay for prior regional investments made by the Water Authority was relieved if a member agency chose to develop a local supply for its own specific benefits and motivations. Although there was disagreement on that point all member agencies recognized that those agencies developing local supplies incurred significant costs, most in excess of what the Water Authority charged for water. The need to encourage the development of local supplies while ensuring both the Water Authority’s fiscal sustainability and member agency equity in payments was recognized by all the participants as they contemplated whether to recommend establishment of a new fixed charge. The reliability
benefit provided by member agencies local supply became its own topic as an outgrowth of this discussion and is also detailed below under “Other Items Discussed.”

**Cost of Service Analysis**

A&N Technical Services Inc. (A&N), an independent rate and charge consultant, was hired in February 2015 to conduct a preliminary analysis to: 1) review the new Supply Reliability Charge for consistency with recognized cost-of-service based rate setting guidelines (such as the AWWA M-1 Manual); 2) verify that the amount expected to be generated by the charge is no more than necessary to cover the reasonable revenue requirement (i.e. costs) for governmental services or products for which the charge is imposed; and 3) assess the degree that the revenue requirement allocation bears a fair or reasonable relationship to the payers’ burdens on or benefits received from the governmental services or products. In addition, A&N’s report, which is provided as Attachment B, documents the methodology for determining the new Supply Reliability Charge on an annual basis and its allocation to member agencies. As mentioned above, if the Board ultimately adopts the recommendation of a supply reliability charge, it and all other recommendations will be sent to the cost of service consultant for review and analysis to ensure compliance with cost of service principles and California law.

**Member Agency Managers Recommendation #1:**

Implement the Supply Reliability Charge alternative as outlined above and in A&N’s report and prior to December 31, 2020 provide a comprehensive evaluation of its effectiveness to the Board of Directors.

**Allocation of Non-Commodity Revenues to the Treatment Rate**

The 2013 Cost of Service (COS) Study by Carollo Engineers recommended a review of the Water Authority’s non-commodity revenue allocation policy. A review was recommended because of the inconsistent application of non-commodity revenues to rate and charge categories and the potential for that to impair cost of service principles. The Water Authority’s current practice is to allocate non-commodity revenues to all rate and charge categories except treatment. Non-commodity revenues are revenues generated by charges unrelated to water sales like the Infrastructure Access Charge, Water Standby Availability Charges, property taxes, etc. These revenues reduce the revenue requirement or amount charged per acre foot for water rates and the cost of other rate service categories.

The two primary concerns that were brought up as result of the COS study are 1) is the current non-commodity revenue allocation methodology equitable to both treated and untreated water customers; and 2) by not consistently applying non-commodity revenue to offset all rate categories does the current methodology weaken any cost of service principles. Staff have discussed these issues with Carollo and reached the following conclusions. By excluding the treatment rate from the pro rata allocation of non-commodity revenues the current allocation methodology results in a slightly higher level of offsetting credits for untreated water rates. The more significant issue is the potential to weaken the cost of service principals by allowing cross subsidization between rate categories. This results from including treatment debt service in the IAC calculation and not offsetting the treatment rate with the IAC revenues. This effectively
includes treatment related expenses in the IAC but allocates the revenues to offset other rate and charge categories.

The discussion over this issue by the Managers spanned two meetings. While some agencies saw this as an issue of equity, a minority of agencies expressed the opinion that the current practice was not inequitable citing the fact that all agencies pay for untreated water while only some pay for treatment service. While the Managers were split on the equity issue, there was consensus regarding the need to address the cost of service issues surrounding the exclusion of Treatment from receiving a share of the non-commodity revenue offsets. The vast majority of the Managers, both treated and untreated water customer agencies agreed that the most effective solution to ensure compliance with cost of service principles was to fully integrate the treatment rate into the rate and charge structure. This means that the treatment rate category will no longer be a separate/independent rate and charge category. To do this the treatment rate category will be treated like the other rate and charge categories and receive a proportionate share of non-commodity offsetting revenues.

Member Agency Managers Recommendation #2:
 Allocate non-commodity revenues to all rate and charge categories and allocate based on current practice of the pro rata share of expenditures.

Special Agricultural Water Rate Program

The Transitional Special Agricultural Water Rate (TSAWR) is set to expire on December 31, 2015, when it will be replaced by the permanent Special Agricultural Water Rate (SAWR). TSAWR consists of two components. There is a rate reduction from the melded supply rate where agricultural customers pay the MWD Tier 1 rate and in shortage allocation are cutback at the MWD cutback level and do not share in the benefits of the QSA or Carlsbad Desalination supplies. The second component of the TSAWR exempts agricultural customers from being subject to a member agency’s share of the Storage Charge. In return, agricultural customers receive half the level of service under the Emergency Storage Program (ESP) and no service under the Carryover Storage Program (CSP).

Upon expiration of the TSAWR, the supply rate differential is discontinued and agricultural customers receive the same level of supply reliability as M&I customers in a drought shortage condition. With the current water supply uncertainty and the potential for supply cutbacks this year, transitioning agricultural customers to the SAWR program could worsen the shortage impact on existing M&I customers. In addition, the TSAWR program’s value to M&I customers occurs during times of water shortages in the form of TSAWR customers taking a greater cutback than M&I customers because they do not share in any of the QSA and Carlsbad Desalination water supplies. Having extended the TSAWR program several times, M&I customers are in a position to reap the benefits of the TSAWR program they have been paying for should supply cutbacks from MWD be imposed this year.

When this topic was initially discussed by the Managers, there was a wide cross section of member agencies that supported continuation of the program. The recommendation that was proposed was to extend the program for five years and conduct a comprehensive evaluation at
that point to determine whether the program was effective and should be continued. It was thought that the five-year period would be consistent with the timing for the evaluation of the proposed Reliability Charge and would be a sufficient timeframe to either recover from the current water supply uncertainty or validate the value of the program. More in depth discussion by the Managers focused on two issues: 1) what was the cost of the program to M&I customers relative to other water management programs that can be implemented locally (e.g. turf replacement or other conservation programs); and 2) should the program, if continued for five years, be limited to currently eligible agricultural customers under existing Board policy (property or accounts previously enrolled in MWD's Interim Agricultural Water Program (IAWP)).

**Financial Impacts**

The cost of the supply rate differential for TSAWR program is estimated to add 1-1.5 percent to the M&I wholesale rate in 2016, which translates to less than 1 percent on the average composite residential retail customer using 15 units per month. The range in percentages is due to whether or not a reliability charge is adopted by the Board. A reliability charge as proposed would reduce the cost differential between the melded supply rate and the MWD Tier 1 rate. The reliability benefit in terms of additional QSA/desalinated water available to the M&I customer if MWD cutbacks are at the 20 percent level is 2 percent. From a simple cost-benefit standpoint, the benefits of the TSAWR program in 2016 would outweigh the costs.

The TSAWR program is a local management action as opposed to dry-year spot or option transfers that depend on external factors to acquire and transport. Such transfers have been problematic in availability and highly expensive during this current drought. The reliability benefits of both are typically experienced for a short period of time and are more similar to an insurance policy or premium to obtain water when most needed. The cost of spot transfers during the current drought has been much higher than experienced in the drought of 2008-2011. A recent transaction being considered by MWD would cost approximately $1,500/AF for the Water Authority or another MWD member agency to acquire and transport the water to Southern California. This reflects the dire conditions experienced in the agricultural regions of the state. To date, spot transfers have not been as significant a shortage management strategy as in previous drought, but that is subject to change if, as anticipated, MWD will be entering into large scale transfer transactions during FY 2016. The marginal cost of the TSAWR program depends on the MWD cutback level. The higher the cutback level is to TSAWR the more water is available to M&I and thus the greater the reliability benefit and the lower the unit cost of the program. Conversely, under a lower MWD cutback, less water is made available to M&I customers from the TSAWR participants, the reliability benefit to M&I customers is lower, and the unit cost is higher. At the current Calendar Year 2015 supply rate differential of $182/AF for TSAWR in a year with a 20-percent MWD cutback, the cost per acre foot of water that is made available from TSAWR participants to M&I customers is approximately $1,500/AF. With an increase in the supply rate differential in 2016, the unit cost at a 20-percent MWD cutback would also increase.

Conservation programs, such as turf replacement, provide immediate savings during shortages but are also done to achieve permanent savings and lessen the long term demand for potable water. Those types of programs on their own are not sufficient to respond to extraordinary
conditions during droughts and immediate supply shortages. It also differs in the total amount of savings that can be achieved from the program and how quickly those savings can be realized. The estimated annual amount of water available from the TSAWR program in this type of shortage situation would be greater than the current annual savings from the turf replacement program. The estimated amount of QSA and Carlsbad Desalination water that would not be shared with TSAWR customers in a 20 percent MWD cutback scenario in FY 2016 is approximately 4,800AF. Under MWD’s turf replacement program, an estimated 600AF of potential savings in the Water Authority’s service area was estimated for calendar year 2014. Conservation programs are a critical response to drought and shortage and with the cost of MWD’s turf replacement program at approximately $1,460/AF are comparable to other supply and demand side options.

A significant difference in the two types of water management programs is that TSAWR has an annual recurring cost and is essentially a stand-by conservation program that can be turned on when needed. A conservation program, such as turf replacement, does not have recurring costs and once water is saved it is saved consistently on a longer term basis. However, from a revenue standpoint TSAWR customers continue to purchase water from the Water Authority at higher volumes of water in non-cutback years. Because TSAWR customers account for almost 10 percent of Water Authority deliveries, this has an overall downward rate pressure on other rate categories such as transportation, treatment and customer service, as well as the collection of fixed revenue through the IAC, property tax and Standby Charges. The rate differential for agriculture has been in place in one form or another for several decades in recognition of the water intensiveness of the agricultural industry and its unique sensitivity to the price of water coupled with its ability to quickly and substantially reduce water use when needed. To the extent these factors change in the future, the efficacy of maintaining the program should be evaluated. Currently, the reliability benefit coupled with the contribution to revenue stability noted above shows a positive cost benefit of the program in a very uncertain water supply availability condition.

The recommendation is to continue the TSAWR program for the next five years and revisit the value of the program in conjunction with the review of the new Supply Reliability Charge. The recommendation recognizes: 1) the benefits the M&I customers have been paying for by supporting the TSAWR program occur during supply shortages; 2) the new Supply Reliability Charge allocation methodology is impacted by the treatment of agricultural water demands; and 3) addressing the issue in one year increments is not efficient and doesn’t provide a sufficient planning window for customers. The five year period will also provide a track record to ascertain what the frequency of shortage cutbacks would be over an extended time period (since the 2009 cutbacks) and allow for a better understanding of the cost and benefits of the program. In relation to this recommendation, the Managers discussed the concept of a rate differential for institutional irrigators such as City owned parks, which may be willing to accept lower levels of reliability in exchange for a reduced price. There was a desire on the part of some of the Managers to further discuss the idea. Staff will put the topic on a future Member Agency Managers Meeting agenda during FY 2016.
Member Agency Managers Recommendation #3:
Extend the TSAWR program through December 31, 2020, limiting eligibility to existing Board policy, at which time, and in conjunction with the evaluation of the new Supply Reliability Charge, the TSAWR program will be evaluated.

Other Items Discussed

As noted above, formulation of the fiscal sustainability recommendations by the Managers led to discussion of other items that the Managers wanted to forward to the A&F Committee as part of their review. The items were as follows:

Use of Reserves to Manage Annual Rate Volatility
In the course of addressing the issue of fixed revenue sources for fixed supply obligations the benefit of annual revenue stability from a fixed charge was highlighted as a justifying factor for a new fixed revenue source. As discussed in the previous section on Enhanced Fixed Revenue, the Managers brought up the impact additional fixed charges to their own retail level revenue volatility. The use of reserves had very strong support by the Managers as a means to mitigate revenue volatility. The result of this discussion with the Managers was general support for maintaining the current Board Policy regarding the sizing of the Rate Stabilization Fund (RSF). The RSF Policy sizes the fund’s target and maximum balances based upon the financial impact of wet weather or mandatory restrictions that reduces water sales. With significant increases in the RSF target and maximum over the next five years projected and the understanding that the reserve would be funded by water rates and charges to achieve the target levels, the Managers were in consensus that revenue volatility be addressed with the Water Authority’s reserves and not mitigated with new fixed charges the sole purpose of which was to address volatility. No further action is required by the Board on this issue.

Recognition of the Reliability Benefit of Member Agency Local Supplies
As part of the development of the new supply reliability charge recommendation the Managers also discussed the importance of member agency development of local supplies to regional water reliability and the cost and benefits of developing those supplies to the individual member agency. Although the Water Authority recognizes that reliability contribution and incentivizes member agencies to develop local supplies through the Board-approved Shortage Allocation Method, the Managers asked that the Board consider a financial incentive for future local projects. Under the Shortage Allocation Methodology member agencies receive additional water in their allocation from the Water Authority in recognition of the regional reliability benefit. Although a financial incentive would help mitigate the cost to the member agency for developing that local supply, a regional benefit must be demonstrated and conform to cost of service principles and California law in order to support the investment of regional ratepayer dollars.

Because an element of the MWD litigation involved MWD’s local projects incentive program staff has proposed that the Water Authority’s MWD Team discuss the issue of a Water Authority local projects incentive program from that perspective. Following a review by the MWD Team, staff would begin meeting with the member agencies during FY 2016 to better formulate concepts and
ideas and return to the Board with any proposals that would be grounded in cost of service requirements and demonstrated regional benefit.

**Conclusions**

After six months and eight meetings, the Managers unanimously approved the comprehensive package of recommendations discussed above for the A&F Committee to consider. Although there was not complete agreement among the Managers on all of the individual recommendations, when considering all of the recommendations as a comprehensive package, the Managers believed that on balance the results improve equity among the member agencies and enhance the Water Authority’s fiscal sustainability. The Managers approach to the recommendations as a package reflects the Board’s direction to address the issues in a comprehensive manner rather than to consider each issue individually. The member agency managers complete fiscal sustainability recommendations are as follows:

- Implement the Supply Reliability Charge alternative and review in five years as outlined above and in A&N’s report.
- Allocate non-commodity revenues to all rate and charge categories and allocate based on current pro rata share of expenditures.
- Extend the TSAWR program through December 31, 2020, limiting eligibility to existing Board policy, at which time, in conjunction with the evaluation of the new Supply Reliability Charge, the TSAWR program will be evaluated.

Staff will be presenting these fiscal sustainability recommendations to the A&F Committee at the March 26 meeting for consideration. Should the Board approve the recommendations, staff would send the package to the cost of service consultant for review and compliance with cost of service principles and California law.

As noted above, the Board adopted the Principles in November 2013 for use when considering changes to the Water Authority’s rate and charge structure (Attachment C). Staff believes that all of the recommendations from the Managers meet the criteria of the Principles.

Prepared by:  David Shank, Financial Planning Manager
Ken Weinberg, Director of Water Resources
Lisa Marie Harris, Director of Finance

Reviewed by:  Sandra L. Kerl, Deputy General Manager

Approved by:  Maureen A. Stapleton, General Manager

Attachment A  –  List of Member Agencies developing the recommendations
Attachment B  –  A&N Technical Services, Inc. Review of Proposed SDCWA – Supply Reliability Charge
Attachment C  –  Fiscal Sustainability Guiding Principles
The following had one or more representatives participating in the Fiscal Sustainability Process:

**Member Agencies**

Carlsbad Municipal Water District  
Del Mar  
Escondido  
Fallbrook Public Utility District  
Helix Water District  
Oceanside  
Olivenhain Municipal Water District  
Otay Water District  
Padre Dam Municipal Water District  
Poway  
Rainbow Municipal Water District  
Ramona Municipal Water District  
Rincon del Diablo Municipal Water District  
San Diego  
San Dieguito Water District  
Santa Fe Irrigation District  
Sweetwater Authority  
Valley Center Municipal Water District  
Vallecitos Water District  
Vista Irrigation District  
Yuima Municipal Water District

1. Includes National City and Southbay Irrigation District
Memorandum

To: Lisa Marie Harris, Director of Finance  
    Dan Hentschke, General Counsel

From: Thomas W. Chesnutt, Ph.D., CAP®

Date: March 2, 2015

Re: Review of Proposed SDCWA - Supply Reliability Charge

Purpose

A & N Technical Services, Inc. has been retained by the San Diego County Water Authority to independently review and provide a professional opinion of whether the proposed Supply Reliability Charge as described later in this memorandum is consistent with recognized cost-of-service based rate setting principles, that the amount expected to be generated by the charge is no more than necessary to cover the reasonably anticipated revenue requirement ("costs") for governmental services or products for which the charge is imposed, and that the manner in which the costs are generally allocated by the charge bears a fair or reasonable relationship to the payor’s burdens on or benefits received from the governmental services or products.¹

Findings

The proposed Supply Reliability Charge comports with water industry cost-of-service-based rate-setting principles. By design, it cannot recover more than the costs allocated to the supply functional costs, since it is computed as a portion of those functional supply costs. Further, it constitutes a reasonable allocation of functional supply costs in that it better aligns the fixed incremental supply costs taken on by the Water Authority to make highly reliable potable water supplies available to its member agencies within the County of San Diego with the benefits available to all water customers connected to the SDCWA integrated water system.

The proposal addresses fairness by allowing for predictability of charge incidence (based on a rolling five year average of historical deliveries) and adjustments to future charge incidence if demand requirements of member agencies change in the future due to local supply

¹ This analysis is limited to a review of the proposed charge in the context of the Water Authority rates structure. It does not include allocation of individual costs to functional rate categories. That aspect of the cost-of-service study for the determination and setting of the amount of the charge will be performed by others.
development or demand management. This reviewer approves of the stated intention to re-examine the Supply Reliability Charge in five years and to embed it as a fixed charge in fiscal procedures and policies intended to assure the SDCWA’s fiscal sustainability objectives².

**Description of the Supply Reliability Charge**

The proposed Supply Reliability Charge will create a new fixed charge for the functional incremental supply costs³ allocated to enhanced supply reliability. Under the proposed methodology the charge would be set annually. First the difference between the combined Desalination and IID Water Transfer Costs and a like amount of water purchased at the MWD Tier 1 Full Service Untreated Rate is determined. The calculated difference is then multiplied by 25% to determine the calendar year Supply Reliability Charge. A detailed calculation methodology is shown below:

³ Functional incremental supply costs for this purpose are understood to be associated with the two highly reliable supplies available to the San Diego County Water Authority that constitute the new and forward-looking supplies—i.e., the supply costs incidental to IID Transfer water supply and the Carlsbad Desalination plant; these are a subset of SDCWA’s overall functional supply costs. The overall supply costs for the Water Authority, include the Tier 1 full service water rate payments made to MWD for purchase of MWD water (currently the total of MWD’s Tier 1 supply rate, system access rate, system power rate, and water stewardship charge), the cost of payments made to IID for transferred water under the IID/SDCWA Agreement for Transfer of Conserved Water plus the payments made to MWD for transportation of that water to the Water Authority service territory under the Exchange Agreement, the payments made for desalinated water under the Water Authority/Poseidon Water Purchase Agreement, and certain other costs of water. Because the Water Authority provides both treated and untreated water, its functional supply costs, by definition, exclude other functional costs such as the functional cost of treatment. The Water Authority’s functional cost categories are currently described in Water Authority Administrative Code section 5.00.050 and Water Authority Ordinance No. 2014-01.
Supply Reliability Charge \[= \left[ (\text{Desalination Water Cost} + \text{IID Water Transfer Cost}) - \text{MWD Tier 1 Equivalent Cost} \right] \times 25\%
\]

Desalination Water Cost \[= (\text{Water Purchase Agreement Contract Price}^4 - \text{Melded Treatment Rate}) \times \text{Desalination Deliveries}\]

IID Water Transfer Cost \[= (\text{IID Water Contract Price} + \text{MWD Transportation Rate}) \times \text{IID Water Deliveries}\]

MWD Tier 1 Equivalent Cost \[= (\text{MWD Tier 1 Full Service Untreated Rate} \times \text{Total Reliability Deliveries})\]

Total Reliability Deliveries \[= \text{Desalination Deliveries} + \text{IID Water Transfer Deliveries}\]

As used in this formula, Desalination Deliveries are 42,000 AF/Y and IID Water Transfer Deliveries are 100,000 AF/Y in 2016 and ramp up to 200,000 AF/Y according to the transfer schedule in the Transfer Agreement.

The revenue generated from this charge will only be applied to the supply revenue requirement prior to determining the volumetric Melded Supply Rate. This charge will be allocated to member agencies based on a five year rolling average of applicable historical water deliveries\(^5\). This charge will be zero when MWD’s Tier 1 costs are equal or greater than the combined Desalination and IID Water Transfer Costs.

Criteria for Evaluation of the Supply Reliability Charge

This independent review will use the CUWA Public Investment Principles in its analysis of the Supply Reliability Charge. These principles were the product of a multiple agency working group at the California Urban Water Agencies and includes the following principles for publicly financed water projects:\(^6\)

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\(^4\) The desalinated water contract price includes the following components:
- WPA Article 17.4 Capital Charges
  - (Debt Service Charge + Equity Return Charge)
- WPA Article 17.5 Operating Charge
  - (Fixed Operating Charge + Variable Operating Charge)
- WPA Article 17.6 Electricity Charge
  - (Fixed Electricity Charge + Variable Electricity Charge)
- WPA Article 8.14 Poseidon Management Fee
  - (Annual Management Fee)

\(^5\) A & N Technical Services has been informed by Water Authority staff that discussions regarding the future of the Transitional Special Agricultural Water Rate (TSAWR) are ongoing and may impact the allocation of the charge to member agencies.

\(^6\) See the CUWA Public Investment White Papers found at http://www.cuwa.org.
1. Inclusive of all beneficiaries
2. A clear nexus between charges and benefits received
3. Specificity, based on defined projects and costs
4. Transparency of benefit and cost allocation decisions, understandable to beneficiaries funding the efforts
5. Strict dedication of funds
6. Reasonable assurances that benefits will be delivered

AWWA Manual M1. On Rate Making Objectives: Accurate attribution of costs of service is not the only objective of water utility ratemaking. Derived from Bonbright et al. (1961, 1988) the Principles of Water Rates, Fees, and Charges, AWWA Manual M1, Sixth Edition (2012, p. 4) provides a more complete list of typical ratemaking objectives:

- Effectiveness in yielding total revenue requirements (full cost recovery)
- Revenue stability and predictability
- Stability and predictability of the rates themselves from unexpected or adverse changes
- Promotion of efficient resource use (conservation and efficient use)
- Fairness in the appointment of total costs of service among the different ratepayers
- Avoidance of undue discrimination (subsidies) within the rates
- Dynamic efficiency in responding to changing supply and demand patterns
- Freedom from controversies as to proper interpretation of the rates
- Simple and easy to understand
- Simple to administer
- Legal and defendable

Analysis

The Supply Reliability Charge reasonably comports with the CUWA principles cited above. The charge is inclusive of all customers that have recently taken SDCWA deliveries and could reasonably be expected to benefit from highly reliable incremental water supplies. There is a clear nexus between this fixed charge and the benefits of highly reliable incremental supplies received by SDCWA customers. The charge is quite specific, being based on two incremental water supplies (Carlsbad Desalination and IID Transfer) defined by contract and imported supplies from MWD (though currently non-contractual, these supply costs are specific.) The multiple year public process (Board hearings, Board Fiscal Sustainability Task Force, Member Agency Managers Workgroup, and public outreach) have provided transparency of benefit and cost allocation deliberation with ample opportunity to improve understanding to SDCWA member agencies and their customers (beneficiaries) about the funding of these highly reliable incremental water supplies. Funds collected from the charge are dedicated to recovering a
subset of functional supply costs and cannot be used for other purposes. The contracts for incremental supplies provide reasonable *assurances* that the benefits of highly reliable incremental supplies will be delivered.

The *Supply Reliability Charge* makes reasonable tradeoffs among cost-of-service-based ratemaking objectives cited above.

*Precedence for Fixed Charges.* The concept of levying fixed charges to recover the costs required for the capacity to deliver public service has a long history (Dupuit, 1844 and more recently Kahn, 1991) and is familiar to anyone who has paid access, standby, or “demand” capacity charges.
Bibliography


Fiscal Sustainability Guiding Principles

The following Guiding Principles have been defined to aid the Board and staff when recommending new or changes to the Water Authority’s rates and charges structure, or financial policies, with the objective of ensuring the long term fiscal sustainability of the Water Authority.

These Guiding Principles shall:

A. Contribute to maintaining a AA+ or better credit rating:
   - Maintaining a strong credit rating lowers interest cost, increases access to credit markets which gives greater flexibility to respond to market changes, and increases affordability
   - Fundamental Strengths are not cost driven and are a mixture of
     - Board willingness to make tough rate decisions
     - Proven history of doing what we say we will do
     - Strong financial management and policies
   - Measured by the following metrics:
     - Debt Service Coverage Ratio (DSCR)
     - Reserve Policies
     - Cash on Hand
     - Appropriate Fixed Revenue to Fixed Cost %

B. Adhere to Industry Cost of Service Principles:
   - Must generate sufficient revenue to pay O&M expenses, costs of development and perpetuation of the system, and preservation of the utility’s financial integrity (reserves, debt service coverage)
   - Benefits bear a fair, reasonable, and logical relationship to burdens

C. Ensure all beneficiaries of services pay a fair share of costs:
   - Nexus between level of service and cost of service
   - Availability of system and supply
   - Different customers generate different costs based on their pattern of use or demand (i.e. peaking, IID, other). Each customer group pays its own way – No free-ridership

D. Provide Equity for all Member Agencies:
   - Fairness between and among Member Agencies in the short and long-term
   - Ensure all regional interests are considered including those of the Water Authority and its member agencies

E. Result in the consistent application of Board rate-setting and other financial policies:
   - Board has adopted comprehensive rate-setting and financial management policies which support fiscal sustainability. These policies need be applied consistently in future decision making
F. **Support intergenerational equity:**
   • Water infrastructure assets have very long useful lives, some estimated at 100 years, both current and future users benefit
   • There must be a proper funding mix of cash funding (existing users) and debt financing (future users) which results in a shared responsibility between current and future users

G. **Result in an appropriate level of fixed revenues for fixed obligations:**
   • There should be a fixed revenue stream for a fixed obligation which takes into consideration reducing rate volatility, incorporating beneficiaries pay principles, member agency equity, and intergenerational equity

H. **Consider our dynamic environment:**
   • Take into account the variability in long term weather patterns, supply availability and the changing nature of Water Authority and member agency water supply planning as well as future regulatory requirements

I. **Maintain or enhance our fundamental mission:**
   • The Water Authority’s fundamental mission is to provide its member agencies with a safe and reliable water supply. Additionally, our statutory obligation is to provide member agencies “with adequate supplies of water to meet their expanding and increasing needs”

J. **Fulfill all Legal Requirements:**
   • State legal cost of service requirements
   • County Water Authority Act
   • Board Policies and Administrative Code

K. **Be consistent in the Water Authority’s position on rate setting and fiscal sustainability here and at MWD**
March 18, 2015

Attention: Board of Directors

General Counsel’s Report – February/March 2015

Purpose
This report discusses certain legal matters receiving attention during the months of February/March 2015.

Significant Developments in Pending Litigation

MWD Rate Cases
2010, 2012 Rate Cases: Judge Karnow initially set the Phase II trial for three days—March 30, April 1, and April 2, 2015—at the December 2, 2014 case management conference (CMC). At that time, he noted that this trial schedule was not final and that MWD had requested more time. At the most recent CMC on February 26, 2015, after MWD repeated its requests for more time, Judge Karnow scheduled four additional potential days for trial, on April 27-30, 2015, for a total of seven trial days. In a subsequent March 3, 2015 order, Judge Karnow set time limits of 9 hours for the Water Authority’s case and 12 hours for MWD’s case. He noted that this meant the trial should be completed in five total trial days, or by April 28, 2015, though he kept April 29-30 on his calendar in case of unforeseen circumstances. He noted that this extended schedule was a compromise between MWD’s claim of a need for more time and the Water Authority’s arguments that MWD’s trial proposal featured duplicative witnesses and focused on largely irrelevant issues.

The Phase II trial will resolve all the remaining issues in the case: the Water Authority’s claim for breach of contract and damages, MWD’s affirmative defenses, and the Water Authority’s preferential rights claim. Judge Karnow again stated his strong desire to get the remaining issues in the case tried quickly so the parties can proceed to the Court of Appeal.

2014 Rate Case: The new case filed on May 30, 2014 challenging MWD’s 2014 rate setting has been transferred to San Francisco Superior Court, assigned to Judge Karnow, and stayed for the time being by stipulation of the parties. The Water Authority has the option of moving to lift the stay at any time, or leaving the stay in place pending final resolution of the 2010 and 2012 cases.

CEQA Litigation
The Court has established the following briefing schedule: Coastkeeper’s statement of issues – January 30, 2015; Coastkeeper’s Opening Brief – March 20, 2015; Water Authority’s Opposition...
Brief – June 12, 2015; Coastkeeper’s Reply Brief – July 10, 2015. Hearing has been set for July 21, 2015. The parties agreed that the deadline for Coastkeeper’s opening brief would be extended to March 27. All other dates remain the same.

**Special Counsel Expenditures**

Funds approved for payments to special counsel during February/March 2015 from the General Counsel’s Operating Budget totaled $141,008.38 for work related to the Metropolitan rate dispute, San Vicente Pumped Storage Study, and San Diego Coastkeeper litigation. In addition, $11,341.00 was approved for payment from Colorado River Program’s Operating Budget for work related to QSA implementation. CIP expenditures during February/March 2015 were $290,475.95 for litigation expenses related to the San Vicente Tunnel Project (Traylor/Shea Joint Venture v. SDCWA) and the San Vicente Dam Raise Project (Shimmick/Obayashi Joint Venture v. SDCWA).

Prepared by: Daniel S. Hentschke

Attachment: Special Counsel Expenditure Report
<table>
<thead>
<tr>
<th>Special Counsel</th>
<th>Project</th>
<th>Total $ Expended FYs 12 &amp; 13 (Fees &amp; Costs)</th>
<th>OP Budget Invoices Approved for Payment this Period</th>
<th>CIP Budget Invoices Approved for Payment this Period</th>
<th>Total $ Expended FYs 14 &amp; 15 (Fees &amp; Costs)</th>
<th>Budget Allocation FYs 14 &amp; 15 for Legal Services $12,724,000.00</th>
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* Concluded matters or assignments.

1 These legal costs ($155,000 total) were reimbursed to the Water Authority by City of Los Angeles as part of the settlement in SDCWA v City of LADWP.

2 These legal costs ($95,808.26 total) were reimbursed to the Water Authority by Eastern Municipal Water District as part of the settlement in SDCWA v EMWD.

3 Not included in totals, these legal expenses related to QSA came out of Colorado River Program budget, not GC budget.

4 Not included in totals, these legal expenses related to San Vicente came out of Engineering budget, not GC budget.

5 Not included in totals, these legal expenses related to desalination came out of Water Resources budget, not GC budget.

6 Not included in totals, these legal expenses related to personnel issues/labor negotiations came out of Human Resources budget, not GC budget.

7 Not included in totals, these legal expenses related to bond counsel services came out of Finance budget, not GC budget.
<table>
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March 18, 2015

Attention: Board of Directors

CLOSED SESSION:
Public Employee Performance Evaluation
Government Code §54957 - Title: General Counsel

Conference with Labor Negotiators, Government Code §54957.6
Designated Board Representatives: Chair, Vice-Chair, Secretary
Unrepresented Employee: General Counsel

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §§54957 and 54957.6, at the formal board meeting of March 26, 2015.

Prepared by: Daniel S. Hentschke, General Counsel