More than 600 elected officials, dignitaries and community leaders celebrated the dedication of the Claude ‘Bud’ Lewis Seawater Desalination Plant on December 14, 2015. Maureen Stapleton, Poseidon CEO Carlos Riva, Board Chair Mark Weston and Poseidon Vice-President Peter MacLaggan are pictured in front of the ceremonial wheel used to ‘deliver’ Pacific on Tap to the region.
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 January 28, 2016** the afternoon session of Standing Committees may commence at the conclusion of the morning session and earlier than **1:00 p.m.** Please see the meeting schedule. The meeting of 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. Items receiving substantive review by a standing committee are generally included on the Consent Calendar for action at the meeting of full Board. 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 online at [www.sdcwa.org](http://www.sdcwa.org) or at the Water Authority Headquarters.
## MEETING SCHEDULE
### JANUARY 28, 2016

### MORNING SESSION
- **9:00 a.m. to 12:00 p.m.**
  - Imported Water Committee
    - Estimated time: 1 hour 55 minutes
  - Water Planning Committee
    - Estimated time: 1 hour

### LUNCHEON FOR DIRECTORS
- **12:00 p.m. to 1:00 p.m.**

### AFTERNOON SESSION
- **1:00 p.m. to 3:00 p.m.**
  - Engineering & Operations Committee
    - Estimated time: 40 minutes
  - Administrative & Finance Committee
    - Estimated time: 30 minutes
  - Legislation, Conservation & Outreach Committee
    - Estimated time: 35 minutes

### FORMAL BOARD MEETING
- **3:00 p.m.**

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*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.*
IMPORTED WATER COMMITTEE

AGENDA FOR

JANUARY 28, 2016

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

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/PRESENTATION

1. MWD issues and activities update.
   1-A Metropolitan Water District Delegates report. (Discussion) (Supplemental Materials) MWD Delegates

2. Colorado River programs.
   2-A Colorado River Board Representative’s report. (Discussion) Doug Wilson
III. INFORMATION

1. Metropolitan Water District Program Report.  
   Amy Chen

IV. CLOSED SESSION

1. 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  
   James Taylor

2. 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  
   James Taylor

3. Conference with Legal Counsel – Anticipated Litigation  
   Government Code §54956.9(d)(4)  
   Potential Initiation of Litigation / One Case / MWD Forced Water Deliveries  
   James Taylor

4. Conference with Legal Counsel – Existing Litigation  
   Government Code §54956.9(d)(1)  
   Name of Case: QSA Judicial Council Coordination Proceeding No. 4353  
   James Taylor

V. ADJOURNMENT

Melinda Cogle  
Clerk of the Board

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 (Revised). 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.
January 20, 2016

Attention: Imported Water Committee


Purpose
This information item provides a progress report on the Imported Water Committee Work Plan for calendar years 2015 and 2016.

Background
Previous Board action: On March 26, 2015, the Board adopted the Imported Water Committee Work Plan for calendar years 2015 and 2016.

Discussion
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 this year, the committee expects to review, discuss, and make decisions pertaining to these matters.

The attached report lists the Imported Water Committee Work Plan for calendar years 2015 and 2016 and provides an update on the activities taken to achieve the work plan. The work plan was prepared under the direction of the Imported Water Committee Chair and Vice Chairs. A final report on the work plan will be provided to the Board in December 2016.

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:

1. Progress Report on the Committee Work Plan
Progress Report on the 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)

   Activities
   The Board adopted Bay-Delta principles in February 2012, and incorporated them as part of the 2015 Legislative Policy Guidelines (November 2014) and the 2016 Legislative Policy Guidelines (December 2015).

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)

   Activities
   The Committee received updates on Bay-Delta activities through Bay-Delta, monthly Delegates and MWD Program reports, other reports and letters (ongoing). During the August 2015 Committee meeting, John Laird (Secretary, California Natural Resources Agency) and Karla Nemeth (Deputy Secretary for Water Policy, California Natural Resources Agency) were invited to address the Committee on issues pertaining to the Bay Delta Conservation Plan and the California WaterFix and California Eco Restore. One central issue the Water Authority had on the BDCP was the lack of specificity on how much water the San Diego region would gain from the project and how much would it cost its ratepayers. Deputy Secretary Nemeth made it clear that the state would not ask any agency to “support a project when it does not yet have a financing plan and complete understanding of the cost.”

   Staff reviewed the BDCP/Cal WaterFix Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental Impact Statement, which was released for a 51-day public review and comment period commencing on July 10, 2015. The committee received staff’s findings on the BDCP/Cal WaterFix Partially Recirculated DEIR/DEIS (September 2015) and heard a presentation on the Water Authority’s comment letter (October 2015). Upon the Board’s review of the letter, staff submitted a formal BDCP/California Water Fix comment letter by the October 30, 2015 deadline.

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)
Activities
The Committee received a report on the State Water Project Contractors Authority’s efforts to finance the planning, environmental design, and pre-construction phases of the BDCP (February 2015). The Committee also received a copy the State Treasurer’s assessment of the affordability and financing considerations of the Bay Delta Conveyance Facility and heard a report on the impact of the assessment’s findings to the Water Authority (April 2015). Finally, the Committee received a presentation on the potential cost impact of the BDCP/Cal WaterFix to the Water Authority (December 2015).

Colorado River Supplies
1. Work with the Colorado River Subcommittee 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)

Activities
The Colorado River Subcommittee met quarterly to discuss issues related to the QSA, IID water transfer, and canal lining projects (January, April, July, and October 2015). The Subcommittee received updates on activities related to the Colorado River Board (CRB) from its members who serve on the CRB’s Board as vice-chair and alternate.

Members of the Committee and its Subcommittee participated in the following legislative advocacy trips to discuss QSA Implementation, the IID petition filed with the State Water Resources Control Board (SWRCB), and the Salton Sea:

- Met with legislative leadership, representatives of the Governor’s office, and key Administration officials in Sacramento (February 2015)
- Met with the San Diego legislative delegation, representatives of the Imperial Valley legislative delegation, and legislative leadership in Sacramento (May 2015).
- In conjunction with the San Diego Regional Chamber of Commerce, met with representatives of the San Diego congressional delegation and Administration officials in Washington, D.C. (September 2015).

Members of the Subcommittee also attended an Imperial Valley farm tour (January 2015), the 2015 Colorado River Symposium (September 2015), the Association of California Water Agencies conference (May 2015), and the Colorado River Water Users Association conference (December 2015). Additionally, various Subcommittee members met with representatives from the IID, County of Imperial, and Coachella Valley Water District in an effort to continue to build board-to-board relationships.

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)

Activities
The Board authorized the General Manager to accept the Wister Sport Fishery Project as
complete and to file a notice of completion (January 2015). Construction of the project was required mitigation for both the All American Canal and the Coachella Canal Lining Projects.

The Committee received a status update on mitigation measures required to be implemented as part of the Coachella Canal Lining Project, and the Board approved a five year as-needed professional services contract for up to $3 million for environmental services for post construction mitigation projects (June 2015).

The Committee received an update on the QSA Joint Powers Authority (JPA) modification to its agency payment schedules to fund projected environmental mitigation measures (June 2015). The Water Authority’s $10 million share of the total $40.5 million advance will result in a nominal savings to the Water Authority of $4.6 million over the seven year payment schedule.

The Water Authority continued its active participation in the Lower Colorado River Multi Species Conservation Program (LCR MSCP) for on-river environmental mitigation associated with the water transfer and canal lining water change in point of diversion.

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)

**Activities**

The Subcommittee received updates on efforts related to binational desalination projects, including participation in binational workgroups.

At the request of the Committee Vice-Chair, the Colorado River Program Director provided an update on binational activities to the San Diego Association of Governments Boarder Committee (July 2015).

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)

**Activities**

Members of the Committee participated in legislative advocacy trips to discuss the Salton Sea in Sacramento (February and May 2015) and in Washington, D.C., (September 2015). (See Colorado River Supplies #1 for more discussion related to the meetings).

A member of the Subcommittee, the Chair of the Board attended the SWRCB’s public workshop on the status of the Salton Sea (March 2015). The Water Authority provided both oral and written comments advocating for the creation of a task force and development of a restoration plan with associated funding. The Water Authority submitted similar comments to Little Hoover Commission at its public hearing regarding Salton Sea mitigation and restoration (April 2015).
A Salton Sea Task Force was developed by the Governor’s Office, and members of the Committee met with the task force in Sacramento to share the Water Authority’s perspectives regarding near-term, intermediate-term, and long-term Salton Sea restoration objectives and plans (May 2015).

The Water Authority participated on a panel before the Assembly Select Committee on Renewable Energy Development and Restoration of the Salton Sea to share the Water Authority’s perspectives regarding Salton Sea restoration (June 2015).

At its regular meetings, the Committee received updates on the Governor’s Salton Sea Task Force (July 2015), and a status update on Salton Sea activities (December 2015).

**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)

**Activities**

The Committee received information related to regional water supply reliability and quality through monthly MWD Program and Delegates reports, such as an update on MWD storage programs and the potential allocation scenarios (March 2015). The Committee also received an update on MWD’s 2015 Integrated Resources Plan (August 2015) and heard from Deven Upadhyay, Water Resources Management Group Manager at MWD, on the Integrated Resources Plan process (September 2015).

As part of the Water Authority’s Delegates’ Report, the Committee was copied on letters related to: MWD’s water supply management strategies, including use of storage supplies (March 2015); the Delegates’ concerns regarding CEQA compliance associated with an amendment to the California Agreement for the Creation and Delivery of Extraordinary Conservation Intentionally Created Surplus; increasing the maximum amount of conserved water IID could store in MWD’s facilities for a three-year term (August 2015); and MWD’s potential recycled water program in conjunction with Los Angeles County Sanitation Districts (September 2015).

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)

**Activities**

The Committee heard a report on MWD’s mid-term biennial budget and financial review (July 2015). The Committee also received copies of letters between the Water Authority Delegates and MWD related to:

- Execution and distribution of MWD’s Official Statement (March 2015 and June 2015);
- Fixing and adopting a readiness-to-serve-charge and a capacity charge for calendar year 2016 (April 2015);
- Continuing MWD water standby charge for fiscal year 2016 (May 2015);
• Funding for MWD’s conservation incentives and implementation of modifications to MWD’s turf removal program (January 2015, May 2015);
• Resolution for reimbursement using bond proceeds for Capital Investment Plan projects (July 2015);
• Establishment of the fiscal year 2015 ad valorem tax rate (August 2015);
• Use of revenue bonds in the aggregate principal amount of $500 million (October 2015); and
• Adoption of the Twenty-First Supplemental Resolution to the Master Revenue Bond Resolution, which authorizes the sale of up to $250 million of Water Revenue Bonds (November 2015).

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)

**Activities**
As a result of low water demands, this item was deferred. The Committee received an update on the Water Authority’s two out-of-region groundwater storage programs (December 2015).

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)

**Activities**
The Committee received updates on the rate litigation in closed session. A final trial court judgment was entered on November 18, 2015 affirming the Water Authority’s victory in both phases of the rate litigation – invalidation of MWD’s rates for 2011, 2012, 2013 and 2014, damages award, and calculation of Water Authority’s preferential rights to MWD water.

Based on staff recommendations, the Board approved the following agreements with:
• M Strategic Communications for continued consulting services (January 2015 and December 2015)
• SCN Strategies for continued consulting services (April 2015)
• Southwest Strategies for continued consulting services (April 2015)
• Brownstein Hyatt Farber Schreck, LLP for special counsel services (June 2015)

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)

**Activities**
The Board of Directors adopted the 2015 and 2016 Legislative Policy Guidelines, which continued the board’s position to oppose legislation that transfers ownership, operation or control of the State Water Project or any of its facilities to MWD, the State Water Project
Contractors, Central Valley Project Contractors, the State and Federal Contractors Water Agency, or any entity composed of MWD or other water project contractors (Legislative, Conservation and Outreach Committee in November 2014 and December 2015). The Committee received reports on Department of Water Resources and State Water Project operations through monthly MWD Program and Delegates reports (Ongoing).

**Other Items**

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

**Activities**

The Committee received a report on the “State Treasurer’s Assessment of the Affordability and Financing Considerations of the Bay Delta Conveyance Facility” (April 2015). The report included a discussion on the comparison of supply options, particularly water supply and programs available to help meet San Diego County’s water supply demands.
January 20, 2016

Attention: Imported Water Committee

Metropolitan Water District Integrated Water Resources Plan update. (Discussion)

Purpose
To provide an update on Metropolitan Water District’s (MWD) Integrated Water Resources Plan (IRP) 2015 Update Report. MWD’s January 2016 report can be accessed at:
with appendices found here:
https://www.mwdwatertomorrow.com/sites/default/files/presentations/011216_IRP_Appendices.pdf

Background
MWD began the 2015 update of its 2010 Integrated Resources Plan (IRP) in March 2015. Different from past IRP update processes, MWD said that it would manage the 2015 update in a bifurcated, two-part fashion: first, a technical update phase, followed by a Board policy phase. The technical Phase 1 was conducted by MWD staff and consultants working with MWD member agency staff, and included various presentations and "experts" who addressed the Board on various topics (e.g., climate change) at its Integrated Resources Planning Committee. The technical phase also included one public workshop. The Technical Report developed during Phase 1 was scheduled to be presented to the MWD Board at its January 12, 2016 meeting. Changing course in December 2015, staff instead presented a final proposed 2015 IRP Update for approval by the Board in January 2016, thus eliminating Phase 2 entirely, in which the board members were scheduled to begin its review and deliberation of the IRP Update before adoption of the IRP update. MWD's media statements following its January 2016 Board meeting described the MWD Board's action as adoption of the IRP, acknowledging only in a closing statement that the MWD Board had yet to consider the many policy and oversight issues properly within the province of the Board. A number of MWD board members expressed some concern during the January IRP committee meeting (as the Water Authority's representatives did) that Phase 2 of the IRP process had essentially been aborted by MWD staff. MWD staff said that Board discussions will continue to be scheduled on the IRP after it is adopted; however, staff stated that the review and oversight will be limited to "implementation" issues focused only on how to achieve and pay for the water supply development "targets" that have been established by staff in the IRP Update.

Discussion
The MWD staff's 2015 IRP report calculated water supply development "targets" based on the IRP’s past reliability objectives, including a core objective of providing 100 percent reliability 100 percent of the time under all hydrologic conditions, and, assuming a "do nothing" baseline (i.e., assume no new water supplies are being developed). The supply targets were calculated on the probability of allocating MWD water based on historic hydrology. The analysis assumes MWD will allocate water when demand exceeds supplies and dry-year storage reserves dip below 1 million acre-feet. Among many other shortcomings, the 2015 IRP update does not consider important policy issues, including:
• Whether the IRP’s reliability goal makes sense under current, changed conditions;
• Near term and long term impacts of local water supply development that will permanently reduce demand for MWD water; and
• Financial implications of the 2015 IRP resource development targets, and how associated rates may impact demand for MWD water.

Attachment 1 provides an overview of the Water Authority's questions and concerns regarding the 2015 IRP’s forecasts and analysis, what data the current report lacks, and key policy issues.

2015 IRP Recommendations
The 2015 IRP update continued the 2010 IRP’s “Adaptive Management” strategy,1 using the same tactics but changing labels. The 2010 IRP’s Core Resources Strategy is now titled the “IRP Approach” in the 2015 update. The IRP Approach sets new targets for imported and local supplies, and conservation, driven by a number of staff assumptions without empirical support. Under the IRP Approach, MWD assumes current baseline Colorado River diversions while developing dry-year programs to fill the Colorado River Aqueduct as needed. For State Water Project (SWP) supplies, rather than utilizing current operations as the baseline, the IRP Approach assumes SWP operations are limited by environmental regulations that do not exist. These assumptions lead the IRP Approach to establish water supply development targets of 180,000 acre-feet and 20,000 acre-feet, for conservation2 and local supplies, respectively. MWD projects a nine percent and four percent probability of allocating supplies in 2020 and 2025, respectively, even with implementation of the IRP Approach. The chance of allocation is attributed to the fact that MWD’s storage reserves are low, but mainly result from other staff assumptions, namely:

• An assumption that there will be an immediate reduction of SWP supplies under nonexistent regulations while the California WaterFix is constructed;
• Groundwater production is assumed to be reduced by more than 140,000 acre-feet annually; and
• Member agencies’ local water supply development is assumed to be limited to 20,000 acre-feet annually, out of the regional potential of more than 1.4 million acre-feet.

In addition to the supplies identified under the IRP Approach, the 2015 IRP recommends the development of an additional 200,000 acre-feet of local supplies and conservation to mitigate, or "buffer," potential risks and uncertainties. The 2015 IRP also recommends the implementation of “Future Supply Actions,” which are “preparatory actions” intended to reduce barriers to implementing local resources. Future Supply Actions are proposed to be taken separate and apart from the 100 percent supply reliability and "buffer" supplies already included in the core, IRP Approach and buffer categories. Although described as an “adaptive management approach,” the 2015 IRP update contains no criteria or triggers to assess and adjust for supply developments. This characterizes the staff's "do everything" approach to supply planning that

1 The 2010 IRP’s adaptive management approach was a three-pronged strategy composed of the “Core Resources Strategy,” “Uncertainty Buffer,” and “Foundational Actions.”
2 MWD plans to accomplish this target through enhancing landscape water use efficiency.
fails to factor in or take into account local resource plans of its member agencies and the Board's affordability objective in the development of the IRP.

**More Analysis Required**

Available data does not support the IRP update analysis or the staff recommendations for MWD water supply development targets. Supporting information for many of the assumptions building the 2015 IRP’s demand and supply forecasts is missing, unreasonable or inaccurate. For example, what is the basis for MWD’s assumption the region can only achieve 50 percent Model Water Efficient Landscape Ordinance (MWELO) compliance without additional efforts? What is the policy basis for MWD to assume the responsibility for compliance? Additionally, the 2015 IRP shows an increase in overall replenishment demand, yet at the same time, it forecasts an annual decrease in groundwater production by more than 140,000 acre-feet. It also fails to factor in the project MWD is undertaking with the Los Angeles County Sanitation Districts to replenish groundwater basins in Los Angeles, Orange and Riverside counties, a project that is estimated at a cost in excess of $3 billion to develop more than 165,000 acre-feet of water annually. Finally, member agency local projects in advanced planning stages, including some with authorized funding and completed environmental review, that are projected to produce more than 200,000 acre-feet annually are omitted from the staff analysis of demand for MWD water. Without further explanation of the 2015 IRP’s assumptions, it appears MWD is greatly overestimating demands and underestimating local supplies, artificially inflating the need for MWD to develop and pay for additional water supplies.

Assuming "IRP Approach" implementation, and if member agencies concurrently implement only 50 percent of local projects that are in advanced planning stages that are not included in the IRP Approach calculation of demand, MWD will have a flat demand at best over the 25-year 2015 IRP planning horizon. If local agencies develop more than 50 percent of these projects and produce groundwater at historic levels, MWD demands will actually **decline** over the planning horizon.

Although the 2015 IRP calls to continue the 2010 IRP’s “adaptive management” approach, it is vague about how MWD would adapt to changing conditions. Trigger point analysis of how and when project development would be dialed up or down is missing. The 2015 IRP also lacks analysis of member agencies’ reliance on MWD under different hydrologic conditions, including wet and dry years, and how MWD’s supplies are planned to be used to meet the needs of its member agencies under these conditions.

Finally, and critically, no financial analysis is provided in the 2015 IRP addressing the impact of rising rates on demand for MWD water, impact of spending levels on MWD water rates, or likelihood of stranded investments. Had the MWD Board demanded an opportunity to review and deliberate the many assumptions contained in the IRP and the financial impacts associated with the spending necessary to support its implementation, a different result may have been reached. Additional issues to be addressed are understanding what is actually driving the demand for MWD water (so that costs may be allocated accordingly during MWD rate-setting)

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3 Member agencies identified an additional almost 500,000 acre-feet of local resource projects that are in feasibility or conceptual stages.

4 The 2015 IRP provides the cost ranges of some local supplies.
and development of a long range financial plan connecting MWD’s rates and financial management to the 2015 IRP’s targets.

**Next Steps**
MWD has said that it is planning to hold policy discussions related to the 2015 IRP’s implementation starting in February and March 2016 with background presentations on past IRP policy deliberations and their processes. An April Board retreat is also being planned. The Water Authority’s Delegates will continue to actively engage in the discourse and raise the issues and concerns identified in this memo. The Delegates submitted a letter to MWD with comments on the 2015 IRP’s analysis and a recommendation not to adopt the 2015 IRP technical report at this time (Attachment 2) since the Board had no opportunity to review its assumptions or deliberate the many Board policy issues that should be involved in adoption of MWD's principal long term planning document.

Prepared by: Liz Mendelson-Goossens, Water Resources Specialist
Reviewed by: Amy Chen, Director of MWD Program
Approved by: Dennis Cushman, Assistant General Manager

Attachment 1: Analysis of MWD 2015 Integrated Water Resources Plan Update
Attachment 2: Water Authority Delegates' January 10, 2016 Letter to MWD on adoption of the 2015 Integrated Water Resources Plan Update
Summary
In January 2016, the MWD Board adopted the 2015 Integrated Water Resources Plan (IRP) update. At the beginning of 2015 IRP update process, MWD stated that the update would consist of two parts: a technical update and a policy discussion. Although the first phase of the process was described as limited to the technical data collection phase, the report presented to the Board includes recommendations on supply targets to meet a reliability goal of meeting 100 percent of retail demands under all hydrologic conditions.\(^1\) To reach that level of reliability, the 2015 IRP established the following resource development targets by 2040:

- 180,000 acre-feet of conservation;
- 20,000 acre-feet local resources development;
- State Water Project actions, in the near-term, to “manage flow and export regulations,” while achieving “a successful outcome in the California WaterFix” in the long-term;
- Colorado River Aqueduct actions to “maintain current levels of water supplies from existing programs, while also developing flexibility through dry-year programs and storage;” and
- 200,000 acre-feet of additional buffer supplies to mitigate “the risk in local supply development.”

Background
MWD’s IRP is intended to be a regional planning document that guides the Board’s water supply development and water management policies and projects. Following the prolonged drought in the early 1990s, which severely impacted MWD’s ability to deliver imported water to its member agencies, MWD undertook a process that involved its member agencies and selected stakeholder groups to explore strategies to meet projected demands over a 25-year horizon. That effort led to MWD’s adoption of its first IRP in 1996, which identified a set of specific resource development goals for both imported and local supplies including conservation to meet projected demands.

Blue Ribbon Task Force
Parallel to the first IRP process, the Board formed a Blue Ribbon Task Force (Task Force) composed of regional community, business, and academic leaders to review MWD’s business practices and operational policies, including those related to the IRP. The Task Force was intended to provide MWD with “a fresh perspective on [its] business practices, identify different solutions to problems, and create a better public understanding of [its] operations.” The Task Force completed a report prior to the adoption of the 1996 IRP, which made several recommendations to ensure successful implementation of its IRP.\(^2\) Many of the recommendations remain highly relevant today and should have been considered in the 2015 update. For example, the Task Force recognized that the IRP’s reliability goal as a policy issue, and highlighted that the level of reliability that the goal establishes should be determined in conjunction with an

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\(^1\) “The 2015 IRP Update sets out a plan of reliability targets and Future Supply Actions to collectively balance supplies and demands under foreseeable conditions and risks, and prepare the region to adapt to an uncertain future,” page 5-1 of the 2015 IRP Technical Report.

understanding of the costs that must be incurred for each additional increment of reliability.\textsuperscript{3} Noting that additional investments in reliability may impact future water rates, the report cautioned that these investments may “dramatically” increase water rates, which in turn may drive down demand, rendering the investments unnecessary and potentially stranded. The report concluded that “reliability, cost, and demand are all interdependent and should be treated that way in the IRP and rate structure reform processes.”

\textit{1996 IRP}
MWD’s first IRP established supply development strategies for imported and local supply development to meet the reliability objective to “provide all of the firm wholesale water demands to its member agencies in 98 out of 100 years, and only in the remaining years consider implementing a shortage allocation plan.” It also set out the following six objectives for the IRP:
- Acknowledge environmental and institutional constraints; and ensure:
  - Reliability;
  - Affordability;
  - Water quality;
  - Diversity; and
  - Flexibility.

\textit{2004 IRP}
Referencing “uncertainties” in any planning process, the 2004 IRP added a 10 percent planning buffer of additional supplies to “provide for 100 percent reliability in 2020 and up to 2025.” It also increased reliance on water transfers and storage to fill supply gaps.

\textit{2010 IRP}
Due to court decisions and subsequent dry conditions, MWD imposed a supply allocation for the first time since its adoption of 1996 IRP for fiscal year 2010.\textsuperscript{4} With that backdrop, the 2010 IRP created a three-prong “adaptive management” approach to meet demands that included:
- Core Resources Strategy, designed to develop supplies that meet 100 percent of projected dry-year demands;
- Uncertainty Buffer, calling for development of additional supplies to mitigate “short-term” changes; and
- Foundational Actions, to prepare for potential development of additional water resources.

\textit{2015 IRP Update Process}
In March 2015, MWD began the third update to the IRP in the midst of a severe drought – and one month later, in April, the Board imposed its second supply allocation since the 1996 IRP for fiscal year 2016. Last August, the Water Authority Imported Water Committee (IWC) received a presentation on previous IRPs, the current 2015 IRP update process, and IRP-related policy

\textsuperscript{3} The Task Force pointed out that some of the agencies most supportive of MWD’s additional resource development were the same agencies with the most aggressive plans to reduce their reliance on MWD. The report suggested that “such agencies appear to want MWD to develop costly backup capacity – or insurance – for their local supply strategies, while seeking to shift the costs for these benefits onto MWD and other agencies and consumers.” The report also found that although member agencies may express support for these additional investments, once they are asked to commit funding for them, these same agencies may prefer a lower level of reliability with a more affordable price tag.

\textsuperscript{4} The allocation continued into fiscal year 2011 and terminated in April 2011.
issues. At the following month’s IWC meeting, MWD staff presented on the 2015 IRP update and the committee made comments to MWD staff about the IRP’s reliability goal, resource development targets, financial implications, potential to strand assets, and update process. These comments highlighted several policy and fiscal concerns, some echoing the ones identified in the Task Force Report.

Different from prior IRP updates, MWD stated that the 2015 process would be bifurcated into two parts: a technical update followed by a policy discussion. The technical portion would update supply and demand forecast data through workgroups with MWD member agency staff. Once the data was collected and analyzed, the Board would discuss policy issues such as reliability objectives, MWD’s approach to conservation, refinements to MWD’s and member agencies’ roles in local resource development, and MWD’s storage management strategy. The Board received reports on the technical update’s progress through staff presentations and expert briefings on various topics, and three “focused workshops.” One public workshop was held at MWD’s headquarters.

The MWD Board adopted the 2015 IRP report in January 2016, concluding the “technical” portion of the 2015 IRP update without policy discussions or debate. MWD stated that there are “remaining policy discussions that will be essential to guiding the development and maintenance of local supplies and conservation,” which will occur during Phase 2 of the update. But the policy issues identified by staff are limited to issues relating to implementation of the staff’s technical report and the IRP. It is unclear if broader policy issues such as MWD’s reliability objective and affordability of MWD water will be addressed at future board meetings or workshop, and whether such discussions could lead to changes in the IRP.

The 2015 IRP Update
MWD’s 2015 IRP technical report states that it has considered changed conditions since the 2010 IRP update, provides updated supply and demand forecasts, and “sets out a plan of reliability targets and Future Supply Actions to collectively balance supplies and demands under foreseeable conditions.”

Updated Demand and Supply Forecasts
The 2015 IRP discusses how supply and demand forecasts changed since the completion of the 2010 IRP. MWD highlights the recent unprecedented dry conditions and the correlating supply limitations, as well changed conditions that impact demands. To understand how MWD has calculated these changed conditions impact MWD’s supply and demand forecasts and how these

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6 These workshops focused on a “drought-proof strategy,” outdoor water conservation, and updated demographic projections provided by the Southern California Association of Governments and were held at MWD’s Union Station Headquarters in June, August, and September 2015, respectively. The 2015 IRP also uses demographic projections from the San Diego Association of Governments in its demand forecasting, but a workshop on these projections was not held.

7 Lowest State Water Project (SWP) allocation in history (5 percent in 2014) and the decline of groundwater basin levels of more than 1 million acre-feet since 2005. Basin levels dropped, in large part, due to reduced natural recharge (resulting from low precipitation).

8 Data from the 2010 Census showed that previous population growth projections were overestimated and the Great Recession (2007-2009) further slowed previously projected population and economic growth.
forecasts changed, analysis below compares the 2015 IRP to MWD’s 2010 Regional Urban Water Management Plan (RUWMP).  

**Demand Forecast Comparison**
The 2010 Census data and updated demographic forecasts caused the 2015 IRP retail demands to drop by about half a million acre-feet per year when compared to the 2010 RUWMP (Table 1). Due in part to State Water Resources Control Board’s recent emergency regulations, MWD service area’s current per capita water use has dropped significantly. In deriving the retail demands, MWD assumes a rebound of the per capita use in 2020.

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2010 RUWMP</strong></td>
<td>4,695,000</td>
<td>4,771,000</td>
<td>4,865,000</td>
<td>4,945,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update</strong></td>
<td>4,163,000</td>
<td>4,266,000</td>
<td>4,333,000</td>
<td>4,400,000</td>
<td>4,453,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(532,000)</td>
<td>(505,000)</td>
<td>(532,000)</td>
<td>(545,000)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Conservation Savings**
The updated population and economic growth numbers affect some of the conservation estimates previously made. The 2015 IRP reduced conservation savings forecasts in 2035 by about 273,000 acre-feet compared to the 2010 RUWMP, but it is unclear whether this reduction is entirely attributable to updated demographic forecasts. Even though the current drought resulted in unprecedented water use reductions, MWD projects these achievements will rebound by 2020, resulting in “more normal” per capita water use. The 2010 RUWMP included additional conservation savings that specifically reflected the 20 percent reduction in water use by 2020 as required by 2009’s Senate Bill X-7-7 (20x2020). The 2015 IRP conservation forecast includes savings from the recently updated Model Water Efficient Landscape Ordinance (MWELO), but assumes only 50 percent compliance, and embedded the 20x2020 requirements in its conservation forecast. Table 2 below shows a comparison between the two plans and added a calculation for conservation assuming 100 percent MWELO compliance.

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2010 RUWMP</strong></td>
<td>1,347,000</td>
<td>1,413,000</td>
<td>1,476,000</td>
<td>1,536,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update</strong></td>
<td>1,056,000</td>
<td>1,127,000</td>
<td>1,200,000</td>
<td>1,263,000</td>
<td>1,339,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(291,000)</td>
<td>(285,000)</td>
<td>(276,000)</td>
<td>(273,000)</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update Adjusted for 100% MWELO Compliance</strong></td>
<td>1,069,000</td>
<td>1,145,000</td>
<td>1,227,000</td>
<td>1,304,000</td>
<td>1,393,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(278,000)</td>
<td>(268,000)</td>
<td>(249,000)</td>
<td>(232,000)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The 2015 IRP projections for active conservation (achieved through MWD and its member agencies conservation programs) only include investments made through fiscal year 2016, meaning MWD assumes that no new investments will be made by it, or its member agencies, to improve water use efficiency after fiscal year 2016.

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9 For this comparison, the 2010 RUWMP was chosen rather than the 2010 IRP because the 2015 IRP demand and supply forecasts present information under “average-year” hydrologic conditions, while the 2010 IRP presented forecasts under dry conditions. The 2015 IRP forecast for 2040 is provided for reference, since the 2010 RUWMP contains forecasts only through 2035.

10 Lower population and economic growth reduced the water use efficiency that was projected to occur with higher economic and population growth.
Water Authority’s Colorado River Supplies
The 2015 IRP incorrectly includes the Water Authority’s independent Colorado River supplies and the Water Authority’s demand for those supplies in MWD’s portfolio. The analysis below corrects that error by properly accounting for them as local supplies. The Water Authority has objected many times to MWD’s continued practice of reporting the Water Authority’s Colorado River supplies this way because it has the effect of making the demand for MWD water supplies appear larger than it actually is.

Local Supplies
Reflecting the increase in local supply development, the 2015 IRP local supply forecast for existing projects increased by almost 70,000 acre-feet compared to the 2010 RUWMP (Table 3). Although the 2015 IRP shows more replenishment demands (106,000 acre-feet), it also shows lower groundwater production forecasts (143,000 acre-feet in 2035) with no explanation.

![Table 3. Comparison of 2010 RUWMP and 2015 IRP local supply forecasts for 2035 in acre-feet](image)

Colorado River Supply
To meet previous demands, MWD borrowed 287,000 acre-feet of water from the Southern Nevada Water Authority (SNWA). The 2015 IRP forecasts include MWD’s payback obligations to SNWA, starting with 5,000 acre-feet in 2035 and building to 10,000 acre-feet in 2040. As noted earlier, MWD improperly mischaracterizes the Water Authority’s Colorado River supplies in the 2015 IRP as part of its own portfolio; these supplies are not included in Table 4 below as supplies MWD needs to obtain. Although the 2015 IRP report described MWD’s various transfer and exchange programs (“flexible programs”) on the Colorado River, unlike the 2010 RUWMP, the 2015 IRP does not include most of these programs in its Colorado River supply forecast. Even though MWD made significant additional investments to obtain Colorado River water since 2010, including a recent land purchase in the Palo Verde Irrigation District service area, supplies resulting from these investments are not accounted for during average conditions. In 2035, the 2010 RUWMP forecast 954,000 acre-feet of Colorado River supplies it needs to maintain, while the 2015 IRP forecast 679,000, a decline of 275,000 acre-feet. See Table 4 for comparison.

---

1 The 2015 IRP only accounts for existing or under construction seawater desalination, groundwater recovery, and recycling projects. The increases reflect expected growth from these projects, rather than new projects (which is consistent with the 2010 RUWMP). The 2015 IRP also assumes existing and under construction projects will produce less water than their actual capacities (by about 6 percent in 2040) and that projects will be delayed beyond the online dates reported by member agencies. MWD staff said local project production is discounted and delayed because the history shows that local projects do not always perform at capacity or come online as planned. MWD staff appears not to have factored into this analysis that the higher price of MWD water is now driving local water supply development that will permanently replace demand for MWD water.
Table 4. Comparison of 2010 RUWMP and 2015 IRP Colorado River supply forecasts in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2010 RUWMP</strong></td>
<td>961,000</td>
<td>954,000</td>
<td>954,000</td>
<td>954,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update</strong></td>
<td>687,000</td>
<td>686,000</td>
<td>685,000</td>
<td>679,000</td>
<td>673,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(274,000)</td>
<td>(268,000)</td>
<td>(269,000)</td>
<td>(275,000)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

State Water Project Supply
Similar to the Colorado River supply forecasts, MWD excludes flexible supplies\(^{12}\) from its 2015 IRP projections for SWP supplies. The 2015 forecast also assumes SWP would be operated under more stringent regulations currently not in existence. In 2035, the 2015 IRP SWP projections are 241,000 acre-feet less than they were in the 2010 RUWMP (table 5).

Table 5. Comparison of the 2010 RUWMP and 2015 IRP SWP supply forecasts in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2010 RUWMP</strong></td>
<td>1,029,000</td>
<td>1,078,000</td>
<td>1,078,000</td>
<td>1,078,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update (Do Nothing)</strong></td>
<td>837,000</td>
<td>837,000</td>
<td>837,000</td>
<td>837,000</td>
<td>837,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(192,000)</td>
<td>(241,000)</td>
<td>(241,000)</td>
<td>(241,000)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

MWD Demand
The 2015 IRP MWD demand forecasts declined by more than 200,000 acre-feet in 2035 compared to the 2010 RUWMP (table 6). And, as noted earlier, this demand forecast factors in only 50 percent MWELO compliance.

Table 6. Comparison of 2010 RUWMP and 2015 IRP demand forecasts (after conservation) in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2010 RUWMP</strong></td>
<td>1,763,000</td>
<td>1,808,000</td>
<td>1,874,000</td>
<td>1,931,000</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>2015 IRP Update</strong></td>
<td>1,586,000</td>
<td>1,638,000</td>
<td>1,679,000</td>
<td>1,728,000</td>
<td>1,768,000</td>
</tr>
<tr>
<td><strong>Change from 2010 RUWMP</strong></td>
<td>(177,000)</td>
<td>(170,000)</td>
<td>(195,000)</td>
<td>(203,000)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Excluded from the 2015 IRP MWD demand forecasts is local supply development except for existing projects, projects that are now under construction or already exist and active conservation\(^{13}\) funded through fiscal year 2016. The 2015 IRP report’s Appendix 5 includes a list of the projects member agencies reported, which total more than 1.45 million acre-feet by 2040. Table 7 below shows these projects by categories and online date.

Table 7. Member agency local projects broken down by project type and online date

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing</strong></td>
<td>693,440</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Under Construction</strong></td>
<td>76,702</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Full Design &amp; Appropriated Funds</strong></td>
<td>34,291</td>
<td>34,030</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Advanced Planning (EIR/EIS Certified)</strong></td>
<td>131,238</td>
<td>6,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Feasibility Projects</strong></td>
<td>80,162</td>
<td>118,701</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Conceptual</strong></td>
<td>38,309</td>
<td>117,144</td>
<td>6,600</td>
<td>115,413</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,054,142</strong></td>
<td><strong>275,875</strong></td>
<td><strong>6,600</strong></td>
<td><strong>115,413</strong></td>
<td></td>
</tr>
</tbody>
</table>

12 The 2015 IRP projections exclude SWP flexible supplies such as the Yuba Accord, Turnback Pool, and MWD’s recently approved exchange program with the Antelope Valley-East Kern Water Agency.
13 Active conservation is conservation resulting from programs funded by MWD, and its member and sub agencies.
If the 2015 IRP set a standard for 100 percent MWELO compliance and included the production of only 50 percent of the member agency supply projects that are currently in advanced planning stages,\(^{14}\) MWD demand projections would be reduced to about 1.6 million acre-feet, see Table 8 below.

Table 8. Potential impact to MWD demands with 100 percent MWELO compliance and 50% local supply production than forecasted, in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD Demand (2015 IRP Original Forecast)</td>
<td>1,586,000</td>
<td>1,638,000</td>
<td>1,679,000</td>
<td>1,728,000</td>
<td>1,768,000</td>
</tr>
<tr>
<td>Additional Savings from 100% MWELO Compliance</td>
<td>12,000</td>
<td>18,000</td>
<td>27,000</td>
<td>41,000</td>
<td>54,000</td>
</tr>
<tr>
<td>50% Implementation of Local Projects in Advanced Planning Stages</td>
<td>82,765</td>
<td>102,780</td>
<td>102,780</td>
<td>102,780</td>
<td>102,780</td>
</tr>
<tr>
<td>Calculated 2015 IRP Demand</td>
<td>1,491,235</td>
<td>1,517,220</td>
<td>1,549,220</td>
<td>1,584,220</td>
<td>1,611,220</td>
</tr>
</tbody>
</table>

\(^{14}\) Includes projects that are fully designed with appropriated funds and projects in advanced planning stages with certified environmental review.

2015 IRP Shortage Assessment & Updated Supply Development Targets

In contrast to the 2010 IRP’s gap analysis under dry conditions, the 2015 IRP provides a statistical analysis of MWD’s probability of allocating water under a repeat of historic hydrology (based on data from 1922-2012). This probability factors in the use of MWD’s dry-year storage portfolio to meet supply shortages. It assumes an allocation occurs when MWD is unable to meet demands utilizing all its available supplies including storage, and when its dry-year storage portfolio drops below 1.0 million acre-feet. The 2015 IRP assesses regional shortage probabilities under three scenarios: 1) “Do Nothing,” 2) “IRP Approach,” and 3) “IRP Approach” with 10 percent local supply loss.

Do Nothing Scenario Analysis

The Do Nothing scenario assumes demand growth as projected but local supply development stops at the current level of investment.\(^{15}\) It is unclear why MWD chose the Do Nothing scenario as its baseline, because it unrealistically assumes member agencies will not implement the projects they have identified in their urban water management plans, including those that are in advance planning stages with funding authorized or certified environmental documentation. Figure 1 shows the results of MWD’s analysis of the Do Nothing scenario; based on these assumptions, the 2015 IRP -- not surprisingly -- finds that the Do Nothing scenario is unacceptable.

\(^{15}\) Any growth in local supply development is limited to natural growth resulting from existing projects and projects currently under construction.
“Adaptive Management” Resource Development Target Analysis
In response to the Do Nothing Scenario’s unacceptability, the 2015 IRP recommends refinements to the 2010 IRP’s three-pronged “adaptive management” strategy. The 2010 IRP strategy included the “Core Resources Strategy” (replaced by the 2015 IRP’s “IRP Approach”), the “Uncertainty Buffer,” and “Foundational Actions” (rebranded as “Future Supply Actions” in the 2015 IRP).

MWD described the IRP Approach as an update of the Core Resources Strategy’s targets for local resource production, imported supplies, and water use efficiency (WUE) development. Some of the targets identified in the Core Resources Strategy remain fairly unchanged in the IRP Approach, but others are distinctly different. Table 9 provides a side-by-side comparison of the Core Resources Strategy and IRP Approach targets.

Table 9. Comparison of supply development targets to meet core demands defined in the 2010 IRP’s Core Resources Strategy and the 2015 IRP’s IRP Approach

<table>
<thead>
<tr>
<th>2010 IRP</th>
<th>2015 IRP Update</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. “Core Resources Strategy” – Established supply targets to meet projected dry-year demands</strong></td>
<td><strong>1. “IRP Approach” – Updated supply targets from the 2010 IRP</strong></td>
</tr>
<tr>
<td>CRA</td>
<td>CRA</td>
</tr>
<tr>
<td>Develop programs to fill the CRA in dry years.</td>
<td>Maintain current supplies and develop programs to fill the CRA in dry years.</td>
</tr>
<tr>
<td>SWP</td>
<td>SWP</td>
</tr>
<tr>
<td>In the near-term, pursue the Two-Gate System.</td>
<td>In the near-term manage flow and export regulations.</td>
</tr>
<tr>
<td>Begin implementing ecological, levee, and flood management improvement projects in the mid-term, during construction of new conveyance.</td>
<td>Achieve implementation of the California WaterFix and California EcoRestore in the long-term.</td>
</tr>
<tr>
<td>A long-term comprehensive plan that addresses ecosystem restoration, water supply, and flood control/storage development.</td>
<td></td>
</tr>
<tr>
<td>WUE</td>
<td>WUE</td>
</tr>
<tr>
<td>Develop 200,000 acre-feet of additional conservation and recycled water by 2020 (via regional-level compliance with SBx7-7).</td>
<td>Develop 180,000 acre-feet of additional conservation by 2040 (via 100 percent MWELO compliance for new construction plus annually retrofit 1 percent of existing landscapes to comply with MWELO).16</td>
</tr>
<tr>
<td>Local Supplies</td>
<td>Local Supplies</td>
</tr>
<tr>
<td>Develop 102,000 acre-feet of local supplies through groundwater recovery and seawater desalination.</td>
<td>Develop 20,000 acre-feet of local supplies through groundwater recovery, seawater desalination, and recycling.17</td>
</tr>
</tbody>
</table>

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16 MWD’s projected demands assume that only 50 percent of new construction will comply with MWELO.
17 A portion of the reduced target for local supply target can be attributed to the implementation of local supplies, such as the Lewis Carlsbad Desalination Plant, since the adoption of the 2010 IRP.
Under the implementation of the IRP Approach, MWD’s SWP supplies increase by 135,000 acre-feet in 2035 compared to the 2010 RUWMP (Table 10).

Table 10. Comparison of the 2010 RUWMP and IRP Approach SWP forecasts in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 RUWMP</td>
<td>1,029,000</td>
<td>1,078,000</td>
<td>1,078,000</td>
<td>1,078,000</td>
<td>N/A</td>
</tr>
<tr>
<td>2015 IRP Update (IRP Approach)</td>
<td>984,000</td>
<td>984,000</td>
<td>1,213,000</td>
<td>1,213,000</td>
<td>1,213,000</td>
</tr>
<tr>
<td>Change from 2010 RUWMP</td>
<td>(45,000)</td>
<td>(94,000)</td>
<td>135,000</td>
<td>135,000</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The 2015 IRP states that future allocations would be “significantly addressed” though the implementation of IRP Approach, with the probability of allocating water in 2030 dropping to zero percent (see Figure 2). Because MWD’s dry-year storage supplies are low,18 coupled with the 2015 IRP’s highly conservative assumptions on local supply development, the IRP Approach shows an immediate threat of allocation. These assumptions include restricted SWP supplies due to environmental regulations that do not exist, but which MWD assumes would be imposed while the California WaterFix is constructed. To mitigate this near-term risk of allocation, MWD recommends pursuing a “comprehensive transfer and exchanges strategy” to augment water supplies, minimize storage withdrawals, and replenish currently depleted storage reserves. Reflecting recent limited and expensive dry-year transfer opportunities, the 2015’s IRP recommended strategy is to seek transfers and exchanges in average and wet years.

Although MWD finds implementation of the IRP Approach significantly reduces the chance of allocations, the 2015 IRP nevertheless recommends the second piece of its adaptive management strategy: develop an additional 200,000 acre-feet of conservation and local resource supplies to buffer against risk and uncertainty. These additional supplies are similar to the 2010 IRP’s “Uncertainty Buffer.” There is no rational basis presented for MWD to fund the development of these additional supplies that would generate excess supplies and further reduce demand for MWD water.

Another tactic to manage “uncertainty” is the 2015 IRP’s third component of its adaptive management strategy: Future Supply Actions. These actions are described as being intended to reduce barriers to implementing local resources should they be needed and are divided into four categories: 1) public outreach; 2) legislation and regulation advocacy; 3) technical studies; and 4) land, infrastructure, and resource acquisition. Table 11 compares the targets of buffer supplies and additional actions established in the 2010 IRP to those recommended in the 2015 IRP.

Figure 2. The probability of allocating water over time under the IRP Approach Scenario

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18 At the end of calendar year 2015, MWD’s dry-year storage reserves were around 900,000 acre-feet.
Table 11. Comparison of buffer supply development targets and actions to reduce the implementation time of local resources in the 2010 and 2015 IRP

<table>
<thead>
<tr>
<th>2010 IRP</th>
<th>2015 IRP Update</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2. “Uncertainty Buffer”</strong> – additional supplies to mitigate risk and uncertainty</td>
<td><strong>2. Develop additional supplies</strong> to mitigate risk and uncertainty.</td>
</tr>
<tr>
<td>Conservation</td>
<td>Implement the Conservation target identified in the Core Resources Strategy (200,000 acre-feet via regional-level compliance with SBx7-7).</td>
</tr>
<tr>
<td>Conservation &amp; Local Supplies</td>
<td>Develop 200,000 acre-feet of local supplies and conservation.</td>
</tr>
<tr>
<td>Local Supplies</td>
<td>Develop up to 300,000 acre-feet of local supplies.</td>
</tr>
<tr>
<td><strong>3. “Foundational Actions”</strong> – “low-regret, low risk” actions to reduce implementation time of recycled water, seawater desalination, stormwater, and graywater local projects.</td>
<td><strong>3. “Future Supply Actions”</strong> – “low-regret, low risk” actions to reduce implementation time of recycled water, seawater desalination, stormwater capture, and groundwater cleanup local projects, including land acquisition for future project siting.</td>
</tr>
</tbody>
</table>

Conclusions

*MWD’s Technical Analysis Lacks Evidentiary Support*

Aside from the fact that the technical recommendations on supply targets are based on the outdated reliability goal of meeting 100 percent dry-year demand under all foreseeable hydrologic conditions,19 data and analysis to support MWD’s supply targets under its three scenarios (Do Nothing, IRP Approach, and 10 percent local supply loss) is incomplete or missing. For all these scenarios, the 2015 IRP fails to present analysis of how deep shortages are projected to be, or the corresponding probabilities of different shortage levels. This makes it impossible to ascertain the potential supply shortages MWD may be facing or how likely these shortages are to materialize. Also, under these scenarios, the 2015 IRP does not provide any analysis of the probability of having surplus supplies that may exceed MWD’s ability to store water. Furthermore, there is no analysis of MWD’s demands, supply gap, and surplus supplies under wet, average, and dry hydrology. Without this information, the 2015 IRP’s conclusions and recommended supply targets are arbitrary and lacking a reasonable basis in the data and record.

*Conservation Forecast Data*

The 2015 IRP’s conservation forecasts are based on assumptions that likely underestimate near-term and long-term conservation efforts. Near-term conservation projections are based on assumptions regarding water use efficiency rebounding from current accomplishments, but there is no explanation why staff believes this level of rebound would happen (or, for why MWD should develop water to meet these demands under current statewide conservation policies and objectives). The same questions exist why MWD should assume only 50 percent MWELO compliance without justification; and, it certainly should not encourage non-compliance by planning to meet the water supply needs of those agencies who do not comply.

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19 “The fundamental goal of the IRP is for Southern California to have as reliable a water system for tomorrow as the region has enjoyed for decades, regardless of the challenges that emerge along the way,” page iii of the 2015 IRP Technical Report.
**Imported Water Supply Forecast Data**

The 2015 IRP does not explain how MWD will use flexible programs on the SWP and Colorado River, such as its fallowing program with PVID or Yuba Accord transfers to meet demands. Also, rather than incorporating SWP supply variability and risk analysis and developing adaptive management strategies to manage these risks, MWD calculated its 2015 IRP shortage probability based on an assumption there will be aggressive environmental regulations that do not actually exist.

**Local Supply Forecast Data**

The 2015 IRP report does not offer any explanation for the assumed reduction in groundwater production, even though it shows a higher replenishment demand, which presumably will help keep groundwater production steady. The IRP Approach assumed only 20,000 acre-feet of new member agencies’ local supplies would be developed. By doing so, more than 200,000 acre-feet of member agencies’ local projects currently in advanced planning stages are disregarded and not included in the 2015 IRP’s forecasts. On top of this, the 2015 IRP does not discuss or include MWD’s recently approved demonstration project for a large-scale recycled water program with the Los Angeles County Sanitation Districts (LACSD). This program alone could provide up to 168,000 acre-feet of groundwater replenishment supplies for Orange, Los Angeles, and San Bernardino counties. No explanation is provided why this project, recently presented to the MWD board for approval, is not factored in to supply and demand scenarios.

**2015 IRP Recommended Supply Targets Are Unfounded**

MWD describes its three-pronged approach (implement the IRP Approach, develop buffer supplies, and implement Future Supply Actions) as an “adaptive management” strategy. However, MWD fails to present any trigger point analysis that shows how it will adapt if demands exceed or fall below the 2015 IRP’s forecasts. The strategy articulated purposely over-develops supplies supposedly to mitigate uncertainties, but no strategy is included to potentially “adapt” if demand for MWD water continues to decrease. MWD itself acknowledges that it may need to find “new markets” for all of the water supply it is planning to develop. ²⁰

**IRP Approach**

The IRP Approach recommends building upon the 2010 IRP’s Core Resources Strategy but MWD does not analyze its success or struggles in implementing previous IRP efforts, making it difficult to assess why this approach is being continued or how it will avoid allocation, if that is the objective. Fresh in mind is MWD’s recent action to allocate supply to manage demand for its water. A look at how MWD member agencies are faring is instructive. Although MWD reduced supplies to member agencies by 15 percent, the Water Authority forecasted that it would have adequate supplies to meet almost all of its demands in fiscal year 2016. ²¹ Not all MWD member agencies experience the MWD allocation the same. The Core Resources Strategy should analyze the impact on the reliability of individual member agencies and exactly which agencies MWD is developing water for. This will be an important question during the upcoming rate-setting process and as individual projects are brought to the MWD board for approval. The LACSD project is a

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²⁰ The 2015 IRP update describes Future Supply Actions spending as including “exploring the feasibility of new local supply options, investing in water-saving technologies, acquiring land and proposing ways to reduce regulatory impediments to supply development.” No explanation on why these actions and spending projects are not already included in the 100 percent supply reliability plus “buffer” supply.

²¹ Prior to the State Board’s emergency regulations which further suppressed demands, the Water Authority forecasted that it would have enough supplies to meet 99 percent of its demands.
good example of a project costs that clearly should be allocated to the groundwater agencies in Los Angeles, Orange and San Bernardino counties that will benefit from the water supply made available from this project.

The IRP Approach’s assumption that almost none of the member agencies local resources projects in advanced planning phases will come online assures the inflation of projected demand for MWD water. Table 12 demonstrates the impact on MWD demands with the implementation of the IRP Approach and if only 50 percent of local projects in advanced planning stages are developed. Similarly, the assumptions that the SWP would be limited by stringent regulations and reduced groundwater production would continue based on recent trends further inflate the need for MWD supplies.

Table 12. Potential impact to MWD demands with the implementation of the IRP Approach and higher local supply production than forecasted in acre-feet

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD Demand</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2015 IRP Original Forecast)</td>
<td>1,586,000</td>
<td>1,638,000</td>
<td>1,679,000</td>
<td>1,728,000</td>
<td>1,768,000</td>
</tr>
<tr>
<td>IRP Approach Implementation</td>
<td>43,000</td>
<td>80,000</td>
<td>118,000</td>
<td>160,000</td>
<td>200,000</td>
</tr>
<tr>
<td>50% Implementation of Local Projects in Advanced Planning Stages</td>
<td>82,765</td>
<td>102,780</td>
<td>102,780</td>
<td>102,780</td>
<td>102,780</td>
</tr>
<tr>
<td>Calculated 2015 IRP Demand</td>
<td>1,460,235</td>
<td>1,455,220</td>
<td>1,458,220</td>
<td>1,465,220</td>
<td>1,465,200</td>
</tr>
</tbody>
</table>

Buffer Supplies
The 2015 IRP’s buffer supply analysis appears to be based on the difference (about 200,000 acre-feet) between local supply production assumed in 2016 (under average hydrology) and actual local production in 2014, when local hydrology was extremely dry. If the development of so-called buffer supplies is intended to address member agencies’ potential dry-year demands for MWD water, those dry-year demands should be properly accounted and planned for, but they should not be characterized as “buffer supplies.”

More than anything else, justification for MWD's IRP is simply, “uncertainty” of many forms and varieties that may impact future supplies and demands, such as climate change. But climate change is already included in MWD’s SWP forecasts. Yet at the same time, MWD does not analyze uncertainties that could reduce the demand for MWD water, such as greater implementation of local resources, or future water use regulations, similar to the current emergency regulations. MWD must analyze uncertainties that may reduce its demands and their associated risks, such as stranding assets. It must also take into account the reality that the reduced demand for MWD water is not solely driven by hydrology, but is also being driven by the development of local projects such as the Lewis Carlsbad Desalination Plant that will permanently reduce demand for MWD water.

Future Supply Actions
It is unclear what projects and programs MWD will present to the Board as “Future Supply Actions.” Expanded from 2010 IRP is the addition of “land acquisition” under Future Supply Action, with no information supporting the recommendation.
Affordability and Financial Analysis Missing
The 2015 IRP recommends supply targets without considering the costs to achieve them or what agencies would be willing to pay for them. Although the 2015 IRP provides a brief summary of the potential cost ranges for local resources, it fails to include how the implementation of these new targets and buffer supplies would impact MWD’s budget and rates. Since there is no analysis of how implementing the IRP would impact MWD’s rates, it is unknown how increased rates would impact future demands. Without understanding the financial impacts of the 2015 IRP’s recommended targets and investment in buffer supplies, it is impossible to determine if these recommendations are financially plausible or how they may impact MWD’s demands, thus exposing MWD to the risk of stranding investments.

Policy Considerations
The missing data and analysis described above makes it difficult for the MWD Board to engage in meaningful policy discussions or make sound, financially sustainable supply development decisions. There are many policy issues that need to be addressed. Several of these issues were raised during the Water Authority’s September 2015 IWC and harken back to the 1994 Task Force’s recommendations.

The IRP’s historic one-size-fits-all reliability goal to meet all retail demands under all foreseeable hydrologic conditions must be reconsidered by the Board. The Board must also take into account which agencies will ultimately be responsible to pay for meeting retail water demands. With member agencies developing projects at different pace, and MWD’s supply allocation plan centered on the premise that MWD water is allocated in such a manner that no one agency is significantly better or worse off than others, MWD’s current reliability goal by default develops more supplies than warranted to insure those few agencies that may over-rely on MWD supplies. Because MWD currently recovers its revenues through volumetric charges, MWD is highly susceptible to developing stranded assets. This underscores the need for a comprehensive financial analysis of the IRP’s recommendations and the financial ramifications of variations from its forecasts, such as lower water sales, all as called for by the Water Authority’s Delegates.

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22 In the 2015 IRP’s Chapter 5, MWD provides cost ranges for five types of local resource projects: 1) stormwater centralized, 2) stormwater distributed, 3) groundwater recovery, 4) recycled water, and 5) seawater desalination.
23 Generally, increases in water rates reduce demands, but the magnitude of this effect cannot be determined with the 2015 IRP’s current level of analysis.
24 MWD staff indicated that MWD’s financial forecast, which is separate from the IRP, considers various levels of water sales, and MWD also uses financial reserves to manage fluctuations in water sales. However, in recent years MWD’s practice has been to budget based upon purposely inflated demands, which greatly over-collect from its member agencies and ratepayers in order to meet its financial obligations.
January 10, 2016

Randy Record and
Members of the Board of Directors
Metropolitan Water District of Southern California
P.O. Box 54153
Los Angeles, CA 90054-0153

RE: Board Memo 8-3: Adopt the 2015 Integrated Water Resources Plan Update - REQUEST TO DEFER BOARD ACTION ADOPTING 2015 IRP UPDATE, OR IN THE ALTERNATIVE, OPPOSE

Dear Chairman Record and Board Members:

The Water Authority supports action by the Board to receive and file, and defer adoption of, the Draft 2015 Integrated Water Resources Plan (IRP) Update and Appendices (Attachments 1 and 2 to Board Memo 8-3), presented to the Board at its December 2015 board meeting, as well as the 2015 IRP Technical Update Issue Paper Addendum, presented to the Board at its October 2015 board meeting (collectively, these documents are referred to in this letter as the staff "Technical Report"). This action would be consistent with the 2015 IRP update process that has previously and consistently been described by MWD staff to the Board as a "two-part process" that would include not only the Technical Report from staff (but instead now presented as the final proposed 2015 IRP Update), but also a subsequent board process that would include "resource policy issues discussion" prior to adoption of the 2015 IRP Update.i

We do not support adoption of the Draft 2015 IRP Update at this time because the MWD Board of Directors is only now beginning the Phase 2 process of reviewing the technical data prepared by staff and deliberating the core planning and policy issues associated with the update and adoption of the IRP. At the board policy level, this review should certainly include deliberation of MWD's reliability and water supply development "targets," because those targets greatly impact the cost and affordability of MWD Water. The purpose of the Board's review should be to ensure that the IRP accomplishes the six objectives established by the Board in 1996, and carried forward since that time, namely,

- Acknowledge environmental and institutional constraints; and ensure:
- Reliability;
- Affordability;ii
- Water quality;
- Diversity; and
- Flexibility
With this set of policy objectives in mind, we wanted to share some preliminary observations at the "50,000 foot view," before the Board reviews the technical data and has an opportunity to discuss policy issues and the assumptions staff has made in the draft 2016 IRP Update, at a workshop or next board meeting. Except where otherwise specifically noted, all analyses contained in this letter are based on the data included in the IRP or taken from other MWD documentary sources. These preliminary observations do not signify agreement with all of the stated assumptions, conclusions and recommendations by staff in the Technical Report, which should more properly be within the province of the Board of Directors during this Phase 2 process.

We request board discussion, and further staff analysis as directed by the Board, of the following issues:

1. **Demand for MWD Water.** The Technical Report projects an increased demand for MWD Water that is not supported by the underlying data, which evidences instead a declining demand for MWD Water. See Attachment 1. It is critical that the Board consider the near and long term implications of the declining demand for MWD Water over time and how the IRP should be adapted now to plan for it.iii

2. **Likelihood of success of member agency projects.** The Technical Report understates existing and near-term local water supply development that will further and permanently reduce demand for MWD Water. See Attachment 2. The supply "gap" in the Technical Reportiv is driven in large measure by the assumption for planning purposes that all but 20,000 acre-feet (AF) of local water supply projects that are not currently under construction will fail to be implemented. This includes projects that are currently in the full design phase with funds appropriated or at the advanced planning stage with completed certified environmental review. In addition to seven projects within the Water Authority’s service area which will be implemented, MWD assumes projects being developed by the following agencies will fail:
   - City of Beverly Hills;
   - City of Torrance;
   - Los Angeles Department of Water and Power;
   - Inland Empire Utility Agency;
   - Upper San Gabriel Valley MWD;
   - Eastern MWD;
   - Municipal Water District of Orange County (MWDOC)/Orange County Water District; and
   - Calleguas MWD

The Technical Report and proposed IRP should "adapt“ now to account for the likely success of these projects, or, at a minimum, factor in some percentage of the yield that will be developed.v If only 50% of the yield from these projects - currently at the advanced planning stage with completed design, funding and/or certified environmental review - is realized, the Technical Report understates local water supply coming on line by more than 100,000 AF annually. This number does not take into account the almost 500,000 AF of additional yield from projects currently under feasibility investigation or in the conceptual planning phase. See Technical Report at Attachment 2, Appendix 5 at pages A.5-1-A.5-13.
3. **State Water Project.** The Technical Report hardwires a "worst case" assumption regarding the yield of the State Water Project (SWP) that is premature at best, assuming a sudden 400,000 AF reduction of SWP supplies in 2020 based on speculation what regulatory action may be taken (and which MWD would presumably object to). It is, again, the staff's assumption that drives creation of a supply "gap." MWD should identify the factors driving the potential magnitude and timing of a potential SWP export reduction, monitor these factors to see if and when they may occur and define thresholds that when reached would trigger action -by MWD and/or its member agencies to address the risk.

4. **Colorado River.** MWD has made substantial investments in Colorado River supplies recently; however, only a small portion of the supplies have been included in The Technical Report's forecast of Colorado River Aqueduct supplies. See Technical Report, Attachment 1 at page 3-27, stating that "flexible" supplies including the PVID program and Intentionally Created Surplus are not included in the forecast. As with the SWP, the IRP should present a risk assessment identifying the factors that will impact the magnitude and timing of restrictions on the availability of Colorado River water and the risk of the factors being triggered.

5. **LACSD project.** The Technical Report has not included or accounted for the water supply proposed to be developed by MWD and the Los Angeles County Sanitation Districts (LACSD) to meet groundwater replenishment demand in Los Angeles, Orange counties and San Bernardino. MWD's groundwater production numbers should be updated to include this water supply which staff has indicated is being developed to meet the water replenishment needs of the Los Angeles, Orange County and San Bernardino groundwater agencies.

6. **Reliability objective.** The Technical Report continues to use an outdated reliability goal, planning to meet 100% of retail water demands under all hydrologic conditions; this objective is outdated at best and should be changed now by the Board as part of the 2015 IRP Update to be more in line with the state's and MWD's own water conservation ethic, state law and standards.

7. **Affordability objective.** The Technical Report's "do nothing" approach to analyzing MWD Water demand, coupled with its "do everything PLUS" water supply planning strategy, fails to take the Board's affordability objective into account. The IRP's "belt and suspenders" planning strategy which the Technical Report "builds on," should be reconsidered by the Board against declining MWD Water sales and increasing local water supply development. Can our ratepayers afford for MWD to plan 100% water supply reliability (under "core resources" strategy or "IRP Approach") plus 500,000 or 200,000 AF ("uncertainty" or "buffer" supply) plus "Foundational" or "Future Supply Actions"? At the very least, the Board should be presented with an affordability analysis. If the IRP is truly adaptive, as it should be, there is no justification for spending ratepayer money now on projects and programs that may never be necessary and may ultimately end up as stranded investments.

8. **Adaptive management.** Although the Technical Report calls for an "adaptive management strategy," there is no consideration of phasing investments or identifying "triggers" (for example, a planned local project fails to be developed) that would allow MWD to truly "adapt" in order to avoid unnecessary costs, expenditures, and stranded assets. The strategy described in the
Technical Report is a "do-everything-and-more" strategy that is inconsistent with the Board's affordability objective.

9. **Impact of higher MWD Water rates.** The Technical Report's discussion of MWD Water demand fails to take into account the inevitable impact of higher MWD rates and charges across a shrinking sales base due to declining sales and demand for MWD Water. Significant MWD Water rate increases are inevitable given the approach recommended in the Technical Report and those higher rates increases will continue to dampen demand for MWD water sales. Higher MWD rates will increase the economic incentive for the development of local water supplies such as is already occurring. See Attachment 2.

10. **Stranded costs.** The IRP Update should analyze and factor in the risk of stranded investments resulting from the reduced demand for MWD Water and rising MWD Water rates being spread across a shrinking ratepayer base.

**Conclusion**

An IRP that does not consider and incorporate actual available data and affordability creates a material risk that MWD investments will be made on illusionary foundations. Ultimately, this Board of Directors will be accountable to the public and ratepayers we serve. We sincerely hope that the Board will insist upon having an opportunity to deliberate these and many other issues and questions that should be addressed in the previously planned Phase 2 of the IRP process.

Sincerely,

Michael T. Hogan  
Keith Lewinger  
Fern Steiner  
Yen C. Tu  

Director  
Director  
Director  
Director

Attachment 1: Demand for MWD Water  
Attachment 2: Examples of member agency water projects not included by staff in calculation of demand for MWD Water

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1. From the beginning of the 2016 IRP Update process, MWD staff said that it would be a two-part process, with the Technical Report scheduled for adoption in January 2016. See April 8, 2015 Member Agency Kick-off Workshop RE 2015 Integrated Water Resources Plan Update ("final IRP Technical Update Report" for Board consideration scheduled for adoption in January 2016 [not the IRP itself]). More recently, see http://edmsidm.mwdh2o.com/idmweb/cache/MWD%20EDMS/003736313-1.pdf, where several of the policy issues raised by the Board are outlined for future board discussion. The Board's policy discussion should not be limited to issues relating to "implementation" of the staff's IRP. Nor is there any reason why the IRP needs to be adopted now, prior to the Phase 2 board deliberations.

2. Affordability is not addressed anywhere in the Technical Report or Attachments 1 and 2 to the 2015 Draft IRP and Appendices.

3. The Technical Report notes the importance of identifying and accounting for "changed circumstances" (e.g., Technical Report at Attachment 1, page v: "The 2015 IRP Update focuses on
ascertaining how conditions have changed in the region since the last IRP update in 2010"), but fails to identify or account for the most material change that has occurred, namely, the fact that local water supply development is widely viewed as both more reliable and now, cost-effective when contrasted with the present and anticipated future cost of MWD Water. See Attachment 2 statements by various member agencies seeking support for local projects. The Technical Report appears to acknowledge this, at least indirectly, by noting that if the California WaterFix is implemented, it may need to seek "new markets" for this water supply. Technical Report at Attachment 1, page vi ("[t]he potential completion of the California WaterFix and a modernized water system in the Delta, for example, would create a new physical ability to move additional supplies in average and above-average years. In addition to providing water for storage management, this could also create opportunities for new markets and partnerships." The Water Authority questions this premise and believes that MWD's legal obligation and mission is to provide its own service area and ratepayers with supplemental water, not to develop it for sale to others and not to protect unidentified "broad public interests" that do not pay MWD's rates and charges (see Technical Report at Attachment 1, page vii ("MWD's baseline imported supplies has proven to be a highly cost-effective investment that protects broad public interests as well as Southland ratepayers"). This is also an issue that warrants further examination in the context of the LACSD project where MWD proposes to pay 100% of project costs and assume substantial risks in order to develop a water supply with respect to which member agencies of the LACSD would have a right of first refusal. See Board Memo 8-3, November 2015 MWD Board meeting. Ultimately, MWD must link its rates to the agencies that are benefitting from the costs MWD is incurring (i.e., it must show "cost causation").

iv The Technical Report states that, "[t]hrough the 2015 IRP Update process, foreseeable challenges and risk scenarios were identified that point to the potential of 200,000 AF of additional water conservation and local supplies needed to address these risks." Technical Report at Attachment 1, page iv. However, this "gap" results in part from the planning assumption that more than 200,000 AF of local projects and conservation measures will fail to be implemented (see Technical Report, Attachment 1, Table 3-5 making clear that supply projections only include projects that are currently producing water or are under construction). The "gap" is also the result of the planning assumption that SWP supplies will be reduced by 400,000 AF; and, because the analysis also fails to include the 168,000 AF of supply for groundwater replenishment from the LACSD project.

v The Technical Report emphasizes MWD's engagement with member agencies but does not explain why or if member agency staff and Board members agreed that it is reasonable to assume for planning purposes that the local projects listed on Attachment 2 would likely fail to be implemented. It isn't possible to reconcile this assumption with the presentations member agencies have made to their respective communities and ratepayers seeking approval and funding of these local projects and the actual progress that is being made toward implementation.

vi The Technical Report describes Future Supply Actions spending as including "exploring the feasibility of new local supply options, investing in water-saving technologies, acquiring land and proposing ways to reduce regulatory impediments to supply development." Staff needs to explain why these actions and spending projects would not already be included in the 100% supply reliability PLUS "buffer" supply. Given this lack of definition or any standard for triggering Foundational Actions spending, it is apparent that the Technical Report isn't a "plan" at all, but is rather, a blank check that could not possibly be a rational basis for establishing MWD's revenue requirements.
Attachment 1 - Demand for MWD Water

The IRP’s projection of increased demand for MWD Water is not supported by MWD’s own data, which evidences instead, a declining demand for MWD Water

IRP Projections (million AF)¹

<table>
<thead>
<tr>
<th></th>
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<th>2030</th>
<th>2035</th>
<th>2040</th>
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</thead>
<tbody>
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<td>Retail Demand after Conservation²</td>
<td>3.84</td>
<td>4.12</td>
<td>4.19</td>
<td>4.22</td>
<td>4.26</td>
<td>4.27</td>
</tr>
<tr>
<td>Local Supply³</td>
<td>2.20</td>
<td>2.31</td>
<td>2.36</td>
<td>2.39</td>
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<tr>
<td>Cumulative Increase MWD Demand</td>
<td>0.17</td>
<td>0.19</td>
<td>0.19</td>
<td>0.21</td>
<td>0.20</td>
<td></td>
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</tbody>
</table>

¹ The retail demand and local supply numbers are taken from the Technical Report, Attachment 1, Draft 2015 IRP Update, Table ES-1. The resulting calculation of MWD Water Demand is simply a mathematical calculation.

² Retail demand as calculated by MWD assumes only 50% compliance with Model Water Efficient Landscape Ordinance (MWELO).

³ MWD does not include in its calculation of local supply any of the Water Authority’s independent Colorado River water supplies (280,000 AF over time); it also assumes only 20,000 AF of member agency local projects will be successfully implemented.

IRP Projections (million AF) adjusted only for San Diego’s Colorado River water

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
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<tr>
<td>Retail Demand after Conservation</td>
<td>3.84</td>
<td>4.12</td>
<td>4.19</td>
<td>4.22</td>
<td>4.26</td>
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<tr>
<td>Local Supply⁴</td>
<td>2.38</td>
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<td>2.67</td>
<td>2.69</td>
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<tr>
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<td>1.55</td>
<td>1.57</td>
<td>1.56</td>
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<td>Cumulative Increase MWD Demand</td>
<td>0.07</td>
<td>0.09</td>
<td>0.09</td>
<td>0.11</td>
<td>0.10</td>
<td></td>
</tr>
</tbody>
</table>

⁴ Local supply corrected to include Water Authority’s actual independent Colorado River supplies over time pursuant to fully executed agreements.

IRP Projections (million AF) adjusted for San Diego’s Colorado River Water and 50% yield from member agency projects that are currently in full design with funds appropriated or at the advanced planning stage with certified environmental review complete

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Demand after Conservation</td>
<td>3.84</td>
<td>4.12</td>
<td>4.19</td>
<td>4.22</td>
<td>4.26</td>
<td>4.27</td>
</tr>
<tr>
<td>Local Supply</td>
<td>2.38</td>
<td>2.59</td>
<td>2.64</td>
<td>2.67</td>
<td>2.69</td>
<td>2.71</td>
</tr>
<tr>
<td>50% yield of Member Agencies</td>
<td>0.08</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
<td>0.10</td>
</tr>
<tr>
<td>MWD Water Demand</td>
<td>1.46</td>
<td>1.45</td>
<td>1.45</td>
<td>1.45</td>
<td>1.47</td>
<td>1.46</td>
</tr>
<tr>
<td>Cumulative Increase MWD Demand</td>
<td>-0.01</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.00</td>
<td></td>
</tr>
</tbody>
</table>
The Technical Report and other historical MWD documents confirm that MWD Water sales are on a long-term declining trend that is no longer based on hydrology but on the development of local water supplies that will permanently replace and reduce demand for MWD Water.
## Examples of member agency projects not included by staff in calculation of demand for MWD Water

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Status of Member Agency Project</th>
</tr>
</thead>
</table>
| City of Beverly Hills | Feasibility Project  
Groundwater development- 2,000 AF  
**Status:**  
Water Enterprise Plan- Adopted July 2015  
Through a variety of projects and measures including groundwater development, “*the City has the potential to decrease its MWD purchases from the current 12,495 AFY to approximately 8,485 AFY by 2024/25.*” This amounts to a 4,010 AF (32 percent) reduction of the City's demand for MWD Water.  
| Calleguas MWD    | Advanced Planning (EIR/EIS Certified) Projects  
North Pleasant Valley Desalter- 7,300 AF  
Feasibility Projects  
2 projects 7,800 AF  
**Status:**  
Calleguas is working with several agencies and the City of Oxnard to develop additional water supplies and reclaim brackish groundwater. These projects are in various stages of development with the largest being the EIR certified North Pleasant Valley Desalter. It is also building a regional salinity management pipeline in phases. Phase 1 is completed and Phase 2 is in design and, according to the Los Angeles Regional Water Quality Control Board, *expected to be completed within the next permitting cycle in 2018.*  
| Eastern MWD      | Full Design & Appropriated Funds Project  
Perris Desalter II, 4,000 AF  
Feasibility Project  
Indirect Potable Reuse- 24,070 AF  
**Status:**  
*Perris Desalter scheduled for bid advertise, November 2016 (9/8/2015 Eastern Presentation)* |
**Inland Empire Utility Agency**

**Advanced Planning (EIR/EIS Certified) Projects**
- IEUA Regional Recycled Water Distribution System- 20,000 AF

**Status:**
IEUA’s Ten-year Capital Improvement Plan identifies immediate and long term capital projects (including pipelines) needed to "utilize 100% of the region’s projected recycled water supplies, increasing recycled water deliveries from approximately 37,000 to 55,000 by 2025."

**LADWP**

**Full Design & Appropriated Funds Projects**
- Terminal Island Water Reclamation- 7,880 AF

**Advanced Planning (EIR/EIS Certified) Projects**
- Downtown and Sepulveda Expansion- 2,600 AF; Tujunga Well Treatment- 24,000 AF

**Feasibility Projects**
- 9 projects-32,865 AF

**Conceptual Projects**
- 4 projects -38,270 AF

**Status:**
From 11/20/2015 Presentation by David Pettijohn to Los Angeles Chamber of Commerce:

*Plans to reduce MWD purchases by 145,000 AF*
- Increase Groundwater by 45,535 AF
- 40,000 AF Water Transfers
- 25,000 AF Stormwater Capture
- 50,451 Increased Water Reclamation

**MWDOC**

**Advanced Planning (EIR/EIS Certified) Projects**
- Huntington Beach Seawater Desalination Project- 56,000 AF

**Status:**
*Decision from Coastal Commission expected within 2 months*

**City of Santa Monica**

**Plans to eliminate the purchase of MWD Water**

**Status:**
The following is the first two paragraphs of the City’s Water Sustainability Master Plan:
The City of Santa Monica (City) supplies imported and local water to approximately 91,000 residents
covering an area of approximately 8 square miles. Looking to its future, the City hopes to eliminate its reliability on imported water by addressing the challenge of existing groundwater quality, identifying new sources of local water supply, and more effectively reduce and manage its water demands.

*With an adopted goal of water self-sufficiency achieved by eliminating reliance on Metropolitan Water District of Southern California (MWD) supply by 2020*, the City of Santa Monica retained Kennedy/Jenks Consultants to develop an integrated Sustainable Water Master Plan (SWMP).

This SWMP combines relevant components of existing plans with an evaluation of a broad range of water supply and demand management options to assist the City in meeting its goals.

This plan has been prepared with the objective of developing a comprehensive document to define supply and demand management options to cost effectively reduce future water demands and enhance local water supply production capabilities.

https://www.smgov.net/uploadedFiles/Departments/Public_Works/Water/SWMP.pdf

<table>
<thead>
<tr>
<th>City of Torrance</th>
<th>Full Design &amp; Appropriated Funds Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madrona Desalter Expansion- 2,400 AF</td>
<td>Status: Received $3.9 Prop 84 funds and $3.0 M Prop. 50 funding. <em>Estimated Completion 2018</em></td>
</tr>
<tr>
<td><a href="http://bondaccountability.resources.ca.gov/Project.aspx?ProjectPK=12317&amp;PropositionPK=4">Link</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Upper San Gabriel Valley MWD</th>
<th>Full Design &amp; Appropriated Funds Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Reuse- 2 projects 730 AF</td>
<td>Status: Upper District adopted an Indirect Reuse Action Plan in 2011 which set forth specific tasks to complete the Indirect Reuse Replenishment Project. It has received $790,000 in grants to date to further the project. <em>According to MWD the project is scheduled to be on-line in 2018.</em></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Western MWD</th>
<th>Feasibility Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rancho California Reclamation Expansion/Demineralization Western AG- 13,800 AF</td>
<td>Status: <em>Scheduled for 2018 completion, according to MWD.</em></td>
</tr>
</tbody>
</table>
Attention: Imported Water Committee

Colorado River Board Representative’s report. (Discussion)

Purpose
The Colorado River Board (CRB) Representative’s report summarizes monthly activities of the Colorado River Board of California.

Discussion
This report covers activities from the December 16, 2015 and January 13, 2016 CRB meetings.

Agency Updates
Individual CRB agencies provided monthly updates including:

- **Metropolitan Water District of Southern California (MWD):** In December, MWD stated that Lake Mathews is nearly full and the Colorado River Aqueduct (CRA) is running at a seven-pump flow. In January, MWD stated that the CRA will shut down next month for maintenance. At the MWD January board meeting, the board approved a two year falling program with the Bard Water District.

- **Imperial Irrigation District (IID):** In December, IID reported that the district over-conserved approximately 45,000 acre-feet in 2015, which will either be stored in Lake Mead, stored in MWD’s system, or delivered early to the Salton Sea. In January, IID stated that the district is shifting their planning efforts to focus on conservation projects to prepare for the end of falling programs.

- **California Department of Water Resources (DWR):** In December, DWR provided an overview of state hydrologic conditions and indicated that much of the state is planning for above average precipitation.

- **Los Angeles Department of Water and Power (LADWP):** In December, LADWP reported that the 2015 water year for Los Angeles was one of the driest years on record. In January, LADWP reported that current snowpack conditions in the Eastern Sierras are trending at almost normal.

- **Coachella Valley Water District (CVWD):** CVWD is continuing to work towards meeting the state mandate for Chromium-6 levels.

- **Water Authority:** The Water Authority reported in December the opening of the Carlsbad Desalination Plant. In January, the Water Authority stated that while recent months have seen drops in conservation levels, the regional aggregate targets for state conservation requirements are being met.

- **Palo Verde Irrigation District (PVID):** At the December meeting, PVID reported that the district acquired title to the diversion dam from the Bureau of Reclamation (Reclamation) and is in the process of replacing the three head gates. In January, PVID reported that the dam maintenance work is almost complete.

Water Supply and Reservoir Conditions
A water supply and reservoir conditions update was provided with data from December 7 (Table 1). A more detailed report is available here: [http://www.usbr.gov/lc/region/g4000/weekly.pdf](http://www.usbr.gov/lc/region/g4000/weekly.pdf).
Table 1. December Colorado River Reservoir Conditions

<table>
<thead>
<tr>
<th>Conditions as of December 7, 2015</th>
<th>Volume (million acre-feet)</th>
<th>Percent of Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total System Storage</td>
<td>29.86</td>
<td>50%</td>
</tr>
<tr>
<td>Lake Powell</td>
<td>12.20</td>
<td>51%</td>
</tr>
<tr>
<td>Lake Mead</td>
<td>9.92</td>
<td>38%</td>
</tr>
<tr>
<td>Unregulated Inflow to Lake Powell for October and November 2015</td>
<td>1.0</td>
<td>94% (of average)</td>
</tr>
<tr>
<td>Upper Basin Snowpack</td>
<td>---</td>
<td>89% (of average)</td>
</tr>
</tbody>
</table>

Updated conditions as of January 5, 2016 are shown in Table 2.

Table 2. January Colorado River Reservoir Conditions

<table>
<thead>
<tr>
<th>Conditions as of January 5, 2016</th>
<th>Volume (million acre-feet)</th>
<th>Percent of Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total System Storage</td>
<td>29.58</td>
<td>50%</td>
</tr>
<tr>
<td>Lake Powell</td>
<td>11.76</td>
<td>48%</td>
</tr>
<tr>
<td>Lake Mead</td>
<td>10.12</td>
<td>39%</td>
</tr>
<tr>
<td>Forecasted Inflow to Lake Powell for Water Year 2016</td>
<td>9.65</td>
<td>89% (of average)</td>
</tr>
<tr>
<td>Upper Basin Snowpack</td>
<td>---</td>
<td>107% (of average)</td>
</tr>
</tbody>
</table>

Drought Update
On December 7, the State Water Resources Control Board (SWRCB) held a workshop to receive input on how to improve the implementation of the Governor’s 25 percent urban conservation mandate. The current conservation requirements were extended through October 31, 2016 depending on precipitation and other factors. The SWRCB received input on whether to keep the conservation level at 25 percent or adjust it. As of January 5, 2016, statewide water use reductions were at 26.3 percent for June through November 2015. The SWRCB is considering whether to make changes to current water conservation requirements in response to comments received during the December workshop.

Basin States Drought Contingency Planning
Since 2013, the Basin States have met in coordination with the Department of Interior to address the potential for continued declining elevation levels at Lake Powell and Lake Mead. A key element in the drought contingency planning efforts has been implementation of the Pilot System Conservation Program. In January, CRB staff presented an update on the ongoing effort for drought contingency planning. Board member comments on the presentation included statements that over-allocation is the core issue on the river and that water users can no longer count on storage to account for the difference between supply and demand.

Salinity Control Program
The Paradox Valley Unit Environmental Impact Statement is on schedule for a draft to be issued in the fall of 2016. Reclamation plans to have all of the agreements for its 2015 Funding
Opportunity Announcement executed by the end of February 2016. There are fifteen projects expected at a total cost of $40 million over the next three to four years.

Implementation of Minute 319
Members of the Mexican delegation spoke during the Colorado River Water Users Association conference in Las Vegas in December. The binational negotiating group that is evaluating options for the potential successor agreement to Minute 319 will meet on January 14-15.

Glen Canyon Dam Adaptive Management Program
A public draft of the Long-Term Experimental and Management Plan Environmental Impact Statement, which will establish new baseline operating conditions at Glen Canyon Dam, was released on January 8, 2016. Publication of the final environmental impact statement, record of decision, and biological opinion is expected in summer 2016.

Lower Colorado River Multi-Species Conservation Program (MSCP)
The Lower Colorado River MSCP will continue to acquire and restore habitat in 2016. Restoration Development and Monitoring Plans are being developed for Parker Dam Camp, Three Fingers Lake, and Planet Ranch. In addition, restoration work is expected to begin at Mohave Valley Conservation Area near Needles, California.

Prepared by:  Kara Mathews, Water Resources Specialist
Reviewed by:  Dan Denham, Colorado River Program Director
Approved by:  Doug Wilson, CRB Representative
January 20, 2016

Attention: Imported Water Committee

Water Transfer Implementation Update. (Presentation)

Purpose
This report provides an update on activities in 2015 related to the Water Authority/Imperial Irrigation District (IID) conserved water transfer established in the Quantification Settlement Agreement (QSA).

Background
The Water Authority receives Colorado River water through the Water Authority/IID Conserved Water Transfer Agreement (transfer agreement) as part of the 2003 QSA. The water transfer with IID is the largest agricultural-to-urban water transfer in the United States and is a critical component of the QSA plan to reduce California’s use of Colorado River water to its basic annual apportionment of 4.4 million acre-feet. 2015 concludes the thirteenth calendar year of conserved water flowing to the San Diego region from the IID water transfer. Conserved water from the IID transfer is conveyed to San Diego County via the Metropolitan Water District of Southern California’s (MWD) Colorado River Aqueduct through an exchange of like quantity and quality water also finalized in the QSA.

The QSA Joint Powers Authority (JPA) administers the funding of environmental mitigation requirements in the Imperial and Coachella Valleys related to IID’s transfer with the Water Authority as well as the water Acquisition Agreement between IID and Coachella Valley Water District (CVWD). The JPA is comprised of representatives from the California Department of Fish and Wildlife (CDFW), CVWD, IID, and the Water Authority, who oversee the collection, investment, and disbursement of funds needed for environmental mitigation projects. Under the terms of the QSA JPA Agreement, the collective financial contributions made by the three water agencies are capped at $133 million (in 2003 dollars or $388 million in nominal dollars), of which the Water Authority is responsible for $52 million (in 2003 dollars or $105 million in nominal dollars). The JPA water agencies’ funding schedules have been modified twice since the original agreement, most recently in May 2015, to advance funds to pay for required mitigation. Funding advances have reduced the nominal obligations of the funding agencies but do not change their 2003 obligation value or the $133 million cap. All mitigation expenses beyond the $133 million are the unconditional responsibility of the state.

Discussion
In 2015, the Water Authority received 100,000 AF of water from the transfer, which accounts for 19 percent of the total annual supply. Since 2003 the annual quantity of transfer water has increased according to an agreed-upon delivery schedule contained in the transfer agreement. When fully implemented in 2021, the transfer will provide 200,000 acre-feet annually—approximately one third of the Water Authority’s total projected annual supply. Based on the
agreement terms, land fallowing was permitted as a means to generate all of the conserved transfer water through 2012 followed by a four-year transition from fallowing to efficiency-based conservation. After 2016, fallowing will no longer be used as a conservation method for the water transfer. In 2015, 40,000 acre-feet was produced through fallowing and 60,000 acre-feet was produced through efficiency conservation.

Figure 1. IID’s Transition to Efficiency Conservation

![Diagram showing IID’s transition to efficiency conservation from fallowing to efficiency-based conservation.]

IID has implemented its voluntary fallowing through various programs that have included both multi-year and short-term contracts with rates paid to farmers ranging from $60 per acre-foot in 2003 to the current rate of $175 per acre-foot. During IID’s transition from fallowing to efficiency-based conservation, the annual water transfer volume will remain at 100,000 acre-feet through 2017 (Figure 1). As fallowing is phased-out as a conservation method, on-farm conservation and system efficiency projects will take a more prominent role in IID’s resource mix. The district currently pays $285 per acre-foot to farmers who voluntarily enroll in the district’s on-farm conservation program. On-farm conservation measures include drip irrigation, pump-back systems, and laser leveling. One of IID’s more notable system conservation efforts is its seepage recovery project along the East Highline Canal, which conserves 31,000 acre-feet of water. While the district has already installed some efficiency-based electronic water gates and added technology for staff to better monitor and prevent spills, IID is re-evaluating its system conservation program in preparation for the efficiency-based portion of the transfer with the Water Authority. Moving forward, the focus will be on long-term projects including lining major canals and building reservoirs to capture water. As part of the Fifth Amendment to the transfer agreement, the Water Authority provided IID $50 million for the exclusive purpose of constructing system conservation capital improvement projects. As of September 30, 2015, IID has utilized $11.3 million of the available $50 million.

Although not directly tied to any provisions in the transfer agreement, IID’s consumptive water use can impact the overall ease of implementation of the water transfer. Since 2003, IID has
underused its annual 3.1 million acre-feet allotment of Colorado River water by as much as 235,000 acre-feet and overused by as much as 150,000 acre-feet. Any annual overages must be repaid in subsequent years with conserved water while underused water flows to the next priority water rights holder, MWD, for free. Water use in Imperial Valley can vary drastically from year to year due to rainfall, temperature, crop type, commodity prices, and conservation obligations. In 2015, total conservation commitments accounted for 386,000 acre-feet (Table 1). To help manage water use in the district and avoid overruns, IID implemented an Equitable Distribution Program in 2013 that apportions water to individual water users.

Table 1. IID's 2015 Conservation Obligations

<table>
<thead>
<tr>
<th>Conservation Commitment</th>
<th>2015 Volume (acre-feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Authority Transfer</td>
<td>100,000</td>
</tr>
<tr>
<td>CVWD Transfer</td>
<td>36,000</td>
</tr>
<tr>
<td>MWD Transfer</td>
<td>105,000</td>
</tr>
<tr>
<td>Salton Sea Mitigation Water</td>
<td>110,000</td>
</tr>
<tr>
<td>Salton Sea Payback Water*</td>
<td>34,909</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>385,909</strong></td>
</tr>
</tbody>
</table>

*pending approval by the IID Board of Directors

QSA Joint Powers Authority
Since 2003, the QSA parties have fully mitigated environmental impacts of the QSA water transfers in the Imperial and Coachella Valleys, including to the Salton Sea. As of December 2015, the JPA has spent more than $79 million in nominal dollars on mitigation activities, including $50 million on mitigation water to the Salton Sea to offset reduced inflows and salinity impacts, $12 million in wildlife and habitat baseline surveys, $9 million for the Managed Marsh Complex, and $4 million related to Salton Sea air quality. Mitigation water will continue to be the most significant JPA expense while it is delivered to the sea through 2017, after which air quality mitigation is projected to be the greatest expense increasing in cost over time.

The QSA JPA has been funding air quality mitigation activities at the Salton Sea since 2006. In collaboration with the County of Imperial, a monitoring network was established around the Salton Sea that has been collecting air quality data since 2009 to provide baseline levels prior to the end of mitigation water in 2017. Initial data analysis indicates that the nearby desert areas west of the sea are a significant source of fugitive wind-blown dust (particulate matter) to the region. In November 2015, the JPA authorized an additional $750,000 from its fiscal year 2016 budget to collect further data on the air quality impact of these desert areas as well as on emissions from currently exposed playa. Evaluating the impact of these dust sources during the baseline period will provide evidence to ensure emissions from these sources are not attributed to the QSA water transfers. In addition to data collection and analysis, the JPA has been proactively funding the development and implementation of air quality pilot projects at the Salton Sea. Pilot projects will be evaluated for a range of parameters including habitat enhancement, cost, and dust control effectiveness. Information from air quality monitoring and pilot projects will guide future JPA mitigation activities once mitigation water ceases in 2017.
Lower Colorado River Multi-Species Conservation Program
While the QSA parties implement and fund “in-valley” environmental mitigation requirements through the QSA JPA, the Lower Colorado River Multi-Species Conservation Program (LCR MSCP) is a basin-wide environmental program to mitigate for “on-river” impacts from the QSA transfers and a variety of other programs. The 50-year MSCP establishes habitat conservation areas along the 100-year floodplain of the Lower Colorado River with acreage requirements for various habitat types designed for identified threatened and endangered species. While the U.S. Bureau of Reclamation is the MSCP’s implementing agency, over 50 stakeholders from the Lower Basin states of California, Arizona, and Nevada participate in the program’s decision-making process though the MSCP Steering Committee. The Water Authority participates in the LCR MSCP to mitigate potential impacts caused from the change in diversion point on the river from Imperial Dam to Parker Dam for the IID water transfer and canal lining water. The Water Authority’s annual funding contributions have been paid with a funding credit which is projected to be exhausted in 2021.

Prepared by: Kara Mathews, Water Resources Specialist
Lesley Dobalian, Senior Water Resources Specialist
Reviewed by: Dan Denham, Colorado River Program Director
Approved by: Maureen A. Stapleton, General Manager
January 20, 2016

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 agencies and organizations.

Discussion
Metropolitan Water District (MWD). This section provides a summary of key actions at the January 11 and 12, 2016 meetings of the MWD Board of Directors. The next committee and Board meetings will take place February 8 and 9.

2015 Integrated Resources Plan Update Adoption.
MWD adopted its 2015 Integrated Resources Plan (IRP) update this month. This is the third update since MWD adopt its first IRP in 1996. The 2015 IRP report recommends a resource development strategy that builds off of the 2010 IRP’s approach to “meet demands under observed hydrology and respond to future uncertainty.” The 2015 IRP’s strategy consists of an “IRP Approach” to meet core demands, buffer supplies, and “Future Supply Actions” (previously called Foundational Actions). The report states that the “IRP Approach,” which includes “reliability targets” for imported and local supplies, and conservation, will substantially improve MWD’s reliability in the long-term.

The 2015 IRP was supposed to be managed in two parts: a technical update phase and a Board policy phase. The January action adopted the plan without substantive discussion on policy issues by the board. Instead, upcoming discussions appear to be limited to IRP implementation issues, leaving out potential policy discussions that the 2015 IRP already assumed in its recommendations such as the level of reliability MWD should provide and how to achieve that reliability.

For details on MWD’s 2015 IRP, please see the memo “Metropolitan Water District Integrated Resources Plan Update” in this month’s Board packet.

Bard Water District Land Management and Seasonal Fallowing Pilot Program.
The Board authorized agreements with Bard Water District (Bard) for a land management and seasonal fallowing pilot program. The program will augment MWD’s Colorado River supply in 2016 and 2017. Bard is part of the Yuma Project, which has a Priority 2 entitlement to California’s Colorado River entitlement. Similar to Palo Verde Irrigation District (Priority 1 and 3(b)), Bard (as part of the Yuma Project) is not a party to the 2003 Quantification Settlement Agreement (QSA). Under the QSA, in years when the amount used by holders of priorities 1, 2 and 3(b) is less than 420,000 acre-feet, MWD is entitled to use the difference between 420,000 acre-feet and the amount of water used (or, when the amount used by holders exceeds 420,000 acre-feet, MWD must make up the difference by reducing its 550,000 acre-feet of Priority 4...
apportionment to maintain California’s 4.4 million acre-feet apportionment). Under the pilot program, MWD will pay participating farmers $400 per acre of fallowed land per year of participation, plus up to $22 per acre-foot for Bard’s development and administrative costs (including compensation for Bard’s lost revenues due to reduced water sales). The total estimated cost to MWD is up to $1.8 million for an anticipated 9,140 acre-feet of saved water over the two-year term. The estimated unit cost is $197 per acre-foot, including compensation for Bard’s lost revenues.

The MWD Committees and Board also:
- Adopted a resolution to support MWD’s application for grant funding, and authorized the General Manager to accept funding and enter into contract, if awarded;
- Appropriated funding, and authorized projects related to rehabilitation and reliability projects for the Colorado River Aqueduct;
- Heard an oral report on Water Supply Drought Management;
- Received a conservation program update as well as an oral report on water conservation advertising and outreach program;
- Heard an oral report on its budget and rate process for fiscal years 2017 and 2018;
- Received an oral update on the business continuity program;
- Heard an oral report on its quarterly financial report;
- In open session, heard a report on *San Diego County Water Authority v. Metropolitan Water District of Southern California, et al.*, San Francisco County Superior Court Case No. CPF-10-510830, No. CPF-12-512466, and No. CPF-14-514004; and
- In closed session, heard an oral update on Conference with Labor Negotiators.

Prepared by: Amy Chen, Director of MWD Program
Approved by: Dennis A. Cushman, Assistant General Manager
January 20, 2016

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 matter at the January 28, 2016 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: James J. Taylor, Acting General Counsel
January 20, 2016

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 January 28, 2016 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: James J. Taylor, Acting General Counsel
January 20, 2016

Attention: Imported Water Committee

CLOSED SESSION:
Conference with Legal Counsel – Anticipated Litigation
Government Code §54956.9(d)(4)
Potential Initiation of Litigation / One Case / MWD Forced Water Deliveries

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(4), to discuss the above-referenced matter at the January 28, 2016 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: James J. Taylor, Acting General Counsel
January 20, 2016

Attention: Imported Water Committee

CLOSED SESSION:
Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: QSA Judicial Council Coordination Proceeding No. 4353

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 January 28, 2016 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: James J. Taylor, Acting 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

II. ACTION/DISCUSSION/PRESENTATION

1. Professional services contract to AECOM to provide As-needed Environmental Consulting Services for a four-year period in an amount not to exceed $4,000,000.
   Staff recommendation: Authorize execution of a professional services agreement with AECOM Technical Services, Inc. to provide As-needed Environmental Consulting Services for four years in an amount not to exceed $4,000,000. (Action)
2. Resolution for the Hauck Mesa Storage Reservoir Project.  
   Staff recommendation: Adopt Resolution No. 2016-- that: finds that the project will not have a significant effect on the environment; adopts the Final Mitigated Negative Declaration; adopts a Mitigation Monitoring and Reporting Program; approves the Hauck Mesa Storage Reservoir Project; and authorizes filing of a Notice of Determination. (Action) 
   Mark Tegio

   Tim Bombardier / Alexi Schnell

4. Update on water supply conditions and drought response activities. (Presentation) 
   Dana Friehauf

III. INFORMATION

   Dana Friehauf

2. Fiscal Year 2016 water supply allocations monitoring. 
   Tim Bombardier

IV. CLOSED SESSION

1. Conference with Legal Counsel – Anticipated Litigation 
   Government Code §54956.9(d)(4) 
   Potential Initiation of Litigation / One Case / State Water Resources Control Board Emergency Regulations 
   James Taylor

V. ADJOURNMENT

Melinda Cogle 
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.
January 20, 2016

Attention: Water Planning Committee

Progress Report on the Water Planning Committee Work Plan for calendar years 2015 and 2016. (Information)

Purpose
This information item provides a progress report on the Water Planning Committee Work Plan for calendar years 2015 and 2016.

Background
Previous Board action: On March 26, 2015, the Board adopted the Water Planning Committee Work Plan for calendar years 2015 and 2016.

Discussion
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, Regional Water Facilities Optimization and Master Plan; water shortage and drought management planning; regional and member agency sponsored local water supply development and member agency assistance on local projects, annexation and other planning matters; environmental compliance interests of the Water Authority including the Climate Action Plan and Natural Communities Conservation Plan and Habitat Conservation Plan; and overseeing the implementation of those policies and plans.

The attached report lists the Water Planning Committee Work Plan for calendar years 2015 and 2016 and provides an update on the activities taken towards achieving the work plan. The work plan was prepared under the direction of the Water Planning Committee Chair and Vice Chairs. A final report on the work plan will be provided to the Board in December 2016.

Prepared by: Robert R. Yamada, Director of Water Resources
Reviewed by: Yen Tu, Chair, Water Planning Committee

Attachment:

1. Progress Report on the Water Planning Committee Work Plan
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)

   Activities
   No Board action required in 2015. Notice of Preparation of a Supplemental EIR published on September 18, 2015. Public scoping meeting held in Carlsbad on October 1, 2015. Consultation with Native American Tribes per AB52 initiated on October 14, 2015, and is ongoing. EIR preparation by Poseidon is continuing. Draft EIR release is tentatively scheduled for February 2016.

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)

   Activities
   Completed. The Board adopted the Final Mitigated Negative Declaration with Mitigation Monitoring and Reporting Program on May 28, 2015. The document was subsequently approved by the City of Poway, Helix Water District, Santa Fe Irrigation District, and Sweetwater Authority.

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

   Activities
   No Board action required in 2015. Staff has not commenced the CEQA planning process in order to investigate alternatives, in coordination with the regulatory agencies, to achieve project goals at less cost.

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)
Activities
The Board in October 2015 approved an amendment extending the MOU to incorporate the proportional division of Proposition 1 funding among the three planning regions. The planning regions are still getting approvals from their policy boards and councils, so this task is not yet complete.

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)

Activities
The Board approved in May 2015 the first amendment to the MOU to extend its term and maintain the financial commitment of the three agencies to the IRWM Program. The Water Authority and San Diego County have approved and signed the new MOU. City staff will ask the San Diego City Council to approve the MOU in February 2016.

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)

Activities
The Board considered and approved in June 2015 an application for the San Diego IRWM planning region’s remaining share of IRWM grant funding ($31.1 million) from the Department of Water Resources’ Proposition 84 program. DWR gave draft approval to the San Diego region’s application in October; final approval is expected in January 2016.

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)

Activities
No Board Action required in 2015. The Reservoir Storage Optimization model was initially targeted for completion in Spring 2016. However, due to overall reduced regional water demands and the current filling of San Vicente Reservoir, the need to address additional carryover storage and alleviate peak capacity constraints is no longer a priority. Completion will now be based on demand trends and will be deferred for a later date.

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)
Activities
The Board considered and approved in June 2015 an application for the San Diego IRWM planning region’s remaining share of IRWM grant funding ($31.1 million) from the Department of Water Resources’ Proposition 84 program. Final DWR approval is expected in January 2016. This Board action will fund multiple water supply projects. In addition to requesting the funding identified for recycled water and desalinated groundwater, the application also included funding for wetlands habitat recovery that will also improve water quality at Sweetwater Reservoir.

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)

Activities
The Board considered and approved in June 2015 an application for the San Diego IRWM planning region’s remaining share of IRWM grant funding ($31.1 million) from the Department of Water Resources’ Proposition 84 program. Final DWR approval is expected in January 2016. Supply projects identified for grant funding include Padre Dam Municipal Water District’s Water Recycling Facility, Phase 1 Expansion Project, which will provide an additional 1,150 acre-feet per year (AFY) of recycled water demand through the construction of project upgrades to the Ray Stoyer Water Reclamation Facility to produce advanced treated water for current non-potable and future potable reuse. Another project selected for grant funding includes the City of Escondido’s Microfiltration Reverse Osmosis Facility for Agriculture, which will produce advanced-treated recycled water suitable for agricultural uses and for future non-potable reuse system expansions, which will result in 880 AFY of recycled water.

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)

Activities
With the Board’s approval in June 2015 to submit an application for the San Diego IRWM planning region’s remaining share of IRWM grant funding ($31.1 million) from the Department of Water Resources, groundwater projects, such as the Sweetwater Authority’s Reynolds Groundwater Desalination Facility Expansion Project, will register an increase of 5,200 AFY of additional supply. With this increase, the Reynold’s Groundwater Desalination Facility will be producing up to 8,800 AFY of potable desalinated groundwater

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)
Activities
Staff reported to the Board in July 2015 on the status of implementation of the Potable Reuse Coordinating Committee’s efforts to create consistent regional messages on potable reuse. Staff completed research focused on specific demographic groups of interest in the San Diego region. The research results were shared with the Board and member agencies. The Potable Reuse Coordinating Committee members worked together to complete a regional brochure that can be used by the Water Authority and member agencies which includes common messages and information on potable reuse.

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)

Activities
Staff reported to the Board in July 2015 on the status of work being done by the State Water Resources Control Board’s Expert Panel and Advisory Group on direct potable reuse and surface water augmentation. A draft report is anticipated for release in September 2016 followed by a State Board workshop in October and final report in December. Staff continues to work with the Potable Reuse Coordinating Committee to engage with the State Water Resources Control Board on development of surface water augmentation regulations that are expected to be released prior to a State Board workshop tentatively scheduled for August 2016.

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)

Activities
No Board action required in 2015. The San Diego Regional Water Quality Control Board adopted a basin plan amendment for onsite waste disposal systems that includes significant provisions related to recycled water. The Water Authority and member agencies sent a joint letter to the San Diego Water Board that ensured that the amendments were supportive of recycled water projects. The Regional Board also agreed to develop and adopt a basin plan amendment for local reservoirs to support potable reuse projects. Staff will keep the Board informed as that basin plan amendment moves forward.

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 (LTPP) 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)
Activities
No Board action required in 2015. Staff provided comments to the Track 1 Scoping Memo for the CPUC’s 2014 LTPP proceeding and will be commenting on the recently released Track 2 Scoping Memo. Staff will also be monitoring opportunities for the upcoming 2016 LTPP as well. With the creation of the Water Authority’s Energy Program, the goal related to large-scale hydro pumped storage will be transferred to the Engineering &Operations Committee Work Plan.

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 in improvements in water quality in the Hodges Reservoir using an Integrated Regional Water Management approach. (December 2016 – Goal #6)

Activities
The final round IRWM application for Proposition 84 funding approved by the Board in June 2015 included funding for the Hodges Reservoir Natural Treatment System in the amount of $2,886,472 for improvement of water quality in Hodges Reservoir and to treat runoff from the watershed above the reservoir. Once approved, next steps include project implementation including creating the artificial wetlands above the reservoir.

Seawater Desalination

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

Activities
Completed. Contracts were approved by the Board in February 2015. Vallecitos Water District executed its Uniform Contract August 25, 2015; the Carlsbad Uniform Contract is pending execution by Carlsbad.

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

Activities
Completed. The Ocean Plan Amendment was adopted by the State Water Resources Control Board on May 6, 2015, with satisfactory regulations for intake and discharge.

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

Activities
Draft EIR preparation by Poseidon is continuing. Public release of the draft EIR is tentatively scheduled for February 2016. Review of planning documents is underway, and design reviews will begin once the EIR is approved.
4. Consider approval of site preservation agreement with Marine Corps Base Camp Pendleton for a potential future Camp Pendleton Desalination Project. (June 2015 – Goal #4)

   Activities
   The site preservation agreement is drafted and under review by Marine Corps Base Camp Pendleton. The target date is revised to June 2016 to align with the schedule for the Intake Testing Program.

5. Review annual supply and demand commitments/targets for the Carlsbad Desalination Project per the Water Purchase Agreement. (June 2015 – Goal #5)

   Activities
   Completed. The delivery schedule confirmation letter for prorated fiscal year 2016 commitment was sent to Poseidon based on a December 23, 2015, commercial operations date.

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)

   Activities
   No Board action required in 2015.

7. Consider the approval of, and monitor and take actions necessary to complete the Intake Testing Program for the Camp Pendleton Desalination Study.

   Activities
   A contract was awarded to Michael Baker International on September 24, 2015, for a two-year Intake Testing Program. Initial project tasks are in progress. A Memorandum of Understanding outlining the scope of work and coordination with Marine Corps Base Camp Pendleton was also approved in September.

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)

   Activities
   At the August 2015 Water Planning Committee meeting, the committee reviewed a report from staff on the forecasting model methodology and development process. At the January 2016 Committee meeting, staff will provide an update on development of the preliminary water demand forecast. Staff anticipates presenting the preliminary demand forecast for the Committee’s review and input at the February 2016 meeting.
2. Consider and approve the 2015 Urban Water Management Plan to comply with California Water Code Sections 10610 – 10656 (June 2016 – Goal #4)

**Activities**
At the August 2015 Committee meeting, the Committee reviewed a report from staff highlighting the main elements of the draft 2015 Urban Water Management Plan (UWMP), the schedule for development of the plan, and new UMWP Act mandates adopted since the 2010 UWMP. At the January 2016 meeting, the Committee will receive a report on the potential local and regional supplies for inclusion in the draft 2015 UWMP.

**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)

**Activities**
The Water Planning Committee reviewed monthly staff reports on supply and demand conditions along with other drought activities of the Metropolitan Water District, State Water Resources Control Board and Department of Water Resources.

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)

**Activities**
In response to supply cutbacks from Metropolitan Water District and the State Water Resources Control Board Emergency Regulation mandating statewide conservation savings, the Board, at its May 14, 2015, meeting, took the following actions:
- Declared the Mandatory Supply Cutback Stage of the Water Authority’s Water Shortage and Drought Response Plan;
- Approved member agency municipal and industrial (M&I) and Transitional Special Agricultural Water Rate supply allocations for fiscal year 2016, and set penalties for member agencies that exceed their supply allocations; and
- Required member agencies to limit outdoor irrigation of ornamental landscapes and turf with potable water to no more than two days per week.

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

**Activities**
The Board approved member agency supply allocations on May 14, 2015. On August 27, 2015, the Board approved a modification to Yuima Municipal Water District’s fiscal year 2016 M&I allocation to provide additional allocation under the loss of local supply adjustment. The Committee reviewed monthly staff reports tracking member agency deliveries compared to supply allocation targets.
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)

Activities
In January 2015, the adoption of Resolution No. 2015-01 set final terms and conditions and approved the concurrent annexation of Rainbow Municipal Water District’s proposed Campus Park West annexation to the Water Authority and the Metropolitan Water District, conditioned upon the fulfillment of all conditions and final approval by the San Diego Local Agency Formation Commission.

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)

Activities
Completed. No Board action required in 2015. The Notice of Exemption was posted with the San Diego County Clerk on October 29, 2015. The thirty-five day statute of limitations for filing court challenges to approval of the project expired December 3, 2015, with no legal challenges filed.

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)

Activities
Completed. The Board adopted the Final Mitigated Negative Declaration with Mitigation Monitoring and Reporting Program on October 22, 2015.

IRWM and Grants Administration

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

Activities
Staff worked with DWR and the San Pasqual Band of Mission Indians to satisfy CEQA requirements associated with San Pasqual’s project that is being supported by the San Diego Proposition 84, Round 2 IRWM grant program. Staff plans to use the same process to satisfy CEQA requirements for other tribal projects receiving funding from San Diego IRWM grants.
January 20, 2016

Attention: Water Planning Committee

Professional services contract to AECOM to provide As-needed Environmental Consulting Services for a four-year period in an amount not to exceed $4,000,000. (Action)

Staff recommendation
Authorize execution of a professional services agreement with AECOM Technical Services, Inc. to provide As-needed Environmental Consulting Services for four years in an amount not to exceed $4,000,000.

Alternatives
Do not authorize the contract, and direct staff to negotiate with other consultant(s) or solicit new proposals.

Fiscal Impact
The availability of funds and the rate category are dependent upon the specific projects as they are identified for these services. Funds identified for use in future fiscal years will be dependent upon Board approval of the future budgets.

Background
The approval and implementation of CIP and Operating Program projects require preparation of environmental review documents in compliance with CEQA and NEPA, as well as regulatory permits from various federal and state agencies including, but not limited to: U.S. Fish & Wildlife Service, U.S. Army Corps of Engineers, California Department of Fish & Wildlife, Regional Water Quality Control Board, and the California Coastal Commission. The Water Authority does not have the in-house staff resources to effectively meet all environmental regulatory compliance requirements in a timely manner. The Water Authority also has an ongoing need for specialized professional services. Field surveys, technical studies, and preparation of environmental documents require a specialized skill set. Staff often does not have the specialized expertise or time available to effectively address the myriad of environmental issues associated with Water Authority projects.

As such, the As-needed Environmental Consulting contract assists staff in two ways: 1) directly provides general and technical environmental consulting services on an as-needed/on-call basis for individual work tasks that cost $150,000 or less; and, 2) supports consultant procurement using the Water Authority’s Request for Proposals (RFP) process for work anticipated to exceed $150,000. Use of the As-needed Environmental Consultant also helps to streamline the environmental process by providing a single consultant that can respond immediately to as-needed work, while providing project management support that can increase or decrease to match a changing workload.

The previous As-needed Environmental Consultant contract and its predecessor contracts have been used with much success over the past eleven years, providing key environmental support to Water Facilities Programs, including several high-profile projects such as Asset Management,
Desalination, and Emergency/Carryover Storage, enabling Water Authority staff to efficiently and effectively resolve environmental issues.

The use of a consultant to provide these services is consistent with the Water Authority’s current Business Plan staffing strategy, incorporating a cost effective blend of resources, including regular staff and consultants. Staffing decisions are based on established criteria designed to add value to the organization, reduce risk, and complement/leverage existing staff competencies. Criteria considered for this recommendation included: staff workload, project timing and duration, and specialized skill/service/equipment.

Discussion

Authorized expenditures under the current As-Needed Environmental Consulting contract are near maximum levels. As a result, a new procurement process for As-Needed Environmental Consulting services was initiated.

A RFP for As-needed Environmental Consulting Services was advertised and emailed directly to environmental consulting firms via the Water Authority’s online vendor database (The Network) on November 13, 2015. Representatives from ten firms attended the pre-proposal meeting held on November 23, 2015. Four firms submitted proposals: AECOM, Environmental Consultants Enterprise, Helix Environmental, and RECON Environmental.

Three firms were short-listed and interviewed by a panel comprised of Water Authority staff. The selection criteria required firms to demonstrate their understanding of the scope of work, technical and specialized qualifications, familiarity with similar projects, and past performance, including the firm’s ability to meet schedules and control costs. Based upon the application of the criteria to the evaluation of written proposals and interviews, AECOM was selected by the panel as the best qualified to perform the required work at a fair and reasonable price. The AECOM team provides a breadth of expertise and depth of resources in the disciplines required for environmental regulatory compliance, and has proven over numerous similar projects its ability to deliver quality work within schedule and budget.

Consultant selection was determined, in part, by the consultant’s demonstrated effort in conducting effective outreach to local small firms during the solicitation period. This commitment included documentation of all efforts to indicate the consultant’s understanding of the Water Authority’s equal opportunity objectives; in particular, a willingness to make meaningful sub-consulting and employment opportunities available to all interested and qualified firms. For this contract, AECOM has identified SCOOP sub-consultants on the project team for the following disciplines: biology, noise, paleontology and traffic. SCOOP staff have verified AECOM’s good faith efforts to conduct outreach to qualified small businesses, including, but not limited to, outreach to minority and women-owned businesses. The small business participation will be identified as task orders are issued, as this is an as-needed contract. AECOM will be required to comply with the requirements of the Small Contractor Outreach and Opportunities Program.

Prepared by: Mark V. Tegio, Senior Water Resources Specialist
Reviewed by: Robert R. Yamada, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager
January 20, 2016

Attention: Water Planning Committee

Resolution for the Hauck Mesa Storage Reservoir Project. (Action)

Staff recommendation
Adopt Resolution No. 2016-__ (attached) that:
   a) Finds that the project will not have a significant effect on the environment;
   b) Adopts the Final Mitigated Negative Declaration;
   c) Adopts the Mitigation Monitoring and Reporting Program;
   d) Approves the Hauck Mesa Storage Reservoir Project; and
   e) Authorizes filing a Notice of Determination.

Alternatives
1) Do not adopt the recommended actions and direct staff to revise and recirculate the environmental compliance documents to include changes as directed by the Board. This will likely delay project approval by 30 to 60 days.
2) Do not adopt the recommended actions and do not construct the Hauck Mesa Storage Reservoir Project. The operational benefits of flow regulatory storage on the Valley Center Pipeline and First Aqueduct will not be realized.

Fiscal Impact
There is no fiscal impact.

Background
The Hauck Mesa Storage Reservoir project is a new flow regulatory storage (FRS) reservoir and associated control facility in the Valley Center area proposed to improve aqueduct system operations. It would improve surge protection, service reliability and efficiency of the Valley Center Pipeline and Valley Center Pump Station by providing flow regulatory water storage and associated control, protecting against outage events that could impede daily operation of the Valley Center Pump Station. Aqueduct flow regulatory system storage would also provide operational flexibility to help balance system flows. The proposed FRS reservoir would provide service reliability to portions of the Valley Center Municipal Water District (VCMWD), Vallecitos Water District, Vista Irrigation District, and the Rincon del Diablo Municipal Water District.

Pursuant to the California Environmental Quality Act, the Water Authority released a Draft Mitigated Negative Declaration for the project on November 10, 2015. Notices announcing the availability of the documents and public hearing were posted on the Water Authority website, published in the Union Tribune and mailed to interested parties. A public hearing to receive comments on the adequacy of the Draft MND was held at the Water Planning Committee on December 10, 2015, at which no speakers were present. The public comment period closed at 5 p.m. that same day.
Discussion
The Draft MND analyzed the demolition of an existing water tank on site, and the construction and operation of the new FRS reservoir. The analyses concluded that although the proposed project could have environmental effects related to biological resources, those effects will not be significant because measures have been incorporated into the project to avoid and/or reduce such impacts to below a level of significance.

The public review period for the Draft MND extended from November 10, 2015 to December 10, 2015. The Draft MND was circulated to the Governor’s Office of Planning and Research, State Clearinghouse along with the required Notice of Completion. Copies of the Draft MND were also sent to responsible and trustee agencies, as well as other interested agencies, organizations, and individuals. The Draft MND was also posted on the Water Authority’s website. A comment letter was received from the County of San Diego. All relevant comments were addressed in the Final MND. None of the comments presented facts or raised issues that would trigger preparation of an Environmental Impact Report.

The Final MND is comprised of the Draft MND and the Mitigation Monitoring and Reporting Program. It includes revisions to clarify and correct the Draft MND, where necessary. No new significant information has been presented in the Final MND that would require recirculation of the Draft MND pursuant to Section 15073.5(a) of the CEQA Guidelines. The Final MND can be found at the following link:

http://www.sdcwa.org/hauck-mesa-storage-reservoir

The Board, as CEQA Lead Agency, needs to consider adoption of the attached Resolution that contains certain findings regarding environmental effects of the project. The Resolution also approves the project and authorizes the filing of a Notice of Determination. The CEQA process will be complete when staff files a NOD indicating adoption of the Final MND and approval of the project.

Prepared by: Mark V. Tegio, Senior Water Resources Specialist
Reviewed by: Robert R. Yamada, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager

Attachment: Resolution No. 2016-_______ adopting the Final Mitigated Negative Declaration for the Hauck Mesa Storage Reservoir Project
RESOLUTION NO. 2016-______

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN DIEGO COUNTY WATER AUTHORITYADOPTING THE FINAL MITIGATED NEGATIVE DECLARATION FOR HAUCK MESA STORAGE RESERVOIR PROJECT; ADOPTING A MITIGATION MONITORING AND REPORTING PROGRAM; APPROVING THE PROJECT; AND AUTHORIZING FILING OF A NOTICE OF DETERMINATION.

WHEREAS, pursuant to the California Environmental Quality Act (CEQA), the State CEQA Guidelines, and the San Diego County Water Authority (Water Authority) Procedures Implementing the California Environmental Quality Act, an Initial Study was prepared regarding the Hauck Mesa Storage Reservoir project; and

WHEREAS, as the result of the Initial Study, a Mitigated Negative Declaration was prepared for public review and consideration by the Board; and

WHEREAS, the Mitigated Negative Declaration was prepared by the Water Authority in consultation with firms or persons having expertise in the analysis of the environmental effects of projects and in the preparation of environmental documentation; and

WHEREAS, a draft of the Mitigated Negative Declaration was made available for a minimum 30-day public review period commencing on November 10, 2015, and ending on December 10, 2015, notice was published at least one time in a newspaper of general circulation as to the availability of the draft Mitigated Negative Declaration, and of a scheduled public hearing to receive public comments, and copies were distributed to the Governor’s Office of Planning and Research, State Clearinghouse along with the required Notice of Completion, and to responsible and trustee agencies, as well as other interested agencies, organizations, and individuals; and

WHEREAS, after review of all written comments and preparation of responses thereto, the Final Mitigated Negative Declaration was presented to the Board of Directors on January 28, 2016, as having been completed in compliance with CEQA and the State CEQA Guidelines; and

WHEREAS, having heard and considered the evidence, and being fully advised regarding the environmental consequences of the project, it is in the interest of the Water Authority and the people it serves to approve the Final Mitigated Negative Declaration, to make findings regarding the environmental effects of the project, to approve a Mitigation Monitoring and Reporting Program, and to approve the project.

NOW, THEREFORE, the Board of Directors of the San Diego County Water Authority resolves:

1. That the foregoing recitals are true and correct.

2. That the Board, as the lead agency under CEQA, hereby finds that the Final Mitigated Negative Declaration has been completed in compliance with the California Environmental Quality Act, that the Final Mitigated Negative Declaration has been presented to the Board and reflects the independent judgment of the Board,
that the Board adopt the Final Mitigated Negative Declaration, and that the Board has reviewed and considered the information contained therein prior to approving the project.

3. That all mitigation measures identified in the Final Mitigated Negative Declaration are hereby made conditions of approval of the project, that the Board approves the Mitigation Monitoring and Reporting Program, and that the General Manager or her designated representative be assigned the task of implementing the Mitigation Monitoring and Reporting Program.

4. That the Board, having reviewed and considered the information contained in the Initial Study, Final Mitigated Negative Declaration, and all pertinent documents, records, and comments, finds that measures have been incorporated into the project which mitigate or avoid significant environmental effects thereof, that the project will not have a significant effect on the environment and involves no potential for any adverse effect, either individually or cumulative, on wildlife resources, that it cannot be fairly argued on the basis of substantial evidence that the proposed project may have a significant effect on the environment, and that there is no serious public controversy concerning the environmental effect on the proposal.

5. That the Board approves the Hauck Mesa Storage Reservoir project.

6. That the General Manager be authorized and is directed to file a Notice of Determination as provided in Section 15075 of the State CEQA Guidelines.

PASSED, APPROVED AND ADOPTED, this 28th day of January 2016, by the following vote:

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 Resolution No. 2016-_____ was duly adopted at the meeting of the Board of Directors on the date stated above.

____________________________
Melinda Cogle, Clerk of the Board
January 20, 2016

Attention: Water Planning Committee


Purpose
To provide an update on preparation of the Water Authority’s 2015 Urban Water Management Plan, and provide preliminary projections on Water Authority and member agency water supplies for inclusion in the draft 2015 Urban Water Management Plan.

Background
The California Urban Water Management Planning Act (Act), which is included in the California Water Code, requires all urban water suppliers within the state to prepare an Urban Water Management Plan (UWMP) and update it every five years. The Act defines an urban water supplier as an agency that provides water for municipal purposes to more than 3,000 customers or supplies more than 3,000 acre-feet of water annually. By this definition, the Water Authority and its member agencies, excluding the City of Del Mar and the Yuima Municipal Water District, are required to update and adopt a UWMP for submittal to the California Department of Water Resources (DWR). The UWMP must contain a forecast of water demands and detailed evaluation of supplies necessary to meet these demands over a minimum 20-year planning horizon for both normal and dry year conditions.

At the August 27, 2015 Water Planning Committee meeting, staff provided an overview of the six main elements of the UWMP, which include 1) Baseline Demand Forecast; 2) Conservation Savings and Water Demand Projections; 3) Water Supplies; 4) Supply Reliability Assessment – Identifying the Projected Water Resource Mix; 5) Scenario Planning; and 6) Shortage Contingency Analysis. The August 2015 report also discussed new mandates that were added to the Act, including extending the deadline for submittal of the UWMP until July 1, 2016. The deadline was extended in response to agencies needing more time to gather data necessary to calculate their actual 2015 per capita water use, which is compared to their target in the 2015 UWMPs.

To date, staff has been focusing its effort on development of the long-term demand forecast, drafting sections of the plan and coordinating with the member agencies to determine projected local supply figures for inclusion in the UWMP. This report provides an update on development of forecast and preliminary projections on local and regional water supplies. At the February 25, 2016 Committee meeting, staff is scheduled to provide the preliminary demand forecast and supply mix.

Discussion
Baseline Demand Forecast
The Water Authority has utilized an econometric model since the mid-1990’s to forecast baseline long-range water demands for its UWMP updates. The Water Authority’s Municipal and Industrial Needs (CWA-MAIN) model projects Water Authority member agency demands by residential, non-residential and agricultural sectors. Development of the preliminary regional
baseline demand forecast is nearly complete, with staff performing a review of sector level demand projections. Upon completion of the regional assessment, staff will conduct a final member agency level analysis of forecasted demands before distributing baseline projections to agencies in early February 2015 for their review. The baseline forecast does not incorporate additional future conservation savings projections, which is done separately. Conservation savings estimates described in the next section will be subtracted from the baseline forecast to generate the Water Authority’s long-term demand projections used in the UWMP demand and supply analysis.

**Conservation Model**

The amount of future conservation savings is a critical element in determining the need for additional supplies. Conservation is also an important resource strategy for ensuring a cost-effective reliable supply of water for the region. To develop projected conservation savings staff selected the Conservation Tracking Tool developed by the Alliance for Water Efficiency (AWE). This spreadsheet-based application enables the evaluation of different conservation scenarios going forward considering existing and future “passive” or code-based water savings and “active” savings resulting from the implementation of demand management programs. The overall goal is to prepare projected conservation savings numbers, in coordination with the member agencies, which are then deducted from the baseline forecast to generate the long-term water demand projection for the region. As part of the conservation modeling effort for future savings, the conservation tracking tool will include estimated outdoor water savings from implementation of the Model Water Efficiency Landscape Ordinance (MWELO) on new housing. The level of enforcement is anticipated to vary by jurisdiction. In addition, existing homes have and will likely continue to voluntarily incorporate landscape improvements that approach the outdoor water savings required under the MWELO. To date, preliminary estimates of annual historic active and passive savings have been generated by the model and are being compared with previous Water Authority calculated savings totals. Staff is also finalizing a set of assumptions that will be used to develop a forecast of future conservation savings. Member agency level savings estimates are scheduled to be distributed to the member agencies in early February 2015 for their review.

**Water Supplies**

Preparation of the UWMP includes identification of the existing and future water supplies from the Water Authority and member agencies that are available to meet projected water demands. To aid staff in analyzing the availability of projected water supplies, these supplies are separated into one of three categories: verifiable, additional planned, or conceptual.

“Verifiable” projects are defined as those with substantial evidence and adequate documentation regarding implementation and supply utilization. They have been identified by the Water Authority or member agencies as having achieved a level of certainty in their planning and implementation where CEQA has been satisfied, permits are in hand, or contracts have been executed. Verifiable supplies are included in water supply assessments and verifications prepared by retail water agencies and used by the cities and county in their land use decisions regarding available water supplies for growth under SB 221 and SB 610. These projects will be used in the Water Authority’s reliability assessment and development of the future resource mix for the San Diego region.
“Additional Planned” projects are those that either the Water Authority or member agencies are actively pursuing but do not rise to the level of verifiable for implementation. Agencies have completed the feasibility phase for these projects and continue to fund advanced planning efforts, such as design work. Supplies from additional planned projects will be utilized to identify additional goals for the region that can potentially further diversification efforts and manage future supply uncertainties. “Conceptual” projects are those considered to be in the pre-planning and pre-feasibility analysis phase, where the projects have not progressed to a point where the project yield can be factored into reliability assessments or uncertainly planning for the 2015 UWMP.

**Water Authority Verifiable Supplies**

Table 1 provides a summary of the Water Authority’s projected verifiable projects for inclusion in the 2015 UWMP and are part of the reliability analysis. The Water Authority’s purchases of supplemental supplies from the Metropolitan Water District will be calculated as the supply increment necessary to meet demands after taking into account conservation savings and Water Authority and member agency verifiable supplies.

<table>
<thead>
<tr>
<th>San Diego County Water Authority</th>
<th>Verifiable Projected Water Supplies (AF) - Normal Weather Year</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing Supplies FY 2015</strong></td>
<td><strong>2020</strong></td>
</tr>
<tr>
<td>Imperial Irrigation District Water Transfers 100,000</td>
<td>190,000</td>
</tr>
<tr>
<td>Canal Lining Projects 80,200</td>
<td>80,200</td>
</tr>
<tr>
<td>Claude “Bud” Lewis Carlsbad Seawater Desalination Plant --</td>
<td>50,000</td>
</tr>
<tr>
<td><strong>Total Projected Supplies</strong></td>
<td>320,200</td>
</tr>
</tbody>
</table>

**Member Agency Verifiable Supplies**

The projections for member agency local supplies are provided by the member agencies. Staff works closely with the member agencies to ensure that the local supplies identified in their UWMPs are consistent with the figures in the Water Authority’s UWMP. The member agencies also identify the supply category for each of their potential projects. Table 2 contains a draft regional summary of the member agencies’ verifiable projected local supplies.
Table 2
Water Authority Member Agencies
Verifiable Projected Water Supplies (AF) - Normal Weather Year

<table>
<thead>
<tr>
<th>Supply Yield FY 2015</th>
<th>Member Agency Supplies</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Surface Water</td>
<td>4,071</td>
<td>51,600</td>
<td>51,500</td>
<td>51,400</td>
<td>51,300</td>
</tr>
<tr>
<td></td>
<td>Groundwater</td>
<td>23,773</td>
<td>30,000</td>
<td>40,700</td>
<td>41,700</td>
<td>47,300</td>
</tr>
<tr>
<td></td>
<td>Recycled Water</td>
<td>26,485</td>
<td>39,200</td>
<td>44,700</td>
<td>44,800</td>
<td>45,000</td>
</tr>
<tr>
<td></td>
<td>Potable Reuse</td>
<td>-</td>
<td>1,000</td>
<td>6,400</td>
<td>6,400</td>
<td>6,400</td>
</tr>
<tr>
<td></td>
<td>Seawater Desalination</td>
<td>-</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Total Projected Supplies</td>
<td></td>
<td>127,800</td>
<td>149,300</td>
<td>150,300</td>
<td>156,000</td>
<td>156,200</td>
</tr>
</tbody>
</table>

1  Existing local surface water and groundwater supplies reflect dry-year yields and projected yield is based on normal conditions. No future increase in surface water yield is anticipated. Increased storage capacity is achieved through the Water Authority’s carry-over storage project and programs which will be reflected in dry-year resource mix.

2  Includes groundwater production and brackish groundwater.

3  Includes groundwater supplies for Yuima MWD mutual water companies requesting loss of local supply adjustment as part of the Water Authority’s water supply allocation.

Additional Planning Projects
The Water Authority and member agencies must continue to strive to develop cost-effective local resources that can further diversify the region’s supplies and reduce demands for imported water from Metropolitan. The additional planned projects provide objectives for the region to work towards by resolving any funding, regulatory, and other constraints associated with implementation. The additional planned projects are considered potential supply management strategies in the Water Authority’s UWMP scenario planning process. Table 3 shows the draft projected additional planned projects to be included in the Water Authority’s draft 2015 UWMP.

Table 3
Water Authority and Member Agencies
Projected Additional Planned Water Supplies (AF) - Normal Weather Year

<table>
<thead>
<tr>
<th></th>
<th>Member Agency Supplies</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Groundwater</td>
<td>3,100</td>
<td>3,100</td>
<td>3,600</td>
<td>3,600</td>
<td>3,600</td>
</tr>
<tr>
<td></td>
<td>Recycled Water</td>
<td>4,300</td>
<td>7,400</td>
<td>12,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td></td>
<td>Potable Reuse</td>
<td>5,000</td>
<td>29,600</td>
<td>47,300</td>
<td>47,300</td>
<td>47,300</td>
</tr>
<tr>
<td></td>
<td>Seawater Desalination</td>
<td>-</td>
<td>15,100</td>
<td>15,600</td>
<td>16,100</td>
<td>16,800</td>
</tr>
<tr>
<td>Water Authority Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seawater Desalination</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>56,000</td>
<td>56,000</td>
</tr>
</tbody>
</table>

1  Additional planned projects are identified in order to provide potential additional water supply objectives for use in scenario planning, but are not utilized in the 2015 UWMP reliability assessment.

2  Includes brackish groundwater recovery projects.
Conceptual Projects
As mentioned earlier, due to the very preliminary nature of water supply projects identified as conceptual, projected conceptual water supplies will not be considered for reliability assessments or uncertainty planning in development of the 2015 UWMP. Table 4 includes the draft projected conceptual water supplies as identified by the member agencies.

Table 4
Water Authority and Member Agencies
Projected Conceptual Water Supplies (AF) 1 Normal Weather Year

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
<th>2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Agency Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groundwater 2</td>
<td>5,100</td>
<td>12,900</td>
<td>16,100</td>
<td>16,200</td>
<td>16,300</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>6,400</td>
<td>8,900</td>
<td>13,800</td>
<td>15,600</td>
<td>17,100</td>
</tr>
<tr>
<td>Potable Reuse</td>
<td>2,200</td>
<td>4,400</td>
<td>4,400</td>
<td>68,300</td>
<td>78,600</td>
</tr>
<tr>
<td>Seawater Desalination</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water Authority Supplies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seawater Desalination</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

1 Conceptual water supply projects are not utilized in the 2015 UWMP reliability assessment or scenario planning.
2 Includes brackish groundwater recovery projects.

Schedule
A public review draft of the Water Authority’s 2015 UWMP is scheduled to be released to the Board and public in March 2016. Prior to release of the public review draft, the member agency managers will have an opportunity to conduct a technical review of the draft plan. Staff anticipates presenting the final draft 2015 UWMP to the Board for approval in May 2016.

Updated Schedule for Preparation and Adoption of Water Authority’s 2015 Urban Water Management Plan

<table>
<thead>
<tr>
<th>Activity</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member Agency coordination meeting for 2015 UWMP</td>
<td>Jul 15, 2015</td>
</tr>
<tr>
<td>Staff report to SDCWA Board on preparation of 2015 UWMP</td>
<td>Aug 27, 2015</td>
</tr>
<tr>
<td>Member agencies provide local supply projections and SBX7-7 target information</td>
<td>Sep – Nov 2015</td>
</tr>
<tr>
<td>Staff report to SDCWA Board on preparation of 2015 UWMP and preliminary projections on water supplies</td>
<td>Jan 28, 2016</td>
</tr>
<tr>
<td>Staff report to SDCWA Board on 2015 UWMP preliminary demand forecast, projected conservation and proposed supply mix</td>
<td>Feb 25, 2016</td>
</tr>
<tr>
<td>2015 UWMP stakeholder outreach effort</td>
<td>Mar - Apr 2016</td>
</tr>
<tr>
<td>Event/Stages</td>
<td>Date</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Public Hearing on Draft 2015 UWMP (SDCWA Board meeting)</td>
<td>Apr 28, 2016</td>
</tr>
<tr>
<td>SDCWA Board considers approval of 2015 UWMP</td>
<td>May 26, 2016</td>
</tr>
<tr>
<td>Submit adopted 2015 UWMP to DWR</td>
<td>Jun 2016</td>
</tr>
</tbody>
</table>

Prepared by: Alexi Schnell, Water Resources Specialist  
Reviewed by: Robert R. Yamada, Director of Water Resources  
Approved by: Sandra L. Kerl, Deputy General Manager
January 20, 2016

Attention: Water Planning Committee

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

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
On November 13, 2015, Governor Brown issued Executive Order B-36-15, which required the State Water Resources Control Board (SWRCB) to extend the May 2015 Emergency Regulation for Statewide Urban Water Conservation (May 2015 Emergency Regulation) through October 31, 2016, should drought conditions persist through January 2016. It also directed the SWRCB to consider modifying the existing restrictions to address uses of potable and non-potable water, and to incorporate insights gained from the existing restrictions. The SWRCB held a public workshop on December 7, 2015, to receive comments on extension of the 2015 Emergency Regulation. The Water Authority Board Chair and staff provided oral comments at the workshop outlining a proposed supply credit that would allow communities to realize the reliability benefit from investing in drought-resilient supplies. A number of Water Authority and member agency board members and staff also participated in the workshop. Leading up to the workshop, close to 170 written comments were submitted from the San Diego region, advocating for the supply credit and a more sustainable approach to managing California’s drought.

Previous Board action: In response to MWD supply cutbacks and the SWRCB regulation for statewide urban water conservation, the Water Authority Board, at its May 14, 2015 meeting:
- Declared the Mandatory Supply Cutback Stage of the Water Authority’s Water Shortage and Drought Response Plan
- Approved member agency municipal and industrial (M&I) and Transitional Special Agricultural Water Rate supply allocations for fiscal year 2016, and set penalties for member agencies that exceed their supply allocations
- Restricted irrigation of ornamental landscapes and turf with potable water to no more than two days a week across the region

Discussion
State Water Resources Control Board Emergency Regulation
On January 15, 2016, SWRCB staff released a proposed Emergency Regulation that would extend the May 2015 Emergency Regulation until 2016. The proposed Emergency Regulation is based on Governor Brown’s November 13, 2015 Executive Order and in response to comments received from stakeholders. The proposed Emergency Regulation will maintain many of the same requirements that apply now. Proposed changes to the May 2015 Emergency Regulation include, but are not limited to:
• Credits and adjustments to urban water suppliers’ conservation standards that consider the
differences in climate affecting different parts of the state; growth experienced by urban areas; and
significant investments that have been made by some suppliers toward creating new, local,
drought-resilient sources of potable supply;
• Further defining commercial agriculture as producing at least $1,000 in revenue the previous year
or would have but for circumstances beyond their control;
• Compliance period is extended until October 2016 and the State Water Board will continue to
assess compliance on a cumulative basis since June 2015; and
• Penalties for homeowners’ associations impeding homeowners from reducing or eliminating the
watering of vegetation or lawns during a declared drought emergency.

In order to be eligible for the drought-resilient supply credit, the urban water supplier must certify
that:
• Use of the drought-resilient supply does not reduce water available to another legal user or the
environment;
• The drought-resilient supply was developed after 2013; and
• Four (4) percent or more of the supplier’s total potable production is new, local drought-resilient
supplies.

The credit will be equal to the urban water supplier’s percentage of drought-resilient supplies, up to a
maximum of eight percent. Table 1 provides a breakdown of the reduction levels, based on the
proposed Emergency Regulation.

<table>
<thead>
<tr>
<th>Drought-Resilient Supplies Percentage of Total Potable Production</th>
<th>Reduction from Conservation Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 – 4.9%</td>
<td>4%</td>
</tr>
<tr>
<td>5 – 5.9%</td>
<td>5%</td>
</tr>
<tr>
<td>6 – 6.9%</td>
<td>6%</td>
</tr>
<tr>
<td>7 – 7.9%</td>
<td>7%</td>
</tr>
<tr>
<td>8% +</td>
<td>8%</td>
</tr>
</tbody>
</table>

Written comments are due to the SWRCB on the proposed Emergency Regulation by 12:00 p.m. on
Thursday, January 28, 2016. The State Water Board will consider adoption of the proposed
Emergency Regulation at its February 2, 2016, public meeting. Staff will provide a more detailed
analysis of the proposed Emergency Regulation and drought-resilient supply credit at the January 28th
Water Planning Committee meeting.

State Water Project
The 2015 water year (October 1 – September 30) ended with statewide runoff at 45 percent of
average and will be recorded as the fourth year of one of the state’s most severe dry periods on
record. The critical conditions have resulted in the storage at key State Water Project reservoirs
remaining well below average (Table 2).
Table 2. Reservoir Storage Levels on January 18, 2016

<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>1.174</td>
<td>33%</td>
<td>52%</td>
</tr>
<tr>
<td>San Luis'</td>
<td>0.588</td>
<td>29%</td>
<td>39%</td>
</tr>
<tr>
<td>Combined</td>
<td>1.762</td>
<td>32%</td>
<td>47%</td>
</tr>
</tbody>
</table>

*San Luis storage includes SWP and Central Valley Project. SWP share in San Luis was approximately 466 thousand acre-feet (TAF).

Snowpack in the northern Sierra Nevada is above-average for this time of year. As of January 19, 2016, the Northern Sierra index of snow-water content is 121 percent of normal for this date. Precipitation in the northern Sierra Nevada as of January 19, 2016, was 110 percent of average and, in the southern Sierra Nevada, 116 percent of average.

Colorado River
As of January 19, 2016, precipitation in the Upper Colorado River Basin was 101 percent of average. Snowpack in the Upper Colorado River Basin was 105 percent of average as of the same date. With 11 out of the last 16 years dry in the Colorado River Basin, reservoir storage in Lake Mead and Lake Powell remains low (Table 3).

Table 3. Reservoir Storage Levels on January 18, 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>11.6</td>
<td>48%</td>
</tr>
<tr>
<td>Lake Mead</td>
<td>10.2</td>
<td>39%</td>
</tr>
<tr>
<td>Combined</td>
<td>21.8</td>
<td>43%</td>
</tr>
</tbody>
</table>

Metropolitan Water District Demands and Storage Levels
Since implementation of Level 3, (15 percent cutback), of its Water Supply Allocation Plan on July 1, 2015, MWD experienced its lowest sales since the 1980’s. The drop in demand is closely tied to agencies complying with the state mandated reductions that began June 1, 2015. MWD is projecting water sales for fiscal year 2016 to track at 1.4 million acre-feet (MAF), excluding the Water Authority’s Colorado River transfer deliveries. This lower demand is helping MWD withdraw less from its storage reserves. At the beginning of January 2016, storage levels were at 872 thousand acre-feet (TAF), excluding emergency storage of 626 TAF.

Local Supply and Demand Conditions
Rainfall totals for water year 2016, for two stations in San Diego County, are shown in Table 4. Forecasters continue to project that the potential storms associated with the El Niño condition will continue to occur in the upcoming winter months.
Total local reservoir storage on January 19, 2016 was approximately 319,800 AF (43 percent of capacity). This total includes “dead storage,” or capacity that is physically inaccessible or restricted by agency operating or emergency storage policies. As of December 31, 2015, the Water Authority had approximately 67,400 AF of carryover supplies, and an additional 33,900 AF of emergency storage, in San Vicente Reservoir. The Water Authority’s Semitropic groundwater storage account has about 16,100 AF in storage.

Total Potable Municipal and Industrial (M&I) Water Use
As discussed earlier, the SWRCB 2015 Emergency Regulation has been in effect since June 2015. Figure 1 shows a comparison of the Water Authority’s member agencies’ total potable M&I monthly water use for the months being assessed under the May 2015 Emergency Regulation and the corresponding months in 2013. Potable M&I water use excludes recycled water use and Transitional Special Agricultural Water Rate (TSAWR) water use. Member agencies’ total potable M&I use in December 2015 was approximately 28,300 AF. Overall, this represents an 18 percent decrease for total potable M&I water use from the same period in 2013. On a cumulative basis, the region experienced a 24 percent drop in potable M&I use for the months of June through December, compared to the same months in 2013. The 24 percent savings exceeds the regional target of 20 percent based on the aggregate of the member agency conservation mandates under the SWRCB 2015 Emergency Regulation.

Table 4. Rainfall Totals as of January 18, 2016

<table>
<thead>
<tr>
<th>Station</th>
<th>Inches</th>
<th>Percent Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindbergh Field</td>
<td>5.88</td>
<td>137%</td>
</tr>
<tr>
<td>Ramona Airport</td>
<td>9.05</td>
<td>143%</td>
</tr>
</tbody>
</table>

Figure 1

Member Agency Total Potable M&I Monthly Water Use (acre-feet)
As shown in Figure 2, monthly rainfall at Lindbergh Field this year has been higher than in the corresponding calendar year 2013 months, totaling 5.85 inches versus 2.24 inches in the base period.

Seasonal Outlook
According to the December 17, 2015 three-month outlook, the U.S. National Oceanic and Atmospheric Administration’s Climate Prediction Center (CPC) forecasts above-average precipitation for the southwest region from January through March (Figure 3). The outlook on temperature is also for continued above average temperatures through March for the entire state.

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

Prepared by: Maria G. Mariscal, Senior Water Resources Specialist
Prepared by: Dana L. Friehauf, Water Resources Manager
Reviewed by: Robert R. Yamada, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager
January 20, 2016

Attention: Water Planning Committee

Water Resources Report

Purpose
This report includes the following exhibits for November and December 2015:

- Rainfall totals for the two months 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)

### RAINFALL TOTALS (inches)

<table>
<thead>
<tr>
<th>Station</th>
<th>November 2015 / December 2015</th>
<th>2015-2016 WATER YEAR (October 2015 through September 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Normal</td>
</tr>
<tr>
<td>Lindbergh Field</td>
<td>1.54 / 0.88</td>
<td>1.01 / 1.53</td>
</tr>
<tr>
<td>(N.O.A.A.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Cuyamaca</td>
<td>2.86 / 5.56</td>
<td>3.26 / 4.89</td>
</tr>
<tr>
<td>(Helix W.D.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lake Henshaw</td>
<td>1.12 / 3.09</td>
<td>2.21 / 3.94</td>
</tr>
<tr>
<td>(Vista I.D.)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Accumulated through December 2015.

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

#### (acre-feet)

**NOVEMBER 2015**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>November 2015</th>
<th>November 2014</th>
<th>12 Months Ended November 2015</th>
</tr>
</thead>
<tbody>
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<td>44,037.7</td>
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<td>12.5</td>
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<td>6,497.5</td>
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1 November 2015 storage account deliveries totaled 4,196 AF to San Vicente Reservoir through city of San Diego connections. November 2014 storage account deliveries totaled 203 AF and 552 AF to Lower Otay and San Vicente Reservoirs through city of San Diego connections, respectively.
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<td>1,706.3</td>
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<td>33,026.9</td>
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<td>575.5</td>
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<td>58.4</td>
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<td>450.7</td>
<td>8,733.7</td>
<td>12,308.2</td>
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<td>897.8</td>
<td>485.6</td>
<td>17,867.8</td>
<td>22,624.6</td>
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<td>253.2</td>
<td>230.5</td>
<td>5,163.8</td>
<td>6,938.4</td>
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<td>249.4</td>
<td>4,955.3</td>
<td>6,577.1</td>
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<tr>
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<td>4,953.2</td>
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<tr>
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<td>185.6</td>
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<td>11,087.4</td>
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<tr>
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<td>778.8</td>
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<td>12,507.7</td>
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<td>13,352.9</td>
<td>17,151.0</td>
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<td>569.0</td>
<td>21,102.7</td>
<td>29,172.9</td>
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<td>970.6</td>
<td>14,262.5</td>
<td>18,110.6</td>
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<tr>
<td>Yuima M.W.D.</td>
<td>188.5</td>
<td>8.1</td>
<td>3,684.9</td>
<td>4,961.1</td>
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<td>28,655.8</td>
<td>515,314.0</td>
<td>574,172.3</td>
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</tbody>
</table>
| Less: Deliveries to SDCWA Storage  
  1                          | 25,872.3      | 3,475.7       | 80,413.9                      | 47,504.2                     |
| TOTAL MEMBER AGENCY DELIVERIES| 29,818.0      | 25,180.1      | 434,900.1                     | 526,668.1                    |
| Deliveries to South Coast Water District | 12.1 | 6.9 | 150.3 | 167.9 |
| Deliveries From SDCWA Storage | 1,324.3       | 966.2         | 10,346.3                      | 8,637.4                       |

1 December 2015 storage account deliveries totaled 24,784 AF to San Vicente Reservoir through city of San Diego connections and 1,188.5 AF of Metropolitan water stored in Lower Otay, respectively. December 2014 storage account deliveries totaled 123 AF and 3,353 AF to Lower Otay and San Vicente Reservoirs through city of San Diego connections, respectively.
### MONTHLY WATER RESOURCES REPORT
#### Estimated Water Use by Member Agency (acre-feet)

**NOVEMBER 2015**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>Imported Source</th>
<th>Local Sources</th>
<th>November Totals</th>
</tr>
</thead>
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<td>2014</td>
<td>2015</td>
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<td>-</td>
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<td>-</td>
<td>75.0</td>
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<tr>
<td>Escondido, City of</td>
<td>1,480.7</td>
<td>-</td>
<td>1,683.1</td>
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<tr>
<td>Fallbrook P.U.D. ¹</td>
<td>790.9</td>
<td>916.6</td>
<td>-</td>
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<td>234.7</td>
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<td>-</td>
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<td>1,542.9</td>
<td>1,741.2</td>
<td>-</td>
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<td>Olivenhain M.W.D.</td>
<td>1,222.2</td>
<td>1,479.4</td>
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<td>Otay W.D.</td>
<td>1,939.8</td>
<td>2,434.4</td>
<td>-</td>
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<td>Padre Dam M.W.D.</td>
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<td>834.0</td>
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<td>16.2</td>
<td>-</td>
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<td>1,513.8</td>
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<td>Ramona M.W.D.</td>
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<td>450.1</td>
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<td>Rincon Del Diablo M.W.D.</td>
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<td>446.9</td>
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<td>603.2</td>
<td>806.2</td>
<td>4.1</td>
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<td>1,508.4</td>
<td>2,004.6</td>
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<tr>
<td>Vista I.D.</td>
<td>1,193.2</td>
<td>1,387.4</td>
<td>-</td>
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<tr>
<td>Yuima M.W.D.</td>
<td>262.7</td>
<td>374.3</td>
<td>-</td>
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<td><strong>-18%</strong></td>
<td><strong>9131%</strong></td>
<td><strong>-14%</strong></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.
## MONTHLY WATER RESOURCES REPORT

**Estimated Water Use by Member Agency**

### (acre-feet)

#### DECEMBER 2015

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>Imported Source</th>
<th>Local Sources</th>
<th>December Totals</th>
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<td>233.1</td>
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<tr>
<td>Olivenhain M.W.D.</td>
<td>1,018.2</td>
<td>-</td>
<td>-</td>
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<td>Otay W.D.</td>
<td>1,777.6</td>
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<td>-</td>
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<tr>
<td>Padre Dam M.W.D.</td>
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<td>-</td>
<td>-</td>
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<td>Pendleton M.C.B. 3</td>
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<td>10.6</td>
<td>-</td>
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<td>Rincon Del Diablo M.W.D.</td>
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<td>San Diego, City of</td>
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<td>10,754.6</td>
<td>503.8</td>
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<td>San Dieguito W.D.</td>
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<td>207.4</td>
<td>98.2</td>
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<td>Santa Fe I.D.</td>
<td>332.8</td>
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<td>132.1</td>
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<td><strong>15%</strong></td>
<td><strong>95%</strong></td>
<td><strong>2%</strong></td>
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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.
5 Includes supplemental groundwater use in Improvement District A and other private water companies.

---

*Generated: 1/11/16 10:54 AM*
## MONTHLY WATER RESOURCES REPORT

### Reservoir Storage

**(acre-feet)**

#### NOVEMBER 2015

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<th>Member Agency</th>
<th>Reservoir</th>
<th>Capacity</th>
<th>Nov. 2015</th>
<th>% of Nov. 2015</th>
<th>Capacity</th>
<th>Nov. 2014</th>
<th>% of Nov. 2014</th>
<th>Change During Month</th>
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<td>66</td>
<td>11%</td>
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<td>Dixon</td>
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<td>2,332</td>
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<td>2,332</td>
<td>89%</td>
<td>0</td>
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<td></td>
<td>Wohlford</td>
<td>6,506</td>
<td>2,250</td>
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<td>2,278</td>
<td>35%</td>
<td>(70)</td>
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<tr>
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<td>4,582</td>
<td>50%</td>
<td>4,610</td>
<td>51%</td>
<td>(70)</td>
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<tr>
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<td>Red Mountain</td>
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<td>292</td>
<td>22%</td>
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</tr>
<tr>
<td>Helix W.D.</td>
<td>Cuyamaca</td>
<td>8,195</td>
<td>325</td>
<td>4%</td>
<td>401</td>
<td>5%</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jennings</td>
<td>9,790</td>
<td>7,347</td>
<td>75%</td>
<td>8,504</td>
<td>87%</td>
<td>376</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>17,985</td>
<td>7,673</td>
<td>43%</td>
<td>8,905</td>
<td>50%</td>
<td>382</td>
<td></td>
</tr>
<tr>
<td>Poway, City of</td>
<td>Poway</td>
<td>3,330</td>
<td>2,675</td>
<td>80%</td>
<td>3,042</td>
<td>91%</td>
<td>(187)</td>
<td></td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>Morro Hill</td>
<td>465</td>
<td>140</td>
<td>30%</td>
<td>128</td>
<td>28%</td>
<td>(49)</td>
<td></td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>Ramona</td>
<td>12,000</td>
<td>2,511</td>
<td>21%</td>
<td>2,550</td>
<td>21%</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td><strong>San Diego, City of</strong> 🌸</td>
<td>Barrett</td>
<td>34,806</td>
<td>1,755</td>
<td>5%</td>
<td>5,181</td>
<td>15%</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>El Capitan</td>
<td>112,807</td>
<td>30,675</td>
<td>27%</td>
<td>32,395</td>
<td>29%</td>
<td>(250)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hodges</td>
<td>30,633</td>
<td>2,734</td>
<td>9%</td>
<td>2,631</td>
<td>9%</td>
<td>142</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Otay</td>
<td>49,849</td>
<td>36,835</td>
<td>74%</td>
<td>31,284</td>
<td>63%</td>
<td>(452)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Miramar</td>
<td>6,682</td>
<td>5,411</td>
<td>81%</td>
<td>5,465</td>
<td>82%</td>
<td>(83)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Morena</td>
<td>50,694</td>
<td>1,302</td>
<td>3%</td>
<td>1,579</td>
<td>3%</td>
<td>(74)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Murray</td>
<td>4,684</td>
<td>4,137</td>
<td>88%</td>
<td>4,145</td>
<td>88%</td>
<td>127</td>
<td></td>
<td></td>
</tr>
<tr>
<td>San Vicente</td>
<td>97,258</td>
<td>47,783</td>
<td>49%</td>
<td>47,594</td>
<td>49%</td>
<td>290</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sutherland</td>
<td>29,508</td>
<td>2,153</td>
<td>7%</td>
<td>2,498</td>
<td>8%</td>
<td>(37)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>416,921</td>
<td>132,184</td>
<td>32%</td>
<td>132,772</td>
<td>32%</td>
<td>(341)</td>
<td></td>
</tr>
<tr>
<td><strong>San Diego W/D/Santa Fe ID</strong> 🌟</td>
<td>San Dieguito</td>
<td>883</td>
<td>420</td>
<td>48%</td>
<td>402</td>
<td>46%</td>
<td>44</td>
<td></td>
</tr>
<tr>
<td><strong>Sweetwater Authority</strong> 📈</td>
<td>Loveland</td>
<td>25,400</td>
<td>7,138</td>
<td>28%</td>
<td>7,736</td>
<td>30%</td>
<td>(48)</td>
<td></td>
</tr>
<tr>
<td>Sweetwater</td>
<td>28,079</td>
<td>3,147</td>
<td>11%</td>
<td>3,419</td>
<td>12%</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>53,479</td>
<td>10,285</td>
<td>19%</td>
<td>11,155</td>
<td>21%</td>
<td>(48)</td>
<td></td>
</tr>
<tr>
<td><strong>Valley Center M.W.D.</strong> 🌱</td>
<td>Turner</td>
<td>1,612</td>
<td>1,025</td>
<td>64%</td>
<td>1,125</td>
<td>70%</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td><strong>Vista I.D.</strong> 🌺</td>
<td>Henshaw</td>
<td>51,774</td>
<td>3,101</td>
<td>6%</td>
<td>3,006</td>
<td>6%</td>
<td>381</td>
<td></td>
</tr>
<tr>
<td><strong>MEMBER AGENCY TOTAL WATER IN STORAGE</strong></td>
<td></td>
<td>569,496</td>
<td>165,080</td>
<td>29%</td>
<td>168,053</td>
<td>30%</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td><strong>Water Authority</strong> 🌲</td>
<td>Olivenhain</td>
<td>24,789</td>
<td>21,843</td>
<td>86%</td>
<td>19,436</td>
<td>86%</td>
<td>497</td>
<td></td>
</tr>
<tr>
<td>San Vicente - Comprised of:</td>
<td></td>
<td>152,100</td>
<td>76,969</td>
<td>51%</td>
<td>35,907</td>
<td>23%</td>
<td>1,102</td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>34,007</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carryover</td>
<td>42,794</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating</td>
<td>167</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>176,889</td>
<td>98,812</td>
<td>56%</td>
<td>55,343</td>
<td>56%</td>
<td>1,599</td>
<td></td>
</tr>
<tr>
<td><strong>Water Authority Storage Accounts</strong> 🌿</td>
<td>El Capitan</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Hodges</td>
<td>8,209</td>
<td>-</td>
<td>-</td>
<td>8,334</td>
<td>-</td>
<td>182</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Otay</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>686</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sweetwater</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>-</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td>-</td>
<td>8,209</td>
<td>9,030</td>
<td>182</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL WATER IN STORAGE</strong></td>
<td></td>
<td>746,385</td>
<td>272,101</td>
<td>36%</td>
<td>232,425</td>
<td>31%</td>
<td>1,925</td>
<td></td>
</tr>
</tbody>
</table>

### OTHER AGENCIES

| Metropolitan Water District | Skinner | 44,264 | 31,552 | 71% | 27,698 | 63% | 220 |
| Diamond Valley | 810,000 | 315,634 | 39% | 393,539 | 49% | (2197) |
| State Water Project | Oroville | 3,537,000 | 929,152 | 26% | 910,446 | 26% | (77,378) |

**TOTAL OTHER WATER IN STORAGE**

| 4,391,864 | 1,276,338 | 29% | 1,331,683 | 30% | (79,355) |

---

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 Dieguito W/D, and California American Mutual Water Co. (Cal-Am)
3 Includes allocated and unallocated water in Lake Henshaw.
4 Water Authority carryover, emergency and operating pools in San Vicente Reservoir were established in June 2015. City of San Diego presently states total capacity in San Vicente at 249,358 AF, with the Water Authority portion being 152,100 AF and the remaining capacity, 97,258 AF, allocable to the city.
5 No defined capacities for storage accounts in city and Sweetwater Authority reservoirs. Figures for November 2015 include evaporation/seepage estimates.

---

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### Water Authority Storage

**January 2015**

- **San Diego, City of**:
  - San Diego Reservoir: 30,633
  - Sweetwater Reservoir: 8,367
  - Lower Otay Reservoir: 8,195
  - Jennings Reservoir: 112,807
  - Hodges Reservoir: 152,100
  - San Vicente Reservoir: 97,258

**Month Change**

- San Diego, City of: 2%
- San Dieguito WD: 27%
- Sweetwater Authority: 7%
- San Vicente: 46%
- Jennings: 27%
- Hodges: 37%
- San Vicente: 46%

**Emergency and Operating Pools**

- **San Diego, City of**:
  - Carlsbad M.W.D.: 12,000
  - San Dieguito WD:Santa Fe ID: 3,330
  - Rainbow M.W.D.: 465
  - Ramona M.W.D.: 12,000
  - San Diego, City of: 34,806
  - El Capitan: 112,807
  - Hodges: 30,633
  - Lower Otay: 49,849
  - Miramar: 6,682
  - Morena: 50,694
  - Murray: 4,684
  - San Vicente: 97,258
  - Sutherland: 29,508

**Member Agency Total Water in Storage**

- **San Diego, City of**: 569,496
- **Other Agencies**: 163,759

**Total Water in Storage**

- **San Diego, City of**: 170,558
- **Other Agencies**: 57,654

**January 2014**

- San Diego, City of: 34,633
- San Dieguito WD: 8,367
- Sweetwater Authority: 8,195
- Jennings: 112,807
- Hodges: 152,100
- San Vicente: 97,258

**Month Change**

- San Diego, City of: 2%
- San Dieguito WD: 27%
- Sweetwater Authority: 7%
- San Vicente: 46%
- Jennings: 27%
- Hodges: 37%
- San Vicente: 46%

**Emergency and Operating Pools**

- **San Diego, City of**:
  - Carlsbad M.W.D.: 12,000
  - San Dieguito WD:Santa Fe ID: 3,330
  - Rainbow M.W.D.: 465
  - Ramona M.W.D.: 12,000
  - San Diego, City of: 34,806
  - El Capitan: 112,807
  - Hodges: 30,633
  - Lower Otay: 49,849
  - Miramar: 6,682
  - Morena: 50,694
  - Murray: 4,684
  - San Vicente: 97,258
  - Sutherland: 29,508

**Member Agency Total Water in Storage**

- **San Diego, City of**: 569,496
- **Other Agencies**: 163,759

**Total Water in Storage**

- **San Diego, City of**: 170,558
- **Other Agencies**: 57,654

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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 Dieguito WD, and California American Mutual Water Co. (Cal-Am)
3. Includes allocated and unallocated water in Lake Henshaw.
4. Water Authority carryover, emergency and operating pools in San Vicente Reservoir were established in June 2015. City of San Diego presently states total capacity in San Vicente at 249,358 AF, with the Water Authority portion being 152,100 AF and the remaining capacity, 97,258 AF, allocable to the city. Figures for December 2015 include evaporation/seeage estimates.
5. No defined capacity for storage accounts in city and Sweetwater Authority reservoirs. Figures for December 2015 include evaporation/seeage estimates.
6. Water stored in Lower Otay Reservoir in December 2015 (1,088.5 AF) is designated Metropolitan Water District supply.
### MONTHLY WATER RESOURCES REPORT

**Tier 1 Estimated Deliveries to Member Agencies**
(Figures in acre-feet)

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

<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>13,410.4</td>
<td>108.4%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>935.0</td>
<td>881.5</td>
<td>94.3%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>17,859.0</td>
<td>16,896.9</td>
<td>94.6%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>10,325.0</td>
<td>9,588.3</td>
<td>92.9%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>25,519.0</td>
<td>24,124.8</td>
<td>94.5%</td>
</tr>
<tr>
<td>Lakeside M.W.D.</td>
<td>3,168.0</td>
<td>2,232.4</td>
<td>70.5%</td>
</tr>
<tr>
<td>Oceanside, City of</td>
<td>19,383.0</td>
<td>19,080.9</td>
<td>98.4%</td>
</tr>
<tr>
<td>Olivenhain W.D.</td>
<td>13,071.0</td>
<td>15,780.0</td>
<td>120.7%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>21,390.0</td>
<td>24,716.5</td>
<td>115.6%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>9,939.0</td>
<td>8,371.5</td>
<td>84.2%</td>
</tr>
<tr>
<td>Pendleton M.C.B./South Coast W.D.</td>
<td>758.0</td>
<td>183.5</td>
<td>24.2%</td>
</tr>
<tr>
<td>Poway, City of</td>
<td>9,348.0</td>
<td>8,114.9</td>
<td>86.8%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>19,018.0</td>
<td>16,970.0</td>
<td>89.2%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>8,052.0</td>
<td>4,910.6</td>
<td>61.0%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>5,482.0</td>
<td>4,649.5</td>
<td>84.8%</td>
</tr>
<tr>
<td>San Diego, City of</td>
<td>144,555.0</td>
<td>162,221.9</td>
<td>112.2%</td>
</tr>
<tr>
<td>San Dieguito W.D.</td>
<td>3,116.0</td>
<td>4,638.7</td>
<td>148.9%</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>5,226.0</td>
<td>7,216.0</td>
<td>138.1%</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>9,650.0</td>
<td>11,975.3</td>
<td>124.1%</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>10,557.0</td>
<td>12,478.4</td>
<td>118.2%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>29,774.0</td>
<td>20,109.0</td>
<td>67.5%</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>11,876.0</td>
<td>13,172.9</td>
<td>110.9%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>2,165.0</td>
<td>3,496.4</td>
<td>161.5%</td>
</tr>
</tbody>
</table>

**MEMBER AGENCY TOTALS**

|                | 393,542.0               | 405,220.3            | 103.0%                          |

Less: QSA deliveries calendar year to date

|                | (162,891.3)             |

Less: ESP deliveries calendar year to date

|                | 0.0                     |

Deliveries to CWA storage year to date

|                | 59,740.8                |

Deliveries from CWA storage year to date

|                | (12,199.1)              |

Desalination deliveries

|                | (3,461.3)               |

Estimated Tier 1 deliveries calendar year to date

|                | 286,409.4               | 72.8%                 |

Invoiced Tier 1 deliveries calendar year to date

|                | 284,864.5               | 72.4%                 |

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 storage puts to San Vicente Reservoir, forced deliveries or deliveries to Olivenhain Reservoir.

4 Includes sales from Water Authority storage accounts, including Olivenhain Reservoir.

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 utilization of pre-deliveries stored at Twin Oaks Valley Water Treatment Plant (TOVWTP) or other treatment plants.
## Tier 1 Estimated Deliveries to Member Agencies

### (Figures in acre-feet)

#### Calendar Year 2015

<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>14,320.2</td>
<td>115.7%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>935.0</td>
<td>940.1</td>
<td>100.5%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>17,859.0</td>
<td>18,095.8</td>
<td>101.3%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>10,325.0</td>
<td>10,124.6</td>
<td>98.1%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>25,519.0</td>
<td>27,840.3</td>
<td>109.1%</td>
</tr>
<tr>
<td>Lakeside M.W.D.</td>
<td>3,168.0</td>
<td>2,390.0</td>
<td>75.4%</td>
</tr>
<tr>
<td>Oceanside, City of</td>
<td>19,383.0</td>
<td>20,400.8</td>
<td>105.3%</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>13,071.0</td>
<td>16,798.2</td>
<td>128.5%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>21,390.0</td>
<td>26,494.1</td>
<td>123.9%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>9,939.0</td>
<td>8,967.4</td>
<td>90.2%</td>
</tr>
<tr>
<td>Pendleton M.C.B./South Coast W.D.</td>
<td>758.0</td>
<td>201.3</td>
<td>26.6%</td>
</tr>
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<td>9,348.0</td>
<td>8,733.7</td>
<td>93.4%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
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<td>17,867.8</td>
<td>94.0%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>8,052.0</td>
<td>5,163.8</td>
<td>64.1%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>5,482.0</td>
<td>4,955.3</td>
<td>90.4%</td>
</tr>
<tr>
<td>San Diego, City of</td>
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<td>173,980.5</td>
<td>120.4%</td>
</tr>
<tr>
<td>San Dieguito W.D.</td>
<td>3,116.0</td>
<td>4,953.2</td>
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<td>Santa Fe I.D.</td>
<td>5,226.0</td>
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<td>Vallecitos W.D.</td>
<td>10,557.0</td>
<td>13,352.9</td>
<td>126.5%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>29,774.0</td>
<td>21,102.7</td>
<td>70.9%</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>11,876.0</td>
<td>14,262.5</td>
<td>120.1%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>2,165.0</td>
<td>3,684.9</td>
<td>170.2%</td>
</tr>
<tr>
<td><strong>MEMBER AGENCY TOTALS</strong></td>
<td><strong>393,542.0</strong></td>
<td><strong>435,050.4</strong></td>
<td><strong>110.5%</strong></td>
</tr>
</tbody>
</table>

### Additional Notes

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 storage puts to San Vicente Reservoir, forced deliveries or deliveries to Olivenhain Reservoir.**
4. **Water stored as Metropolitan Water District water in Lower Otay Reservoir.**
5. **Includes sales from Water Authority storage accounts, including Olivenhain Reservoir.**
6. **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 utilization of pre-deliveries stored at Twin Oaks Valley Water Treatment Plant (TOVWTP) or other treatment plants.**

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MONTHLY WATER RESOURCES REPORT
Summary of Water Authority Member Agency Operations

NOVEMBER 2015

Member Agency Deliveries (AF)

- **November:**
  - Recycled: 1,987 AF (2015), 2,030 AF (2014)

- **Previous 12 Months:**
  - Imported: 430,262 AF (2015), 532,790 AF (2014)
  - Recycled: 24,053 AF (2015), 25,292 AF (2014)

Member Agency Water Use

- **November 2015:**
  - Imported: 88%
  - Surface: 2%
  - Well & Brackish Recovery: 5%
  - Recycled: 5%

- **Previous 12 Months:**
  - Imported: 89%
  - Surface: 1%
  - Well & Brackish Recovery: 5%
  - Recycled: 5%

Member Agency Storage (AF)

- **November:**
  - 2015: 165,080 AF
  - 2014: 168,053 AF

- **12 Month Average:**
  - 2015: 169,998 AF
  - 2014: 178,091 AF
MONTHLY WATER RESOURCES REPORT
Summary of Water Authority Member Agency Operations

DECEMBER 2015

Member Agency Deliveries (AF)

- **December 2015**: 29,818 AF
- **December 2014**: 25,180 AF
- **Previous 12 Months 2015**: 434,900 AF
- **Previous 12 Months 2014**: 526,668 AF

Member Agency Water Use

- **December 2015**:
  - Imported: 89%
  - Surface: 2%
  - Well & Brackish Recovery: 5%
  - Recycled: 4%
- **Previous 12 Months**:
  - Imported: 89%
  - Surface: 1%
  - Well & Brackish Recovery: 5%
  - Recycled: 5%

Member Agency Storage (AF)

- **December 2015**:
  - Member Agency Deliveries: 163,759 AF
  - Member Agency Storage: 170,558 AF
- **December 2014**:
  - Member Agency Deliveries: 175,496 AF
  - Member Agency Storage: 179,622 AF
- **12 Month Average**:
  - Member Agency Deliveries: 2015
  - Member Agency Storage: 2014
January 20, 2016

Attention: Water Planning Committee

Fiscal Year 2016 water supply allocations monitoring (Information)

Purpose
This report provides an update on Water Authority and member agency fiscal year 2016 (FY 2016) monthly and cumulative deliveries compared to supply allocation tracking targets for the Water Authority’s two classes of service, Municipal and Industrial (M&I) and Transitional Special Agricultural Water Rate (TSAWR) water.

Background
In April 2015, the Metropolitan Water District of Southern California implemented Level 3 of its Water Supply Allocation Plan (WSAP), cutting back supplies 15 percent to its member agencies starting July 1, 2015, for the FY 2016 allocation period. On May 14, 2015, in response to cutbacks from MWD, the Board authorized Stage 3 (Mandatory Cutbacks) of the Water Authority’s Water Shortage and Drought Response Plan and approved Water Authority member agency M&I and TSAWR supply allocations for FY 2016.

In 2008, the Board adopted procedures on implementation of the allocation methodology found in the WSDRP, which requires staff to report to the Board on monthly water deliveries compared to performance tracking targets. To assist with tracking member agency performance over the FY 2016 allocation period, staff in coordination with the agencies, developed monthly performance tracking targets for M&I and TSAWR deliveries. Monthly targets were developed using historical monthly delivery patterns; M&I sector targets were based on an average of fiscal years 2013 and 2014, and TSAWR targets were based on fiscal year 2014 deliveries. Since allocation compliance is assessed on an annual basis, member agencies are not subject to penalties if they exceed monthly targets in the interim period. Any financial penalties would be levied at the end of the FY 2016 allocation period.

On August 27, 2015, the Board approved a modification to Yuima MWD’s FY 2016 M&I supply allocation to provide an additional 2,529 acre-feet under the WSDRP loss of local supply adjustment. The modification was to account for local groundwater supplies not included in Yuima MWD’s initial base period dataset. In September 2015, Water Authority staff submitted a request to MWD under the WSAP small appeal process for an adjustment to the San Diego region’s allocation to take into account the modified groundwater supplies. MWD staff approved the request in September 2015 and increased the Water Authority’s allocation by 765 AF, to 309,375 AF. Taking into account the groundwater modification and adjustment from MWD, Water Authority staff updated each member agency’s annual allocation and monthly M&I tracking targets for all of FY 2016. TSAWR monthly allocation targets were not affected by this adjustment due to the program’s separate class of service cutback obligation.
Discussion

Fiscal Year 2016 Member Agency Water Deliveries

Figure 1 shows Water Authority aggregated member agency monthly M&I performance targets compared to estimated monthly M&I deliveries. For the month of December 2015, M&I water deliveries are estimated to total 28,008 AF, or approximately 3 percent below the updated December target of 28,847 AF.

To gauge annual performance, Figure 2 shows a year-to-date comparison of aggregated member agency M&I targets and M&I deliveries. Cumulative M&I deliveries through December 2015 are tracking at 199,566 AF, or 23 percent below the aggregate target of 257,900 AF for the same period.

Figure 1
FY 2016 Member Agency Monthly M&I Tracking Targets vs. Estimated M&I Deliveries
Table 1 presents a member agency level breakdown of the regional M&I information shown above in Figure 1. Monthly member agency M&I targets and estimated deliveries for the current month and FY 2016 to date (through December 2015) are shown, as well as variances. Table 1 also shows FY 2016 annual M&I allocations and cumulative M&I deliveries as a percentage of allocations for each agency year to date.
Table 1

FY 2016 Member Agency M&I Targets, Estimated M&I Deliveries and Annual M&I Allocations (AF)

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Monthly Target</th>
<th>Monthly Actual</th>
<th>Monthly Variance</th>
<th>Cumulative Target</th>
<th>Cumulative Actual</th>
<th>Cumulative Variance</th>
<th>FY 2016 M&amp;I Allocation</th>
<th>% Allocation Delivered to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>1,218</td>
<td>910</td>
<td>308</td>
<td>10,101</td>
<td>7,063</td>
<td>3,038</td>
<td>19,182</td>
<td>36.8%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>63</td>
<td>59</td>
<td>4</td>
<td>605</td>
<td>498</td>
<td>107</td>
<td>1,097</td>
<td>45.4%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>1,236</td>
<td>1,022</td>
<td>214</td>
<td>10,609</td>
<td>7,625</td>
<td>2,984</td>
<td>20,503</td>
<td>37.2%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>398</td>
<td>355</td>
<td>43</td>
<td>4,519</td>
<td>2,607</td>
<td>1,913</td>
<td>8,442</td>
<td>30.9%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>3,618</td>
<td>3,716</td>
<td>(98)</td>
<td>15,949</td>
<td>14,022</td>
<td>1,927</td>
<td>32,036</td>
<td>43.8%</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
<td>213</td>
<td>158</td>
<td>55</td>
<td>1,923</td>
<td>1,233</td>
<td>690</td>
<td>3,567</td>
<td>34.6%</td>
</tr>
<tr>
<td>Oceanside, City of *</td>
<td>1,379</td>
<td>1,300</td>
<td>79</td>
<td>14,388</td>
<td>10,235</td>
<td>4,153</td>
<td>27,596</td>
<td>37.1%</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>1,082</td>
<td>1,012</td>
<td>70</td>
<td>11,420</td>
<td>8,401</td>
<td>3,020</td>
<td>21,422</td>
<td>39.2%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>1,979</td>
<td>1,778</td>
<td>201</td>
<td>17,523</td>
<td>13,301</td>
<td>4,222</td>
<td>32,930</td>
<td>40.4%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>780</td>
<td>580</td>
<td>200</td>
<td>7,049</td>
<td>4,356</td>
<td>2,693</td>
<td>13,092</td>
<td>33.3%</td>
</tr>
<tr>
<td>Pendleton Military Reservation</td>
<td>76</td>
<td>6</td>
<td>70</td>
<td>298</td>
<td>31</td>
<td>267</td>
<td>595</td>
<td>5.2%</td>
</tr>
<tr>
<td>Poway, City of *</td>
<td>491</td>
<td>618</td>
<td>(127)</td>
<td>6,607</td>
<td>4,239</td>
<td>2,369</td>
<td>11,900</td>
<td>35.6%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>577</td>
<td>423</td>
<td>154</td>
<td>6,516</td>
<td>4,916</td>
<td>1,600</td>
<td>11,600</td>
<td>42.4%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>222</td>
<td>187</td>
<td>36</td>
<td>2,479</td>
<td>2,115</td>
<td>364</td>
<td>4,750</td>
<td>44.5%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D. *</td>
<td>374</td>
<td>305</td>
<td>69</td>
<td>3,946</td>
<td>2,517</td>
<td>1,430</td>
<td>7,226</td>
<td>34.8%</td>
</tr>
<tr>
<td>San Diego, City of *</td>
<td>11,247</td>
<td>11,754</td>
<td>(507)</td>
<td>102,934</td>
<td>86,699</td>
<td>16,235</td>
<td>193,244</td>
<td>44.9%</td>
</tr>
<tr>
<td>San Diego W.D.</td>
<td>229</td>
<td>315</td>
<td>(86)</td>
<td>3,086</td>
<td>2,379</td>
<td>708</td>
<td>6,622</td>
<td>35.9%</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>299</td>
<td>333</td>
<td>(34)</td>
<td>5,414</td>
<td>3,562</td>
<td>1,852</td>
<td>10,829</td>
<td>32.9%</td>
</tr>
<tr>
<td>South Coast W.D. **</td>
<td>19</td>
<td>12</td>
<td>7</td>
<td>185</td>
<td>70</td>
<td>115</td>
<td>336</td>
<td>20.8%</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>1,015</td>
<td>896</td>
<td>119</td>
<td>8,998</td>
<td>6,465</td>
<td>2,533</td>
<td>17,057</td>
<td>37.9%</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>716</td>
<td>816</td>
<td>(100)</td>
<td>7,168</td>
<td>6,243</td>
<td>925</td>
<td>13,375</td>
<td>46.7%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>433</td>
<td>334</td>
<td>99</td>
<td>5,300</td>
<td>3,591</td>
<td>1,709</td>
<td>9,334</td>
<td>38.5%</td>
</tr>
<tr>
<td>Vista I.D. *</td>
<td>1,118</td>
<td>1,089</td>
<td>29</td>
<td>9,086</td>
<td>6,943</td>
<td>2,143</td>
<td>17,492</td>
<td>39.7%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>65</td>
<td>35</td>
<td>30</td>
<td>1,797</td>
<td>457</td>
<td>1,341</td>
<td>3,378</td>
<td>13.5%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>28,847</td>
<td>28,008</td>
<td>839</td>
<td>257,900</td>
<td>199,566</td>
<td>58,334</td>
<td>487,605</td>
<td>40.9%</td>
</tr>
</tbody>
</table>

Notes:
Performance tracking targets shaped using average of FY 2013 and FY 2014 monthly deliveries.
*Estimated M&I deliveries, as TSAWR deliveries for certain agencies have yet to be reported.
**Includes deliveries through Metropolitan Water District and South Coast Water District to the following entities within the Water Authority service area:
San Onofre Nuclear Generation Station (8.7 AF), San Mateo Point Housing on Camp Pendleton (2.1 AF), and San Onofre State Park (1.3 AF).
Deliveries for current month shown in parentheses.
Table 2 shows monthly member agency TSAWR targets and TSAWR deliveries for December 2015, FY 2016 year to date, and variances for those agencies that have reported December 2015 TSAWR deliveries. Additionally, percentage of allocation, to date, is shown by member agency. For those agencies having reported, December 2015 TSAWR deliveries totaled 1,794 AF, or 2.2 percent more than those agencies’ aggregate current month target of 1,756 AF.

Table 2
Fiscal Year 2016 TSAWR Tracking Targets vs. Actual Deliveries (AF)

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Monthly Target</th>
<th>Monthly Actual</th>
<th>Monthly Variance</th>
<th>Cumulative Target</th>
<th>Cumulative Actual</th>
<th>Cumulative Variance</th>
<th>FY 2016 TSAWR Allocation</th>
<th>% Allocation Delivered to Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escondido, City of</td>
<td>141</td>
<td>177</td>
<td>(36)</td>
<td>1,497</td>
<td>1,344</td>
<td>153</td>
<td>2,750</td>
<td>48.9%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>157</td>
<td>182</td>
<td>(25)</td>
<td>2,325</td>
<td>1,798</td>
<td>527</td>
<td>4,089</td>
<td>44.0%</td>
</tr>
<tr>
<td>Oceanside, City of *</td>
<td>13</td>
<td>n.r.</td>
<td>-</td>
<td>210</td>
<td>n.r.</td>
<td>-</td>
<td>432</td>
<td>-</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>6</td>
<td>6</td>
<td>(0)</td>
<td>61</td>
<td>53</td>
<td>8</td>
<td>111</td>
<td>47.3%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>17</td>
<td>16</td>
<td>1</td>
<td>264</td>
<td>151</td>
<td>113</td>
<td>390</td>
<td>38.6%</td>
</tr>
<tr>
<td>Poway, City of *</td>
<td>2</td>
<td>n.r.</td>
<td>-</td>
<td>26</td>
<td>n.r.</td>
<td>-</td>
<td>40</td>
<td>-</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>395</td>
<td>475</td>
<td>(80)</td>
<td>5,156</td>
<td>4,415</td>
<td>741</td>
<td>9,701</td>
<td>45.5%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>72</td>
<td>67</td>
<td>5</td>
<td>783</td>
<td>584</td>
<td>199</td>
<td>1,246</td>
<td>46.9%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D. *</td>
<td>9</td>
<td>n.r.</td>
<td>-</td>
<td>102</td>
<td>n.r.</td>
<td>-</td>
<td>168</td>
<td>-</td>
</tr>
<tr>
<td>San Diego, City of *</td>
<td>3</td>
<td>n.r.</td>
<td>-</td>
<td>52</td>
<td>n.r.</td>
<td>-</td>
<td>79</td>
<td>-</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>66</td>
<td>58</td>
<td>8</td>
<td>615</td>
<td>498</td>
<td>117</td>
<td>1,107</td>
<td>45.0%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>760</td>
<td>660</td>
<td>100</td>
<td>9,423</td>
<td>7,131</td>
<td>2,292</td>
<td>17,124</td>
<td>41.6%</td>
</tr>
<tr>
<td>Vista I.D. *</td>
<td>2</td>
<td>n.r.</td>
<td>-</td>
<td>43</td>
<td>n.r.</td>
<td>-</td>
<td>85</td>
<td>-</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>142</td>
<td>154</td>
<td>(12)</td>
<td>2,021</td>
<td>1,652</td>
<td>369</td>
<td>3,429</td>
<td>48.2%</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>1,785</strong></td>
<td><strong>1,794</strong></td>
<td><strong>(38)</strong></td>
<td><strong>22,578</strong></td>
<td><strong>17,625</strong></td>
<td><strong>4,520</strong></td>
<td><strong>40,751</strong></td>
<td><strong>44.1%</strong></td>
</tr>
</tbody>
</table>

Notes:
Performance tracking targets shaped using FY 2014 monthly deliveries.
*Agencies not yet reported for the current month are shown as "n.r."
**Totals for Actual, Variance and % Allocation columns exclude agencies with "n.r." designation.
Fiscal Year 2016 Regional Water Deliveries

Figure 2 shows cumulative FY 2016 Water Authority delivery of MWD supplies, excluding QSA deliveries, compared with the FY 2016 MWD allocation to the Water Authority, which also excludes QSA deliveries. Cumulative FY 2016 delivery of MWD supplies through December 2015 totaled 167,043 AF, or 54 percent of the MWD FY 2016 allocation of 309,375 AF. The year to-date total includes deliveries of approximately 47,100 AF of Water Authority storage placed into San Vicente Reservoir as carryover supply.

Figure 2
FY 2016 MWD Allocation vs. Cumulative Water Authority Deliveries of MWD Supply through December 2015

Prepared by: Stu Williams, Water Resources Specialist
Prepared by: Tim Bombardier, Principal Water Resources Specialist
Reviewed by: Robert R. Yamada, Director of Water Resources
January 20, 2016

Attention: Water Planning Committee

CLOSED SESSION:
Conference with Legal Counsel – Anticipated Litigation
Government Code §54956.9(d)(4)
Potential Initiation of Litigation / One Case / State Water Resources Control Board
Emergency Regulations

Purpose
This memorandum is to recommend a closed session, pursuant to Government Code §54956.9(d)(4), to discuss the above-referenced matter at the January 28, 2016 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: James J. Taylor, Acting General Counsel
ENGINEERING AND OPERATIONS COMMITTEE

AGENDA FOR

JANUARY 28, 2016

Ken Williams – Chair     Tony Heinrichs
Marty Miller – Vice Chair  Michael Hogan
Ron Watkins – Vice Chair    John Linden
Gary Arant              Ron Morrison
Jimmy Ayala             Ken Olson
Brian Boyle             Halla Razak
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

II. ACTION/DISCUSSION/PRESENTATION

1. Contract for purchase and installation of electric continuous duty valve actuators at various Water Authority facilities. Kathy Schuler
   Staff recommendation: Authorize the General Manager to award a three (3) year contract in the amount of $1,907,590 to provide, retrofit, and install approximately 100 electric continuous duty valve actuators at various Water Authority facilities. (Action)
2. Contract amendment with Braun Blaising McLaughlin & Smith PC for legal and consulting services.
   **Staff recommendation:** Authorize the General Counsel to execute a contract amendment with Braun Blasuring McLaughlin & Smith PC (Braun) for legal and consulting services to increase the contract amount by $290,000 for a new contract amount of $340,000. (Action)  
   **(Action)**  
   **Kelly Rodgers**

3. Carlsbad Desalination Project Update. (Presentation)  
   **Frank Belock**

4. Selection process for public works and professional services contracts. (Presentation)  
   **Jim Fisher / Jerry Reed**

III. INFORMATION

1. Hydropower Subcommittee Update.  
   **Mike Hogan**

IV. CLOSED SESSION

1. Conference with Legal Counsel – Existing Litigation
   **Government Code §54956.9(d)(1)**
   Name of Case: Hemet Manufacturing Company Inc.; DBA Genesis Construction v. SDCWA; San Diego Superior Court Case No. 37-2015-00041627-CU-WM-CTL  
   **James Taylor**

V. ADJOURNMENT

**Melinda Cogle**
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.
January 20, 2016

Attention: Engineering and Operations Committee


Purpose
This information item provides a progress report on the Engineering and Operations Committee Work Plan for calendar years 2015 and 2016

Background
Previous Board action: On March 26, 2015, the Board adopted the Engineering and Operations Committee Work Plan for calendar years 2015 and 2016.

Discussion
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.

The attached report lists the Engineering and Operations Committee Work Plan for calendar years 2015 and 2016 and provides an update on the activities taken towards achieving the work. The work plan was prepared under the direction of the Engineering and Operations Committee Chair and Vice Chairs. A final report on the work plan will be provided to the Board in December 2016.

Prepared by: Jerry Reed, Director of Engineering
               James E. Fisher, Interim Director of Operations and Maintenance
Reviewed by:   Frank Belock, Jr., Deputy General Manager
               Ken Williams, Chair, Engineering and Operations Committee

Attachment:

1. Progress Report on the Committee Work Plan
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)

Activities
Board approved the proposed budget in June 2015. The budget includes 5400 linear feet of pipe relining, design and construction of 17 high priority infrastructure rehabilitation projects, and 13 miles of pipeline condition assessment. Currently the projects are on track and 4 percent of the $33M appropriation has been expended.

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)

Activities
The Water Authority received DSOD’s formal certification to fill the San Vicente Reservoir to the full height of the raised dam on December 3, 2015. Litigation support is ongoing.

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)

Activities
Construction completion was extended past April 2015 due to contractor delays, design modifications, and inclement weather. The construction is nearly complete but a Notice of Completion is expected in April 2016, pending completion and punch list items.

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)
Activities
The Bypass Pipeline was substantially completed in November 2015. Construction completion was extended to January 2016 due to inclement weather and to accommodate member agency water deliveries.

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)

Activities
This project is complete. Notice of Completion was filed on June 9, 2015 and Caltrans has reimbursed the Water Authority per the utility services agreement.

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)

Activities
Construction began in the fall of 2015 and is on track for construction completion in fall 2016.

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)

Activities
This project has experienced contractor equipment procurement delays. Due to low water demands, operational impacts are not anticipated. Project completion is anticipated in March 2016.

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)

Activities
The CEQA document has proceeded well ahead of schedule and is expected to be certified at the January 2016 Board meeting.
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).

   Activities
   Final update to the Board will be provided in January 2016.

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)

   Activities
   This project is complete. Notice of completion was filed on April 9, 2015.

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)

   Activities
   Commissioning/commercial operation of the Carlsbad Desalination projects was completed in December 2015.

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)

   Activities
   Staff participated in a disaster recovery tabletop exercise at the County of San Diego in September 2015 and assisted in the development and participated in the MWD regional earthquake exercise in November 2015. In December 2015, staff held a member agency workshop on flood preparedness, response, and recovery which included multiple County departments and SDG&E.

2. Provide oversight of efforts required to complete video surveillance and communication upgrades at the Escondido Operations Center. (June 2016 – Business Plan Goal #4)
Activities
The contract has been executed and the installation layout has been approved. The vendor is procuring the parts. Installation work is anticipated to begin in early 2016 with an estimated completion date of June 2016.

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

Activities
This activity is scheduled for 2016 (see Item 1 for 2015 activities).

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)

Activities
Based on current operations, the Lake Hodges Hydroelectric Facility has generated $1.45 million in revenue fiscal year-to-date and is on track to meet these goals. As the operation, maintenance, and administration costs associated with the pumped storage component of the facility is estimated to be approximately $1.7 million, the projected return for fiscal year 2016 is $1.1 million.

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)

Activities
This activity is scheduled for 2016 (see Item 1 for fiscal year 2016 activities).

3. Provide oversight of the efforts necessary to resolve five of the top ten right of way enforcement cases. (June 2016 – Business Plan Goal #5)

Activities
Four of the five encroachment cases have been resolved. The last one is pending an encroachment permit to be signed by the property owner and is expected to be complete on schedule.

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

Activities
Due to low aqueduct flows and major maintenance, this goal is not expected to be reached by the end of June 2016.
January 20, 2016

Attention: Engineering and Operations Committee

Contract for purchase and installation of electric continuous duty valve actuators at various Water Authority facilities. (Action)

Staff recommendation
Authorize the General Manager to award a three (3) year contract in the amount of $1,907,590 to provide, retrofit, and install approximately 100 electric continuous duty valve actuators at various Water Authority facilities.

Alternative
Do not award the contract and direct staff to solicit new bids for the project. This may result in operational restrictions to both the treated and untreated water system and a delay to the project of three months.

Fiscal Impact
Funds in the amount of $1,907,590 are available within the System-Wide Flow Control Facility Actuator Replacements lifetime budget and the fiscal years 2016 and 2017 Capital Improvement Program appropriation. This item relates to the Transportation rate category.

Background
The Water Authority uses remotely operated valves to control flow throughout the system and to our member agencies. Each of these valves requires an actuator, which is a device that is mounted directly on a valve and in response to a signal uses a combination of gears to move the valve opening to a desired position. There are approximately 100 valve actuators installed throughout the Water Authority’s aqueduct system.

Over the years, we have installed six different makes/models of actuators. The vast majority of these actuators are no longer being manufactured and replacement parts are unavailable. For several years now, the Operations and Maintenance Department has been salvaging parts as an actuator has been removed from service to maintain the remaining actuators. With limited access to replacement parts, the facilities relying on these actuators are at risk of losing operational control and impacting delivery to our member agencies. As part of the Asset Management Program, a CIP project was approved for a system-wide Flow Control Facility Actuator Replacement.

Discussion
On October 8, 2015, a Notice Inviting Bids was advertised for the purchase and installation of approximately 97 actuators to be retrofitted onto existing valves at various Water Authority flow control and turn out facilities located throughout San Diego County. The notice was published in a local newspaper and sent to 35 firms through the Network (the Water Authority’s collaborative online vendor registration system). In addition, outreach e-mails were sent to representatives of the
three primary actuator providers. A pre-bid meeting and job site visit were held in mid-October with
the 3 firms being represented.

Two responses to the Notice of Inviting Bids were received, one bid from R&B Automation, Inc.
representing AUMA and a “no bid” from one of the other firms due to their inability to meet the
requirements of the project specifications. R&B Automation submitted the apparent low bid in the
amount of $1,907,590. The average cost for the actuators is $19,075 each, which is comparable to
costs of previous actuator purchases.

Staff has reviewed the apparent low bid and determined that R&B Automation, Inc.’s costs are
reasonable compared to the cost of a standard actuator. Staff also reviewed other bid items such as
licensing, bonding and references. Based on this review, R&B Automation, Inc. is the lowest,
responsive and responsible bidder.

Due to the limited availability of small firms that perform this type of service, SCOOP outreach was
not required.

Prepared by: Kathy Schuler, Operations and Maintenance Manager
Reviewed by: Jim Fisher, Interim Director of Operations and Maintenance
Approved by: Frank Belock, Jr., Deputy General Manager
January 20, 2016

Attention: Engineering and Operations Committee

Contract amendment with Braun Blaising McLaughlin & Smith PC for legal and consulting services. (Action)

**Staff recommendation**
Authorize the General Counsel to execute a contract amendment with Braun Blaising McLaughlin & Smith PC (Braun) for legal and consulting services to increase the contract amount by $290,000 for a new contract amount of $340,000.

**Alternative**
Do not approve staff recommendation or approve certain components of the work plan. This will jeopardize or delay completing on-going work that is required for regulatory support and energy cost management.

**Fiscal Impact**
There are sufficient funds in the General Manager’s approved Fiscal Year 2016 and 2017 operating budget and the capital improvement program budget to support this action. The rate category for this project is customer service.

**Background**
Energy is a substantial cost in treating and delivering water to customers. With the dynamic nature of the energy market, fluctuating retail energy costs, and new facilities such as the Carlsbad Desalination Plant becoming operational, the Water Authority is placing an even greater focus on energy cost management. Because energy issues such as these affect the Water Authority and its member agencies, staff recommended and the Board approved the addition of the Energy Program to the General Manager’s organizational structure and authorized budget for the program. After the establishment of the Energy Program, due to the evolving nature of the various energy-related issues, it became apparent that technical support resources are required to address near-term programmatic needs. Rather than requesting additional staff, the Water Authority retained Braun to provide such support. Braun was established in 1996 and specializes in providing legal and consulting services on energy and water-related issues, including market and regulatory advocacy, commercial negotiations, public agency law, environmental regulation, and legislative support. In addition, they serve as special counsel to the California Municipal Utilities Association, representing the association before regulatory agencies and providing legal advice on energy law and market rules in California.

Braun’s initial work included advising staff on ways to leverage the Water Authority’s energy-related authorities granted by Senate Bill 552 and the County Water Authority Act to allow the agency to better participate in the energy market. Braun has also assisted staff in drafting contract terms for new energy initiatives such as battery storage for peak demand shaving to
protect the interests of the Water Authority and its customers while maximizing energy cost savings. Both of these opportunities provide a means to diversify the Water Authority’s energy supply portfolio translating to reduced energy costs and water rate stabilization to the benefit of member agencies.

Discussion
To fully reap the benefits of new energy initiatives and provide support for on-going efforts, Braun’s services are required in four main areas. These areas are energy procurement and transmission; new energy initiatives; existing power purchase agreements; and energy regulatory engagement, as further discussed below.

Energy Procurement and Transmission
Braun identified regulatory avenues for the Water Authority to procure less costly wholesale energy, inclusive of wind and solar, and delivering this energy to key Water Authority facilities. These regulatory avenues may also allow the power generated by the Water Authority to be delivered to and used by these facilities in lieu of transmitting the power to the energy grid and being compensated at a lower rate. To gain access to such transmission arrangements, the Water Authority has begun participating in a regulatory process prescribed by the Federal Power Act. Braun specializes in these types of water-energy issues and is needed to continue to provide support to navigate the federal process and finalize the necessary transmission agreements. The annual energy cost savings is estimated to be up to $10.6 million based on today’s current market rates for wholesale versus retail energy costs and associated fees.

New Energy Initiatives
New energy initiatives include the potential for installing inline hydroelectric generation facilities along the Water Authority’s Aqueduct, and floating solar panels at Olivenhain Reservoir. Braun’s services are necessary to help develop the terms of new professional services and development agreements to reduce the Water Authority’s risk exposure and safeguard its ratepayers. Once these energy agreements are finalized, they will serve as templates that can be used frequently in years to come. The potential combined annual net revenue is estimated to be at least $1.1 million should these initiatives move forward.

Existing Power Purchase Agreements
The Water Authority is a party to Power Purchase Agreements (PPAs) for the Lake Hodges Pumped Storage and Rancho Peñasquitos Hydroelectric facilities. It is important that Braun be retained to continue support for administration of these existing PPAs to ensure they are being executed in accordance with the intent of the PPA terms. Additionally, the Rancho Peñasquitos Hydroelectric Facility PPA expires in early 2017 and Braun would provide support in assessing alternatives for entering into a subsequent agreement or another business structure that would best serve the interests of the Water Authority and its member agencies. The combined Fiscal Year 2015 net revenue for these two facilities was $1.3 million.

Energy Regulatory Engagement
There are key issues such as energy storage procurement and renewable energy integration before the California Public Utilities Commission and the California Energy Commission that
influence the cost and use of energy locally. As such, it is important for the Water Authority to remain current in the energy market and be engaged in the regulatory setting. Braun would guide the Water Authority’s participation in rule-making and energy tariff setting processes to help safeguard its ability to deliver a safe, reliable, and affordable water supply to its member agencies.

Due to Braun’s unique and extensive experience on energy-related matters and the estimated return on this initial investment, staff recommends amending Braun’s contract in the amount of $290,000 to continue legal and consulting services required for regulatory support and advisement on existing and proposed energy initiatives through June 2017.

Prepared by: James J. Taylor, Acting General Counsel
Reviewed by: Kelly Rodgers, Energy Program Manager
Approved by: Frank Belock, Jr., Deputy General Manager
January 20, 2015

Attention: Engineering and Operations Committee

Selection process for public works and professional services contracts. (Presentation)

Purpose
This informational item provides an overview of the process used for selecting contractors and consultants for public works projects and professional services contracts.

Discussion
The Water Authority operates and maintains a large, complex water system consisting of approximately 300 miles of pipelines, 96 service connections, more than 1,400 appurtenance structures, 7 pump stations, 2 hydroelectric plants, and 1 dam/reservoir. To ensure reliable, uninterruptable water service, the Water Authority uses a core workforce in the Operations and Maintenance Department to conduct periodic inspections, perform routine and corrective maintenance, and support the capital improvement program. The Water Authority also uses a core workforce in the Engineering Department to execute the Capital Improvement Program; manage the acquisition, disposal, and lease of real property; and patrol and manage 168 miles of Right of Way.

Both the Engineering and Operations and Maintenance Departments utilize public works and professional services contracts to help manage their work. These services are needed to complete work that requires specialized skills, augment staff during peak workload periods, and execute design and construction projects as part of Capital Improvement Program. Examples of typical contracts include: public works construction contracts, professional services contracts for electrical and preventive maintenance, and professional services contracts for specialized design in support of the CIP program.

During the committee meeting staff will provide information on how the Water Authority procures public works (construction) and professional services (consultant and other service) contracts. We will discuss our Administrative Code rules for procurement, the differences between each type of procurement process, and describe the standard selection process for each type.

Prepared by: Jerry Reed, Director of Engineering
Jim Fisher, Interim Director of Operations and Maintenance
Baldemar J. Troche, Administrative Services Manager

Approved by: Frank Belock, Jr., Deputy General Manager
January 20, 2016

Attention: Engineering and Operations Committee

CLOSED SESSION:
Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: Hemet Manufacturing Company Inc.; DBA Genesis Construction v. SDCWA;
San Diego Superior Court Case No. 37-2015-00041627-CU-WM-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 January 28, 2016 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: James J. Taylor, Acting General Counsel
ADMINISTRATIVE AND FINANCE COMMITTEE

AGENDA FOR

JANUARY 28, 2016

Gary Arant – Chair      Keith Lewinger
Doug Wilson – Vice Chair  Mark Muir
Halla Razak – Vice Chair  DeAna Verbeke
David Cherashore        Ron Watkins
Lois Fong-Sakai          Mark Watton
Ed Gallo                 Mark Weston
Frank Hilliker           Ken Williams
Tom Kennedy

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

   Staff recommendation:  Note and file the monthly Treasurer’s report.  
   (Action)

2. Approve the selection of Wells Fargo Bank as the commercial banking services provider.  David Shank
   Staff recommendation:  Authorize the General Manager to award a commercial banking service contract to Wells Fargo Bank for a five-year period with two one-year renewal options.  (Action)
II. ACTION/DISCUSSION/PRESENTATION

1. Adopt the Water Authority’s 2015 Long-Range Financing Plan. Lisa Marie Harris
   Staff recommendation: Adopt, as final, the Water Authority’s 2015 Long-Range Financing Plan. (Action)

2. Owner Controlled Insurance Program for the Emergency and Carryover Storage Projects. (Presentation) Matthew Brown

III. INFORMATION

1. Board of Directors’ fourth quarter 2015 expenses and attendance. Rod Greek


3. Board calendar.

IV. CLOSED SESSION

V. ADJOURNMENT Melinda Cogle
   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.
January 20, 2016

Attention: Administrative and Finance Committee


Purpose
This information item provides a progress report on the Administrative and Finance Committee Work Plan for calendar years 2015 and 2016.

Background
Previous Board action: On March 26, 2015, the Board adopted the Administrative and Finance Committee Work Plan for calendar years 2015 and 2016.

Discussion
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 two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

The attached report lists the Administrative and Finance Committee Work Plan for calendar years 2015 and 2016 and provides an update on the activities taken towards achieving the work plan. The work plan was prepared under the direction of the Administrative and Finance Committee Chair and Vice Chairs. A final report on the Work Plan will be provided to the Board in December 2016.

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:

1. Progress Report on the Committee Work Plan
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)

   **Activities**
   On March 26, 2015, the Board approved the Member Agency Managers comprehensive recommendations on Fiscal Sustainability.

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

   **Activities**
   On May 28, 2015, the General Manager’s Recommended Budget for Fiscal Years 2016 and 2017 was presented to the Board. On June 9 and 11, 2015 the Administrative and Finance Special Committee Meetings – Budget Workshops were held. On June 25, 2015, the Board adopted the multi-year budget for fiscal years 2016 and 2017.

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

   **Activities**
   On April 23, 2015, the Board approved the one year extension of the JP Morgan liquidity facility that supports the Series 7 of the Water Authority’s commercial paper program.

4. **Long Range Financing Plan** – Review the updated Long Range Financing Plan and provide direction. (December 2015 – Goal #9)

   **Activities**
   On December 2, 2015, the draft 2015 Long Range Financing Plan was provided to the Board for review and comment. On January 28, 2016, the Long-Range Financing Plan will be presented to the Board for adoption.
5. **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)

**Activities**
An assessment was completed and action items identified.

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

**Activities**
On October 14, 2015, the Board approved a professional services contract with GNC Consulting, Inc. to provide PeopleSoft enterprise resource planning software upgrade services for a total not-to-exceed amount of $900,000. The consultants have been onsite and have begun the initial planning steps. The project is in the very early stages and is on track to be completed by June 2017.

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)

**Activities**
Staff continues to enhance security measures across the organization including implementing an online security awareness training program that was launched in November 2015. Water Authority technical staff remain in constant communication with federal, state, and local cyber security agencies to stay alert of the current cyber environment. The security assessment from an outside consultant is on track to be completed in August 2016.

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

**Activities**
On June 25, 2015, the Board approved amendments to the consolidated Memorandum of Understanding with the represented employees for July 1, 2015 through June 30, 2019.

**Other Items**
1. **Business Insurance** – Review business insurance renewals for the workers compensation, general liability and property programs and provide direction. (June 2015).

**Activities**
On June 17, 2015, the Board authorized the purchase of property insurance from Travelers Property Casualty Company of America in the amount of $146,613, liability insurance from Alteris – Allied World Assurance Company in the amount of $321,896,
and workers’ compensation from Special District Risk Management Authority (SDRMA) in the amount of $274,445.

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

**Activities**
On May 15, 2015, the Water Authority entered into a contractual agreement with DR McNatty & Associates to develop a website and centralized database to support the conservation program. By July 2016, three programs will be migrated to the new database: the WaterSmart Landscape Makeover Series, the Sustainable Landscape E-Learning website, and the WaterSmart Checkup program. The WaterSmart Landscape Makeover Series program website centralization was completed in August 2015. The Sustainable Landscape E-Learning website is currently in development and on track for launch in February 2016. The WaterSmart Checkup program is slated to begin migration in January 2016 and to be completed by July 2016.
January 20, 2016

Attention: Administrative and Finance Committee

Monthly Treasurer’s Report on Investments and Cash Flow

Purpose
The purpose of the Treasurer’s Report is to provide monthly financial information to the Board of Director’s.

Attached for review by the Administrative and Finance Committee and the Board of Directors is the Treasurer’s Report as of December 31, 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 December 10, 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 74 percent currently invested in AAA rated or AAA/AA+ split-rated securities. In December 2015, the Water Authority’s overall portfolio yield rose from 0.83 percent to 0.85 percent and continues to exceed the investment benchmark of 0.58 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 PERCENTAGES

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<td></td>
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<td>100.00%</td>
<td>$385,854,950</td>
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<td>Accrued Interest (unavailable for investing)</td>
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<td>63,362</td>
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<tr>
<td>Checking/Petty Cash/Available Funds (unavailable for investing)</td>
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<td>121,115</td>
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<tr>
<td>Subtotal for Pooled Funds:</td>
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<td></td>
<td>$386,039,427</td>
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**Bond/CP Fund Excluded from Portfolio Percentages:**

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Treasury Securities</td>
<td>-</td>
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</tr>
<tr>
<td>Agency Securities</td>
<td>-</td>
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</tr>
<tr>
<td>Placement Service Certificates of Deposit</td>
<td>-</td>
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</tr>
<tr>
<td>Commercial Paper</td>
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<tr>
<td>Local Agency Investment Fund (LAIF)</td>
<td>64,426,283</td>
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<td></td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
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</tr>
<tr>
<td>Money Market Funds and Cash</td>
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<tr>
<td>Accrued Interest (unavailable for investing)</td>
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<td>$66,214,295</td>
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<tr>
<td>Subtotal for Bond/CP Fund (available for CIP expenditures):</td>
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<td>$66,214,295</td>
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**Debt Service Reserve (DSR) Funds Excluded from Portfolio Percentages:**

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<tr>
<th>Investment Type</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Trinity Plus - Reserve (GIC) - Series 1998A COPs</td>
<td>12,240,775</td>
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<td>Subtotal for Debt Service Reserve Funds (unavailable for CIP expenditures):</td>
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<td>$12,240,775</td>
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**Total Cash and Investments**

$464,494,497

### PORTFOLIO INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Pooled Funds **</th>
<th>Bond/CP Fund</th>
<th>Debt Service Reserve</th>
<th>Total *</th>
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<tbody>
<tr>
<td>Portfolio Yield to Maturity - 365 Days</td>
<td>0.79%</td>
<td>0.37%</td>
<td>5.55%</td>
<td>0.85%</td>
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<tr>
<td>Average Term</td>
<td>903</td>
<td>1</td>
<td>1</td>
<td>751</td>
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<tr>
<td>Average Days to Maturity (730 Days Maximum)</td>
<td>421</td>
<td>1</td>
<td>1</td>
<td>350</td>
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* "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 December 16th, the FOMC raised the target for the federal funds rate to a range of 25-50 basis points. The next meeting is March 16th.
## Portfolio Characteristics

- **Average Duration**: 3.03
- **Average Coupon**: 1.78%
- **Average Purchase YTM**: 1.57%
- **Average Market YTM**: 1.71%
- **Average S&P/Moody Rating**: AA+/Aa1
- **Average Final Maturity**: 3.19 yrs
- **Average Life**: 3.15 yrs

## Account Summary

<table>
<thead>
<tr>
<th></th>
<th>Beg. Values as of 11/30/15</th>
<th>End Values as of 12/31/15</th>
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<tbody>
<tr>
<td><strong>Market Value</strong></td>
<td>24,093,251</td>
<td>24,009,373</td>
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<tr>
<td><strong>Accrued Interest</strong></td>
<td>100,859</td>
<td>99,650</td>
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<tr>
<td><strong>Total Market Value</strong></td>
<td><strong>24,194,110</strong></td>
<td><strong>24,109,024</strong></td>
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<tr>
<td><strong>Income Earned</strong></td>
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<td><strong>Cont/WD</strong></td>
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<td><strong>Par</strong></td>
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<td><strong>Book Value</strong></td>
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<td><strong>Cost Value</strong></td>
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## Top Issuers

- **Issuer**
- **% Portfolio**
  - Berkshire Hathaway: 16.8%
  - Microsoft: 16.7%
  - Exxon Mobil Corp: 16.7%
  - ChevronTexaco Corp: 16.6%
  - Apple Inc: 16.5%
  - Wal-Mart Stores: 8.4%
  - Procter & Gamble Company: 8.4%
  - **Total**: 100.0%

## Issuer Allocation

- Apple Inc: 16.45%
- Wal-Mart Stores: 8.43%
- Procter & Gamble Company: 8.38%
- ChevronTexaco Corp: 16.57%
- Berkshire Hathaway: 16.77%
- Exxon Mobil Corp: 16.66%
- Microsoft: 16.74%

## Maturity Distribution

- 0 - 25: 41.6%
- 25 - 5: 41.7%
- 5 - 1: 16.7%

## 12-Month Yield Comparison

- SDOWA
- BAML 1-Year AAA - AA US Corp Index
### Managed Pool Accounts

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<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P</th>
<th>YTM</th>
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<th>Maturity Date</th>
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<tr>
<td>CASH35</td>
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<td>CAMP - OPERATING/POOLED</td>
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<tr>
<td>CASH45</td>
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<td>CAMP - 2010B BONDS-BABS</td>
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Subtotal and Average: 156,904,568.00

**Medium Term Notes**

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<th>Book Value</th>
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<th>S&amp;P</th>
<th>YTM</th>
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Subtotal and Average: 24,143,375.28

**Commercial Paper - Discount**

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<th>Purchase Date</th>
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<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>
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<tbody>
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Subtotal and Average: 36,956,916.30
SDCWA - Fiscal Year 2016
Portfolio Management

Page 2

Portfolio Details - Investments
December 31, 2015
CUSIP

Investment #

Issuer

Average
Balance

Purchase
Date

Par Value

Market Value

Book Value

04/19/2012
04/25/2013
09/19/2014
10/28/2014
10/28/2014
05/21/2015
09/17/2013
03/13/2014
10/28/2014
12/18/2014
03/18/2015
04/29/2015
04/29/2015
05/21/2015
10/30/2015
11/23/2015
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10/30/2015
11/23/2015
06/25/2012
06/21/2013
07/23/2013
09/17/2013
11/20/2013
12/19/2013
03/13/2014
03/13/2014
03/20/2014
04/15/2014

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4,000,000.00
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3,500,000.00
4,000,000.00
7,000,000.00
3,000,000.00

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7,880,487.00
998,000.00
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4,992,250.00
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7,994,600.00
10,145,000.00
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6,087,000.00
5,171,950.00
4,058,000.00
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10,050,600.00
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8,012,640.00
4,006,320.00
4,006,320.00
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1,511,358.00
5,997,114.00
3,496,885.00
3,534,020.00
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5,689,550.00
4,468,764.00
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3,015,009.00
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4,333,037.33
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10,464,400.00
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3,116,700.00

Stated
Rate

S&P

YTM Days to
365 Maturity

Maturity
Date

Federal Agency - Coupon
31331JX32
3133ECMM3
3133EDUE0
3133EDXA5
31331QGB7
3133EEWN6
3133XFD60
313373FQ0
3133XMTE1
3130A0QT0
3130A4Q88
3130A53Z0
3133782M2
3130A4GJ5
3130A4GJ5
3130A4GJ5
3137EAAD1
3137EAAD1
3137EAAD1
3137EAAJ8
3137EAAD1
3137EADS5
3137EAAD1
3137EAAD1
3137EACA5
3137EACA5
3135G0BA0
3135G0BA0
3135G0JA2
3135G0JA2
3135G0JA2
3135G0JA2
3135G0ZB2
3135G0PQ0
3135G0PQ0
3135G0BA0

10048
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FEDERAL FARM CREDIT BANK
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1.700
0.600
0.850
1.150
5.300
0.700
5.375
2.500
4.875
1.480
1.125
1.050
1.500
1.125
1.125
1.125
5.250
5.250
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5.250
0.875
5.250
5.250
3.750
3.750
2.375
2.375
1.125
1.125
1.125
1.125
0.750
0.875
0.875
2.375

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0.948
0.637
0.986
0.943
0.975
0.667
0.690
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0.958
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1.137
1.076
1.241
1.000
0.895
1.076
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0.518
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0.778
1.011
0.690
0.410
1.213
1.373
0.704
0.700
1.040
1.203
0.844
0.830
0.875
1.110
1.113
0.409

301
480
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648
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461
102
117
668
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1,162
845
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108
291
108
287
108
108
1,181
1,181
101
101
482
482
482
482
475
664
664
101

10/28/2016
04/25/2017
04/05/2017
10/10/2017
10/25/2017
04/06/2017
04/12/2016
04/27/2016
10/30/2017
04/17/2018
04/17/2018
10/23/2018
03/08/2019
04/25/2018
04/25/2018
04/25/2018
04/18/2016
04/18/2016
04/18/2016
10/18/2016
04/18/2016
10/14/2016
04/18/2016
04/18/2016
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03/27/2019
04/11/2016
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04/20/2017
10/26/2017
10/26/2017
04/11/2016

Portfolio CWA2
CC
PM (PRF_PM2) 7.3.0


<table>
<thead>
<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer</th>
<th>Purchase Date</th>
<th>Average Balance</th>
<th>Par Value</th>
<th>Market Value</th>
<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P YTM 365</th>
<th>Days to Maturity</th>
<th>Maturity Date</th>
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<tbody>
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<td>3135G0ZB2</td>
<td>10123</td>
<td>FEDERAL NATION MORTAGE ASSOC.</td>
<td>04/15/2014</td>
<td>5,000,000.00</td>
<td>4,981,750.00</td>
<td>4,980,850.00</td>
<td>0.750</td>
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<td>5,947,182.00</td>
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<td>5,271,315.54</td>
<td>5,281,736.28</td>
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<td>AA+</td>
<td>0.986</td>
<td>482</td>
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<td>3,487,225.00</td>
<td>3,494,246.00</td>
<td>0.750</td>
<td>AA+</td>
<td>0.821</td>
<td>475</td>
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<td>4,000,000.00</td>
<td>3,992,520.00</td>
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<td>1.125</td>
<td>AA+</td>
<td>1.358</td>
<td>1,022</td>
<td>10/19/2018</td>
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Subtotal and Average

Federal Agency - Coupon

|          |              |                                            |               | 196,295,653.86 | 191,553,000.00 | 192,987,537.27 | 199,323,090.96 | 0.882     | 486               |

|          |              |                                            |               |                |              |              |             |          |                  |

Treasury Securities - Coupon

|          |              |                                            |               | 66,176,489.96  | 66,000,000.00 | 65,940,247.14 | 66,176,489.96 | 0.767     | 530               |

|          |              |                                            |               | 481,755,594.25 | 456,336,507.37 | 457,715,236.74 | 464,373,378.15 | 0.851     | 350               |

Subtotal and Average

|          |              |                                            |               |                |              |              |             |          |                  |

Total and Average

Portfolio Management
Portfolio Details - Investments
December 31, 2015

SDCWA - Fiscal Year 2016
## Portfolio Details - Cash

**SDCWA - Fiscal Year 2016**

**Portfolio Management**

**December 31, 2015**

<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>S&amp;P</th>
<th>YTM</th>
<th>Days to Maturity</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Passbook/Checking Accounts</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>CASH01</td>
<td>48</td>
<td>PETTY CASH</td>
<td>07/01/2015</td>
<td>2,500.00</td>
<td>2,500.00</td>
<td>2,500.00</td>
<td>0.000</td>
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<tr>
<td>CASH02</td>
<td>1000</td>
<td>WELLS FARGO - OPERATING/POOLED</td>
<td>07/01/2015</td>
<td>122,355.02</td>
<td>122,355.02</td>
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<td>0.001</td>
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<tr>
<td>CASH03</td>
<td>1001</td>
<td>WELLS FARGO - PAYROLL ZBA</td>
<td>07/01/2015</td>
<td>-3,740.07</td>
<td>-3,740.07</td>
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<td>0.000</td>
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<tr>
<td>CASH39</td>
<td>4000</td>
<td>WELLS FARGO - 2010B BONDS-BABS</td>
<td>07/01/2015</td>
<td>3.99</td>
<td>3.99</td>
<td>3.99</td>
<td>0.000</td>
<td>1</td>
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**Total Cash and Investments**:

- Average Balance: 0.00
- Total: 481,755,594.25
- Par Value: 456,457,626.31
- Market Value: 457,836,355.68
- Book Value: 464,494,497.09
- YTM: 0.851
- Days to Maturity: 350
## SDCWA - Fiscal Year 2016
### Portfolio Management
#### Activity Summary
December 2014 through December 2015

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<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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<tbody>
<tr>
<td>December</td>
<td>2014</td>
<td>80</td>
<td>547,286,815.40</td>
<td>0.566</td>
<td>0.574</td>
<td>0.600</td>
<td>2</td>
<td>1</td>
<td>606</td>
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<tr>
<td>January</td>
<td>2015</td>
<td>77</td>
<td>564,646,521.95</td>
<td>0.547</td>
<td>0.555</td>
<td>0.507</td>
<td>1</td>
<td>4</td>
<td>587</td>
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<tr>
<td>February</td>
<td>2015</td>
<td>76</td>
<td>511,772,265.16</td>
<td>0.601</td>
<td>0.609</td>
<td>0.615</td>
<td>5</td>
<td>6</td>
<td>651</td>
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<tr>
<td>March</td>
<td>2015</td>
<td>79</td>
<td>514,766,492.71</td>
<td>0.621</td>
<td>0.630</td>
<td>0.640</td>
<td>3</td>
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<td>April</td>
<td>2015</td>
<td>72</td>
<td>463,900,626.75</td>
<td>0.695</td>
<td>0.705</td>
<td>0.636</td>
<td>7</td>
<td>14</td>
<td>683</td>
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<td>May</td>
<td>2015</td>
<td>78</td>
<td>476,626,587.53</td>
<td>0.716</td>
<td>0.726</td>
<td>0.681</td>
<td>6</td>
<td>0</td>
<td>701</td>
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<tr>
<td>June</td>
<td>2015</td>
<td>79</td>
<td>470,842,737.73</td>
<td>0.738</td>
<td>0.748</td>
<td>0.716</td>
<td>2</td>
<td>1</td>
<td>718</td>
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<tr>
<td>July</td>
<td>2015</td>
<td>80</td>
<td>469,298,162.29</td>
<td>0.752</td>
<td>0.762</td>
<td>0.746</td>
<td>1</td>
<td>0</td>
<td>728</td>
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<tr>
<td>August</td>
<td>2015</td>
<td>81</td>
<td>474,611,547.05</td>
<td>0.753</td>
<td>0.763</td>
<td>0.735</td>
<td>1</td>
<td>0</td>
<td>726</td>
</tr>
<tr>
<td>September</td>
<td>2015</td>
<td>82</td>
<td>478,931,011.69</td>
<td>0.760</td>
<td>0.771</td>
<td>0.743</td>
<td>1</td>
<td>0</td>
<td>736</td>
</tr>
<tr>
<td>October</td>
<td>2015</td>
<td>78</td>
<td>453,676,707.19</td>
<td>0.797</td>
<td>0.809</td>
<td>0.747</td>
<td>3</td>
<td>7</td>
<td>724</td>
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<tr>
<td>November</td>
<td>2015</td>
<td>84</td>
<td>472,146,427.60</td>
<td>0.818</td>
<td>0.830</td>
<td>0.785</td>
<td>6</td>
<td>0</td>
<td>737</td>
</tr>
<tr>
<td>December</td>
<td>2015</td>
<td>83</td>
<td>464,373,378.15</td>
<td>0.840</td>
<td>0.851</td>
<td>0.817</td>
<td>1</td>
<td>2</td>
<td>751</td>
</tr>
</tbody>
</table>

Average: 79 | 489,452,252.40 | 0.708% | 0.718% | 0.690 | 3 | 3 | 694 | 329
January 20, 2016

Attention: Administrative and Finance Committee

Approve the selection of Wells Fargo Bank as the commercial banking services provider.
(Action)

Staff recommendation
Authorize the General Manager to award a commercial banking service contract to Wells Fargo Bank for a five-year period with two one-year renewal options.

Alternatives
The Board could select one of the lower ranked banking service providers.

Fiscal impact
The costs for banking services are quoted primarily on a per-item basis for the services the Water Authority uses and the monthly banking activity fluctuates depending on the number of transactions during each month. The projected banking expenses under the new banking contract are expected to provide a small savings and remain flat over the contract period. The current annual budget for commercial banking fees is $16,800. The new contract will reduce the estimated annual commercial bank fees in fiscal years 2016 and 2017 by approximately $3,900 and $5,900, respectively. This item impacts all rate and charge categories.

Background
The Water Authority’s current commercial banking service provider is Wells Fargo Bank. Although Wells Fargo Bank has a long history of providing outstanding service to the Water Authority as its commercial banking services provider, it is a best management practice to periodically evaluate both the level of services provided and the costs of its commercial banking service provider. As a result, a Request for Proposal (RFP) for commercial banking services was prepared.

Staff retained the services of Strategic Treasurer, an independent consulting firm, to evaluate the Water Authority’s current banking services and service needs to identify potential service enhancements available from banks today. Strategic Treasurer is a national firm that specializes in treasury and banking management and services. As an independent advisor, Strategic Treasurer helped develop the RFP questionnaire to ensure that all of the proposals provided similar detailed information and prepared a report that provided a comparison of both services and costs associated with the proposals.

Discussion
An RFP for commercial banking services was issued on September 12, 2015 and was sent to 55 prospective banks. On September 30, 2015, the Water Authority received qualifying proposals from Wells Fargo Bank, MUFG, and US Bank. Strategic Treasurer developed a detailed report summarizing service offerings and estimated costs associated with each proposal based upon each banks specific fee schedule.
After a thorough evaluation of all responses to the RFP and Strategic Treasurer’s report, the Water Authority’s selection panel unanimously recommended that Wells Fargo Bank be selected. The selection criteria used to evaluate the proposals included ability to meet required services and offer required bank products, ability to offer product and service enhancements, technical competence and strength of relationship management team, experience with public agency clients, ability to support transition to new provider, and overall cost to the Water Authority including the ability to guarantee pricing for five years. The recommendation was based upon the application of the evaluation criteria under which Wells Fargo received the highest score. In addition, Wells Fargo Bank was the lowest cost proposal and guaranteed it’s pricing for a five-year period. Under the new contract, the Water Authority will reduce banking fees over the five year period by approximately 35% from the current budgeted level. In addition, the cost of transitioning to a new commercial bank, which is a significant level of effort and staffing cost, is avoided.

Wells Fargo is recognized as one of the most highly capitalized and well-managed banks in the industry. The bank continues to offer enhanced technology with respect to its banking services and products, and keeps the Water Authority apprised of new products and services available for consideration to aid in the continual streamlining of our operations. In addition, staff continues to be satisfied with the products and service levels and the quality of the relationship management team. References include clients such as the County of San Diego, Eastern Municipal Water District, and the San Diego Unified Port District, among others.

Prepared by:  David Shank, Financial Planning Manager  
Reviewed by:  Lisa Marie Harris, Director of Finance  
Approved by:  Sandra L. Kerl, Deputy General Manager
January 20, 2016

**Attention:** Administrative and Finance Committee

**Adopt the Water Authority’s 2015 Long-Range Financing Plan. (Action)**

**Staff recommendation**
Adopt, as final, the Water Authority’s 2015 Long-Range Financing Plan.

**Alternatives**
Do not adopt the Water Authority’s 2015 Long-Range Financing Plan.

**Fiscal impact**
There is no fiscal impact.

**Background**
On April 24, 2008 the Board adopted the Water Authority’s 2008 Long-Range Financing Plan (LRFP). At that time, the Water Authority was facing a downward turning economy with the financial crisis starting to unfold and significant and sustained periods of drought. It was in this challenging environment that the Water Authority prepared for the largest capital investment in its long history. At that time, the ten-year Capital Improvement Projects (CIP) program spending was set to peak at $1.75 billion. The CIP projects included a new treatment plant, canal linings and the emergency storage projects. In addition, the LRFP included the enhancement of key financial policies including the establishment of a Board senior-lien debt service coverage target and enhanced Rate Stabilization Fund metrics.

While the LRFP is an important communications document for a wide range of stakeholders, the primary intended audience is investors and rating agencies. Aimed at investors and rating agencies, the document focuses on key financial policies, projected future capital expenditures debt issuances, revenues and expenditures, financial performance metrics, and risks facing the Water Authority. However, to make the document as accessible as possible to the widest range of stakeholders, a detailed discussion is provided on key aspects of the Water Authority’s operations.

The 2008 LRFP received positive feedback by both rating agencies and investors. Standard and Poor’s sought approval to use it as a Best in Class example of financial planning for other agencies. In addition, the 2008 LRFP has become a policy reference manual for all stakeholders and has supported over $2 billion in transactions including refodings and new debt issuances.

The Draft 2015 LRFP was presented to the A&F Committee on December 10, 2015. The final 2015 LRFP is recommended for adoption at the January 28, 2016 A&F Committee meeting.

**Discussion**
The 2015 LRFP highlights the Water Authority’s transition to an operations and asset management focused agency from a construction oriented agency. The baseline $582 million ten-year CIP is a much more modest spending level when compared to the 2008 LRFP. The largest component of the CIP is Asset Management, which makes up more than 40% of the ten-year CIP. The Asset
Management program includes the Relining and Pipe Replacement Program and other infrastructure rehabilitation. Although the 2015 LRFP anticipates modest capital investments, the ten-year planning horizon is not without its challenges. It is a challenge to project future water sales with an El Nino forecast looming as the Water Authority potentially enters its fifth year of drought coupled with unprecedented state water drought regulations. The financial impacts of these recent demand regulations, if permanent, have just begun to impact water agencies across the state.

While there are a large number of assumptions embedded in the 2015 LRFP, the core assumptions are those that have significant financial impacts and include water sales, local supplies, cost of imported water and transportation and the CIP. At the November 12, 2015 A&F Committee Workshop, staff provided a detailed overview of the assumptions that will serve as the foundation for the 2015 LRFP. During that presentation, detailed overviews of the baseline, and high and low rate and charge assumptions were provided. It should be noted that the financial projections included in the 2015 LRFP are based upon the high rate and charge assumptions, which deviate from the baseline/expected CIP and water sales levels discussed in the LRFP. By using the high rate and charge assumptions a more conservative financial outlook is provided. The high and low rate and charge guidance provided in the LRFP is especially important to the member agencies as they develop their own financial plans. At the December 10, 2015 A&F Committee meeting, staff provided an overview of the draft 2015 LRFP and identified minor changes made to the LRFP assumptions.

The LRFP will also incorporate changes to the policies governing the management of the Stored Water Fund and the long-term capital funding target mix. The recommended policy changes focus on better aligning the policies with changes in operations and the CIP project mix. These policy recommendations were presented to the A&F Committee at both the November 12, 2015 Workshop and the December 10, 2015 committee meeting. A summary of the recommended policy updates are provided below.

**Long-Term Funding Target Mix**

With the CIP project mix shifting more towards asset management, more of the CIP projects are refurbishing existing assets that have been in service for a long time to the benefit of existing customers. The recommended increase of the PAYGO/cash funding target to 30% from its current level of 23% increases the utilization of PAYGO funds for these projects. Funding these projects with PAYGO/cash helps balance intergenerational equity by implementing a more pay-as-you-use approach to project funding. This would also reduce the amount of planned new debt issuances, which is viewed favorable by the rating agencies.

**Stored Water Fund**

The recommendations for the Stored Water Fund are: make the fund permanent; manage all water storage activities within the Stored Water Fund; establish a maximum calendar year-end balance threshold; and engage a cost of service consultant to validate the policy for cost of service principles. The Stored Water Fund recommendations ensure funds are available to purchase water for the Water Authority’s water storage facilities. In addition, revenue collections and expenses for stored water will be tracked to ensure that rate and charge integrity is maintained.
The 2015 LRFP is broken down into several sections. A description of the content of each section is provided below.

Section 1—Executive Summary: Highlights the key enhancements of this LRFP update and provides a brief summary of each section.

Section 2—Financial Management Objectives and Policies: Describes Water Authority capital financing and reserve policies and credit ratings from Standard & Poor’s, Fitch Ratings, and Moody’s Investors Service.

Section 3—Regional Water Sales Projections: Details the Water Authority’s long-term water sales forecast, which reflects the near-term drought impacts of extraordinary conservation and long-term impacts of local supply development.

Section 4—Capital Improvement Plan: Sets forth the Water Authority’s CIP, highlighting its progression over time and summarizing the current $2.8 billion CIP by project category and status.

Section 5—Capital Financing Plan: Elaborates on the Water Authority’s capital financing plan including the debt instruments used to finance the CIP. It discusses the methodology used to optimize the financing mix, and provides detail on outstanding Water Authority debt and all future debt and cash necessary to completely fund the Water Authority’s CIP.

Section 6—Water Authority Financial Forecast: Confirms the overall feasibility and affordability of the Water Authority’s capital financing plan and includes high and low rate forecasts. The ten-year projection of sources and uses of funds incorporates the impact of all debt projected to be issued during the planning period and demonstrates that the CIP can be implemented with manageable long-term growth in water rates.

Section 7—Funds and Reserves: Provides information on the Water Authority’s seven major operating and capital funds, their authorized uses, Board-approved funding policies, and projected cash balances. The projections demonstrate that the Water Authority will have sufficient liquidity to meet both its operating and CIP commitments.

Section 8—Risk Sensitivity Analysis: Analyses of the Water Authority’s exposure to variability in certain underlying assumptions. It provides detail regarding the potential impact of reduced water sales volumes on Water Authority revenues; changes in short-term interest rates on Water Authority net interest expense; and reduced new housing activity on capacity charge revenues.

Section 9—Appendices: Details the Water Authority’s bonded debt as well as its non-bonded obligations (including post-employment obligations for pension and retiree healthcare benefits) and contains the full text of the Water Authority’s Debt Management and Investment policies.
2015 LRFP Review Process
The review process has been structured to provide opportunities for member agency review and input at both the staff and Board levels. The following are both past and planned meetings.

- October 13, 2015—General Managers’ Meeting—draft outline presented for review, discussion and input
- October 14, 2015—Finance Officers’ Meeting—draft outline presented for review, discussion and input
- November 12, 2015—Special A&F Committee Workshop—review & discussion of draft assumptions and select financial policies
- November 17, 2015—General Managers’ Meeting—review & discussion of draft assumptions and select financial policies
- November 18, 2015—Finance Officers’ Meeting—review & discussion of draft assumptions and select financial policies
- December 8, 2015—Joint General Managers’ and Finance Officers’ Meeting—review draft financial projections and High/Low rate and charge projections
- December 10, 2015—A&F Committee Meeting—overview and discussion of 2015 LRFP
- January 28, 2016—A&F Committee Meeting—adopt 2015 LRFP

The attached 2015 LRFP (Attachment A) includes minor revisions to the previous draft made in response to feedback received and continued staff review.

Prepared by: David Shank, Financial Planning Manager
Reviewed by: Lisa Marie Harris, Director of Finance
Approved by: Sandra L. Kerl, Deputy General Manager

Attachment A: Water Authority’s 2015 Long-Range Financing Plan
**Not an Offer to Sell Securities.** The Long-Range Financing Plan is for informational purposes, and is not an offer to buy or sell, or a solicitation of an offer to buy, and may not be relied upon in connection with the purchase or sale of any security. No information or representations with respect to the sale by the Water Authority of any security may be relied upon other than information and representations contained in the *Preliminary Official Statement and final Official Statement* approved by the Water Authority for use in connection therewith.

To receive an Official Statement please contact:

San Diego County Water Authority  
4677 Overland Avenue  
San Diego, CA 92123  
858-522-6600

Or visit our website at [http://www.sdcwa.org/](http://www.sdcwa.org/)
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<th>Section</th>
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1. Executive Summary

With the completion of several landmark construction projects, the Water Authority has transitioned from an organization focused on constructing new facilities to an organization focused on the operations and maintenance of existing facilities. Looking forward, the Capital Improvement Program (CIP) is driven by the Water Authority's Asset Management Program, which includes the Water Authority's relining program. The Asset Management Program seeks to optimize asset Renewal and Rehabilitation (R&R) decisions.

The primary goal of the Water Authority’s LRFP is to support the long-term fiscal sustainability of the Water Authority. It identifies the financial policies that guide the Water Authority’s prudent management of financial risk, and outlines how the Water Authority plans to finance the CIP. It also provides details regarding key underlying assumptions and provides long-term financial forecasts. This document was last updated in 2008 and is being prepared to provide future financial information to stakeholders. The remainder of this executive summary highlights the important features of the 2015 LRFP and contains brief summaries of each chapter of the 2015 LRFP.
1.1 Highlights of the 2015 LRFP

**Highlights Completion of Significant Water Reliability Projects.** With the completion of the San Vicente Dam Raise Project, the crown jewel of the Water Authority’s Emergency Storage Program, and commercial operations of the Carlsbad Desalination Plant, the Water Authority has reached a significant milestone in its long history of water supply diversification. Known for doing what it says and making difficult decisions, these Water Authority accomplishments are nothing short of groundbreaking. **Section 4, Capital Improvement Program,** focuses on the Water Authority’s plan to optimize the life-cycle costs of its assets through its innovative Asset Management Program.

**Addresses the Near-Term Financial Impacts of the Statewide Demand Regulations.** With dry hydrologic conditions in its primary watersheds and unprecedented statewide water use regulations, the Water Authority is facing significant near-term demand reductions. Several sections of this LRFP provide enhanced discussion of drought-related impacts. **Section 3, Regional Water Sales Projections,** provides discussion of the expected impacts of water use regulations, local supply development, and El Niño conditions on water demands. **Section 6, Water Authority Financial Forecast,** incorporates the impacts of reduced water sales volumes, increased rates from the Water Authority’s main supplier, Metropolitan Water District of Southern California (MWD), and deliveries of desalinated water. Finally, **Section 8, Risk Sensitivity Analysis,** also analyzes the potential volatility in net revenues that could result from reduced water sales.

**Provides Additional Information Regarding Key Assumptions, Sensitivity Analyses, and Non-Bonded Liabilities.** Water sales projections, local supplies, cost of imported water, and CIP expenditures drive LRFP financial projections. **Section 3, Regional Water Sales Projections,** and **Section 4, Capital Improvement Program,** describe these key assumptions. In addition to the drought impacts discussed above, **Section 8, Risk Sensitivity Analysis** also looks at the potential exposure to variations in capacity charge revenues and interest rates. Finally, though the Water Authority’s unfunded pension and retiree healthcare costs are small, relative to total outstanding debt, a detailed description of these liabilities is included in **Section 9, Appendices,** for reference.

1.2 LRFP Section Descriptions

**Section 2—Financial Management Objectives and Policies.** This section describes Water Authority capital financing and reserve policies; discusses these policies as tradeoffs between the financial management objectives of cost efficiency, predictable rates, and intergenerational equity; and elaborates on the Water Authority’s strong credit ratings from Fitch Ratings, Standard & Poor’s, and Moody’s Investors Service.

### Key Policy Recommendations

1. The LRFP shows the Stored Water Fund as a permanent fund dedicated to providing working capital for all stored water. A maximum year-end balance equal to 110% of the expected cost to fill available storage capacity has been established. The policy is described further in Section 7.

2. The PAYGO/Cash funding target mix has been updated to 30% from the 23% target set in 2008. The new target mix reflects the types of CIP projects on the horizon and the availability of PAYGO funds to support the new target. This plan will reduce future debt issuance and will be viewed favorably by rating agencies.
**Section 3—Regional Water Sales Projections.** This section describes the Water Authority’s expected long-term water sales forecast (see Chart 1-1). Not only does it provide additional detail as to the breakdown in sales volumes among customer classes, but it also highlights the local and imported supply sources being developed to meet the demand. The forecast reflects near-term drought impacts of extraordinary conservation measures and mandatory cutbacks to agricultural customers within the region. Lastly, the section discusses the various challenges facing the State Water Project (SWP).

![Chart 1-1 Water Sales Forecast](image)

**Section 4—Capital Improvement Program.** This section describes various elements of the Water Authority’s CIP. It discusses the expected $582 million ten-year CIP projection and summarizes the current $2.8 billion lifetime CIP by project categories and status. It also provides information demonstrating the Water Authority’s track record of CIP execution. Chart 1-2 shows the expected CIP expenditures during the planning period.

![Chart 1-2 Annual CIP Expenditures](image)
Section 5—Capital Financing Plan. This section provides a detailed overview of the debt instruments the Water Authority anticipates using to finance the CIP and the methodology used to optimize the long-term financing mix (Chart 1-3). The outstanding $2.15 billion in long-term and short-term debt, and projections of approximately $168.5 million of future debt are necessary to fund the Water Authority’s existing CIP (Chart 1-4).

Section 6—Water Authority Financial Forecast. This section demonstrates the overall feasibility of the Water Authority’s capital financing plan. It provides a brief description of the Water Authority’s rates and charges, highlighting the Water Authority’s fixed revenue sources. The comprehensive ten-year projection of sources and uses of funds incorporates the impact of all debt projected to be issued during the planning period. Both rate and debt service coverage projections demonstrate that the Water Authority can prudently implement the CIP with a manageable long-term growth in water rates over the planning period.
High and low rate and charge forecasts for Municipal and Industrial (M&I) customers have been developed to provide guidance on the anticipated trends in rates and charges. The high rate and charge projection is based upon a water sales outlook that includes continued restrictions on water demand in addition to a slow rebound in future sales (low sales levels), a win in the MWD litigation and a restructuring of their rates to comply with the law, a high rate forecast for MWD’s rates that takes into account planning costs for Cal WaterFix (capital costs for the State’s current plan for addressing the Bay-Delta issues are not included in the LRFP projection period), an aggressive development of member agency local supplies, and a higher than expected CIP funding levels. The low rate projection is based upon water demands and sales levels returning to levels in line with average levels, a win in the MWD litigation and a restructuring of their rates to comply with the law, a moderate development of member agency local supplies, and a lower than expected CIP funding level. All of the financial projections presented in the LRFP are based upon the high-rate forecast, which provides stakeholders with conservative financial projections. Chart 1-5 shows that over the planning period the high-rate and low-rate forecasts project a compounded annual growth in M&I rates of 4.8% and 1.6%, respectively.

Chart 1-6 below shows that projected senior lien debt service coverage during the planning period will be at the Board-established target of 1.50 times.

(1) Customer Service, Storage, and Supply Reliability Charges converted to $/AF based on sales forecast.
Section 7—Funds and Reserves. The financial collapse of 2008 highlighted the importance of maintaining adequate liquidity. This section describes the Water Authority’s seven major operating and capital funds, their authorized uses, Board-approved funding policies, and projected cash balances. The projections in this section, summarized in Chart 1-7, demonstrate that the Water Authority will have sufficient liquidity to meet both its operating and capital investment commitments under the high-rate scenario assumptions.

Chart 1-7  Projected Year-End Fund Balances

Section 8—Risk Sensitivity Analysis. As with all water utilities, the Water Authority is exposed to a mix of financial risks during the LRFP planning period that are common to most water agencies. The financial crisis of 2008 showed that even the most careful planning can be disrupted by extreme conditions. Looking forward, there is the potential for major changes in both the economic and capital markets as the business cycle plays out, and preparing for them is a challenge. As part of its continuous improvement efforts, the Water Authority actively evaluates and prepares for different types of risk. This section analyzes the Water Authority’s exposure to variability in water sales volumes, interest rates, and local economic activity. Table 1-1 demonstrates how hydrologic risks that the Water Authority faces in Calendar Year 2016 may impact the Water Authority financially. California is currently facing a variety of water supply and demand challenges. The table illustrates the financial impact of additional reductions in sales. It is important to note that the impact of the statewide mandatory demand reductions on M&I customers and MWD’s reduction of 15% on Transitional Special Agricultural Water Rate (TSAWR) sales have already been factored into the demand and financial projection provided in the document. Therefore, the table illustrates the financial impact of reductions in demand below the regulated levels or if wet weather further suppresses demand, in spring of 2016.

Table 1-1  Financial Impact of Calendar Year 2016 Water Sales Volatility

<table>
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<tr>
<th>Percent Sales Loss</th>
<th>Sales Loss (Acre-Feet)</th>
<th>Revenue Impacts</th>
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<tr>
<td></td>
<td>Water Sales</td>
<td>Treatment</td>
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<tr>
<td>Change in M&amp;I Demand</td>
<td>5%</td>
<td>(18,933)</td>
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<tr>
<td>Change in TSAWR</td>
<td>5%</td>
<td>(1,725)</td>
</tr>
<tr>
<td>Total</td>
<td>(20,658)</td>
<td>(7,776)</td>
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<td>Units</td>
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<td>Rate Impact</td>
<td>$5.85/AF</td>
<td>$9.79/AF</td>
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<tr>
<td>Change in M&amp;I Demand</td>
<td>15%</td>
<td>(56,798)</td>
</tr>
<tr>
<td>Change in TSAWR</td>
<td>15%</td>
<td>(5,176)</td>
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<tr>
<td>Total</td>
<td>(61,974)</td>
<td>(23,328)</td>
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<tr>
<td>Units</td>
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<td>321,855</td>
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<td>Rate Impact</td>
<td>$19.75/AF</td>
<td>$32.82/AF</td>
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Section 9—Appendices. This section provides detailed information regarding the Water Authority’s outstanding bonded debt as well as its non-bonded obligations. These include Quantification Settlement Agreement (QSA) - related environmental and socioeconomic mitigation payments, and post-employment obligations such as pension and retiree health benefits. Table 1-2 displays the Water Authority’s bonded debt and other liabilities as of June 30, 2015. In September 2015, the Water Authority refunded $185 million of the Water Authority’s obligations related to the 2008A Certificates of Participation (COP’s) and the 2010A Water Revenue Bonds for a net present value savings of $15 million. The Water Authority participates in the CalPERS pension system. The Water Authority has consistently made the full annual pension contribution calculated by CalPERS. In Fiscal Year 2015, the Water Authority’s Other Post-Employee Benefits (OPEB) related to retiree healthcare were funded through a series of payments to the California Employers’ Retiree Benefit Trust. As of June 30, 2015, the Water Authority had an OPEB Actuarial Surplus of $92,000.

1.3 Conclusion

Since 1991, when drought conditions threatened the San Diego region with mandatory supply cutbacks, the Water Authority has made tremendous progress in improving water reliability through supply diversification and improvements in facilities. Long-range supply, facilities, and financial planning have been central to this success. The 2015 LRFP marks another execution milestone. Anchored in the principles of prudent financial management, the LRFP promotes transparency, providing all stakeholders with a clear picture of Water Authority finances now and in the future. The 2015 LRFP key conclusions are: an estimated $168.5 million in new debt will be issued during the LRFP planning period; the high and low rate and charge projections illustrate both feasibility and affordability of the CIP; and the recommended policy enhancements support the Water Authority’s long-term fiscal sustainability.

For additional information, please contact: San Diego County Water Authority, Finance Department, 4677 Overland Avenue, San Diego, CA 92123.
Financial Management Objectives and Policies

The Water Authority's financial management objectives and policies support the Water Authority's overarching strategic goals. These overarching goals are incorporated into the Water Authority's 2014-2019 Business Plan, which aligns resources and provides a "roadmap" for achieving its mission of providing a safe and reliable water supply for the region. The Long-Range Financing Plan (LRFP) contains goals, objectives, and policies that promote the prudent management of financial risks and ensure a sustainable financial infrastructure for the Water Authority. The Credit Rating and Investor Relations Program contains goals, objectives, and strategies for marketing the Water Authority’s credit to key stakeholders in the financial community.

In charting a course of prudent financial management, the Water Authority developed several key policies, which are contained in this LRFP. In 2006, following the recommendations of the Rate Model Working Group (RMWG) and Administrative and Finance Committee, the Board amended the Water Authority's financial policies regarding the Rate Stabilization Fund (RSF) and Debt Service Coverage Ratio (DSCR). As part of the amendments, the Board established a target funding level for the RSF that better protects the Water Authority against the financial impact of 2.5 years of wet weather or mandatory restrictions, and established a maximum fund balance equal to the financial impact of 3.5 years of wet weather or mandatory restrictions. In addition, it established a senior lien target DSCR of 1.50 times and provided the authority to establish separate funds for known, specific future expenses such as stored water purchases.

In today's challenging water supply environment, the Water Authority must focus on the goal of maintaining long-term fiscal sustainability and align financial policies and objectives to support that goal. In 2012, the Fiscal Sustainability Task Force (FSTF) was established by the Board to evaluate the Water Authority's long-term fiscal sustainability. The FSTF completed its work at the March 2014 Board meeting. At that meeting, the Administrative and Finance Committee was charged with developing a recommendation that addressed all of the outstanding fiscal sustainability items identified by the FTSF in a comprehensive manner.

In March 2015, the Board approved a comprehensive recommendation, that when viewed in its entirety, reflect a balanced and equitable approach to changes in the rate and charge structure, and achieves the goals of fiscal sustainability. The adopted recommendations were as follows:

- Implement a new Supply Reliability Charge
- Allocate non-commodity revenues to all rate and charge categories
- Allocate the debt and equity payments for the Carlsbad Desalination Plant to the Melded Supply Rate
- Extend the Transitional Special Agriculture Water Rate through 2020

The adopted recommendations were made to both the rate and charge structure and the cost allocation methodology, which will help reduce water sales revenue volatility.

Together the Water Authority's rate and charge structure and reserve policies act to reduce revenue volatility, provide smooth and predictable rates and charges, and protect against wet weather and mandatory restrictions. Furthermore, the strengthened key financial ratios support the maintenance of the Water Authority's AA+
/Aa2/AA+ credit ratings and access to lower interest rates. More detail related to these and other policies involving capital financing and reserve levels are discussed further in this section.

The aim of this section is threefold:

- Describe key Water Authority financial policies, the Fiscal Sustainability Guiding Principles, and the Comprehensive Independent Cost of Service Reviews
- Provide a context for understanding the policies in terms of financial management objectives
- Present the Water Authority’s credit ratings

2.1 Key Water Authority Financial Policies

The Water Authority’s financial policies cover a range of diverse activities. For the purpose of long-range financial planning, those relating to capital financing and reserve levels are of particular importance. The following section describes in more detail each of the Water Authority’s key financial policies.

### Capital Financing Policies

- Debt Service Coverage Ratio (DSCR)
- Fixed/Variable-Rate Debt Mix

### Reserve Policies

- Operating Fund
- Rate Stabilization Fund
- Guiding Financial Principles

2.1.1 Capital Financing Policies

**Debt Service Coverage Ratio.** The DSCR measures the availability of current financial resources to pay for debt service. It is the ratio of the most recent year’s net revenues divided by the most recent year’s debt service. For example, a DSCR of 1.00 means that after paying all operating expenses, an issuer has exactly enough funds to pay its debt service obligations.
The DSCR is a key metric used by credit rating agencies and investors to assess the credit worthiness of an issuer. In this way it is similar to the income to loan ratio used in qualifying for a home mortgage. All other things being equal, a higher DSCR means less borrowing, better credit ratings, and a lower cost of debt. Conversely, a lower DSCR means more borrowing, lower credit ratings, and more expensive debt.

The Water Authority’s General Resolution is the document governing outstanding debt issues. In this document, the Water Authority contractually commits to setting rates so as to maintain a minimum DSCR of 1.20 times on senior lien debt. The Water Authority also covenants to maintaining net revenues of at least 1.00 times on all outstanding senior and subordinate obligations.

**Senior Lien Debt Service Coverage Ratio Target.** Highly-rated issuers generally have DSCR’s that exceed the covenanted levels. In 2006, the Water Authority’s Board adopted a senior lien DSCR policy target of 1.50 times. This DSCR target provides levels appropriate to preserve the long-term financial integrity of a ’AA’ rated agency. In addition to this 1.50 times policy target, the Board also adopted another policy target of 1.00 times on senior lien debt net of capacity charge revenues.

**Fixed/Variable-Rate Debt Mix.** Fixed/variable-rate debt mix refers to the relative amount of fixed- and variable-rate debt an agency has outstanding. Over any significant period of time, variable-rate debt has outperformed long-term fixed-rate debt. For this reason, variable-rate debt is an important part of any capital financing plan. With these lower rates, however, comes added interest rate volatility. Chart 2-1 shows the variability of certain short-term rate indices since 1995. As can be seen, within any given year, the cost of variable-rate debt can rise or fall significantly and can put pressure on annual debt service budgets. However, in recent years the rates have been relatively stable and low. In the larger financial context, variable-rate debt provides a natural hedge against changes in investment earnings. On a net basis, interest expense on the portfolio of outstanding debt and invested cash balances will be more volatile with a 100% fixed-rate debt portfolio than with some mix of variable and fixed-rate debt. For this reason, a level of variable-rate exposure is a prudent financial decision.

The Water Authority’s fixed/variable-rate debt mix will vary over time depending on the schedule of future debt issuance and the amortization of outstanding debt. For planning purposes, the percentage of outstanding debt that is variable-rate is limited to 30%. This is consistent with the level of invested reserves maintained by the Water Authority as well as credit rating agency guidelines.

**Chart 2-1** Changes in Short-Term Interest Rates Over Time *(as of July of each year)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Yield (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>9</td>
</tr>
<tr>
<td>1996</td>
<td>8</td>
</tr>
<tr>
<td>1997</td>
<td>7</td>
</tr>
<tr>
<td>1998</td>
<td>6</td>
</tr>
<tr>
<td>1999</td>
<td>5</td>
</tr>
<tr>
<td>2000</td>
<td>4</td>
</tr>
<tr>
<td>2001</td>
<td>3</td>
</tr>
<tr>
<td>2002</td>
<td>2</td>
</tr>
<tr>
<td>2003</td>
<td>1</td>
</tr>
<tr>
<td>2004</td>
<td>0</td>
</tr>
<tr>
<td>2005</td>
<td>1</td>
</tr>
<tr>
<td>2006</td>
<td>2</td>
</tr>
<tr>
<td>2007</td>
<td>3</td>
</tr>
<tr>
<td>2008</td>
<td>4</td>
</tr>
<tr>
<td>2009</td>
<td>5</td>
</tr>
<tr>
<td>2010</td>
<td>6</td>
</tr>
<tr>
<td>2011</td>
<td>7</td>
</tr>
<tr>
<td>2012</td>
<td>8</td>
</tr>
<tr>
<td>2013</td>
<td>9</td>
</tr>
</tbody>
</table>

- **SIFMA Index *:** a seven-day high-grade market index comprised of tax-exempt variable rate demand obligations;
- **LIBOR:** London Interbank Offered Rate - a benchmark interest rate index for adjustable rate mortgages, business loans, and financial instruments.
2.1.2 Reserve Policies

**Operating Fund.** The most readily available Water Authority reserves are held in the Operating Fund. Described more fully in Section 7.0, the Operating Fund is intended to manage working capital requirements of the Water Authority. As such, it is sized at 45-days of annual operating expense. Five million dollars of the Operating Fund is held for emergency repair purposes.

**Rate Stabilization Fund (RSF).** In its examination of Water Authority financial policies, the member agency workgroup described earlier looked at the overall levels of Water Authority financial reserves and reviewed funding policies for the Water Authority's RSF. Water Authority financial advisors conducted a comparative analysis of national and statewide water agency financial reserves which highlighted a wide variation among agencies in the level of reserves being driven by each agency's particular situation.

In reviewing funding policies for the RSF, the member agency workgroup characterized and quantified the financial risks actually facing the Water Authority - hydrology risk, interest rate risk, and capacity charge revenue risk. Hydrology risk refers to the decrease in sales volumes and net financial margin caused by either wet weather or mandatory drought restrictions. Interest rate risk refers to the change in net interest cost on the Water Authority's portfolio of debt and investments. Capacity charge risk refers to the change in capacity charge revenue resulting from changes in development activity and timing, and number of new system connections.

In 2006, the Board adopted funding policies for the RSF based on hydrology risk. Described more fully in Section 7.0, the funding policies establish target and maximum funding levels for the RSF equal to 2.5 and 3.5 years respectively, of the net financial loss resulting from extreme wet weather or mandatory drought restrictions. The targets are based upon the analysis of historical rainfall. As shown in Chart 2.2, wet years tended to occur in “clusters” of two to three years with an average of 2.5 years, which is the basis for the target. The policy also identifies appropriate uses for RSF monies including meeting debt service coverage targets, paying for operating expenses, and smoothing rates. Chart 2.3 graphs the projected target and maximum levels of the Water Authority's RSF, which increase over time as the cost of water increases.
2.1.3 Financial Guiding Principles

The Guiding Principles were developed to create a framework to support the Board’s policy deliberations. The Guiding Principles are to be used when evaluating any recommended changes to existing rates and charges or financial policies. Because evaluating financial policies can be challenging, the Guiding Principles are structured to provide very basic evaluation criteria to quickly identify policy changes that merit further consideration and those that do not. The Guiding Principles are listed below:

- Contribute to maintaining a AA+ or better credit rating
- Adhere to industry Cost of Service Principles
- Ensure all beneficiaries of services pay a fair share of costs
- Provide equity for all Member Agencies
- Result in the consistent application of Board rate-setting and other financial policies
- Support intergenerational equity
- Fulfill all legal requirements
- Result in an appropriate level of fixed revenues for fixed obligations
- Consider our dynamic environment
- Maintain or enhance our fundamental mission
- Be consistent in the Water Authority’s position on rate-setting and fiscal sustainability here and at MWD

These criteria were chosen because they are seen as supporting the Water Authority’s long-term fiscal sustainability.

2.2 Financial Management Objectives

This section provides a context for understanding the Water Authority’s financial policies in terms of certain financial management objectives - cost-efficiency, predictable rates, and intergenerational equity. It describes these objectives and illustrates how the financial policies strike a balance between them.

Cost Efficiency. The cost efficiency objective relates to maintaining the lowest possible revenue requirement from water sales. All other things being equal, lower expenses translate into lower rates for member agencies.

Predictable Rates. The predictable rates objective relates to managing the volatility in rates from year to year. Rate stability allows customers to plan effectively based on a stable and predictable cost of water. This objective is particularly important for wholesale water suppliers, such as the Water Authority, whose rates serve as long-term investment benchmarks that can influence member agency capital investment decisions.

Intergenerational Equity. The intergenerational equity objective relates to sharing the cost for capital improvements between current and future ratepayers. Investments in regional facilities for supply, conveyance, and treatment are expensive; and these facilities have service lives of up to 100 years. Intergenerational equity means that the cost burden for these large and long-lived investments is borne by the range of both current and future beneficiaries.
2.2.1 Capital Financing Policies

**Debt Service Coverage.** The debt service coverage policy represents the most complex tradeoff of the objectives discussed previously. For example, in terms of cost efficiency, though higher DSCRs lead to increases in near-term revenue requirements, they also yield cost efficiencies in other areas. Higher coverage means less debt outstanding, a higher credit rating, and lower interest expense over time. DSCR policies can also have significant impact on the financial management goal of rate predictability. In the absence of reserves, DSCR targets close to legally covenanted levels provide an issuer with very little choice in mitigating an unfavorable variance in revenues and expenses other than to raise rates. Lastly, because it impacts the level of debt outstanding, DSCR policies also impact intergenerational equity. Generally speaking, low coverage and a high degree of debt outstanding allocates a greater share of costs to future ratepayers. The following table details the tradeoffs between lower and higher coverage.

**Table 2-1 Debt Service Coverage**

<table>
<thead>
<tr>
<th>Management Objective</th>
<th>Lower DSCR</th>
<th>Higher DSCR</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Efficiency</strong></td>
<td>Lowsers near-term revenue requirement and rates</td>
<td>Increases near-term revenue requirement and rates</td>
</tr>
<tr>
<td></td>
<td>Weakens credit ratings and increases interest expense</td>
<td>Strengthens credit ratings and decreases interest expense</td>
</tr>
<tr>
<td><strong>Predictable Rates</strong></td>
<td>Lower margin for managing volatility in net revenue means more volatile rates</td>
<td>Greater margin for managing volatility in net revenue means less volatile rates</td>
</tr>
<tr>
<td><strong>Intergenerational Equity</strong></td>
<td>More debt means cost burden shifted to future generations</td>
<td>Less debt means cost burden shifted to current generation</td>
</tr>
</tbody>
</table>

**Fixed/Variable-Rate Debt Mix.** The fixed/variable-rate debt mix represents a tradeoff between cost efficiency and stable rates. As with adjustable rate mortgages, the generally lower variable interest rate comes with interest rate volatility. As mentioned earlier, the one subtlety here relates to variable-rate debt acting as a hedge against any period of declining returns in an agency’s investment portfolio.

**Table 2-2 Fixed/Variable-Rate Debt Mix**

<table>
<thead>
<tr>
<th>Management Objective</th>
<th>Variable-Rate Debt</th>
<th>Fixed-Rate Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Efficiency</strong></td>
<td>Historically lowest average cost-of-funds</td>
<td>Historically more expensive than variable-rate debt</td>
</tr>
<tr>
<td><strong>Predictable Rates</strong></td>
<td>Water rates may vary with interest expense; though partially hedged by interest earnings on invested funds</td>
<td>Water rates vary less as interest expense locked-in at time of borrowing</td>
</tr>
</tbody>
</table>
**Reserve Policies.** Reserve policies involve tradeoff among all three objectives. Though funding reserves may increase near-term costs, a lack of reserves means that any volatility in revenues and expenditures will be directly and immediately passed on to customers in terms of water rates. With adequate reserves, the impact of volatility in net revenues to the Water Authority need not result in rate shock to member agencies. Given the nature and degree of the financial risk facing the Water Authority, adequate financial reserves are essential to prudent financial management. Moreover, once built, financial reserves invested in taxable securities can be very cost effective for a tax-exempt debt issuer. One intergenerational consideration also relates to reserves such as the Water Authority’s Stored Water Fund. The goal of this fund is to spread the cost responsibility of certain large expenditures over time.

**Table 2-3 Reserve Policies**

<table>
<thead>
<tr>
<th>Management Objectives</th>
<th>Lower Reserves</th>
<th>Higher Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Efficiency</strong></td>
<td>Decreases near-term revenue requirement and rates</td>
<td>Increases near-term revenue requirement and rates; however, reserve earnings mitigate impact</td>
</tr>
<tr>
<td></td>
<td>Weakens credit ratings and increases interest expense</td>
<td>Strengthens credit ratings and decreases interest expense</td>
</tr>
<tr>
<td><strong>Predictable Rates</strong></td>
<td>Lower margin for managing volatility in net revenue means more volatile rates</td>
<td>Greater margin for managing volatility in net revenue means less volatile rates</td>
</tr>
<tr>
<td><strong>Intergenerational Equity</strong></td>
<td>Reserve shortfalls borne by ratepayers at time of expenditure</td>
<td>Reserve is funded by ratepayers over time</td>
</tr>
</tbody>
</table>

**Debt/Cash Funding Mix.** Debt and cash are the funding sources for capital projects. Therefore, the debt/cash funding mix drives the amount of debt issued. Typically the availability of cash to fund the Capital Improvement Program (CIP) is what determines the funding mix. Cash to fund the CIP can be generated incrementally over time or built into a rate increase. In some instances, the debt service coverage targets for an entity can generate sufficient funds to support a healthy cash funding level.

**Table 2-4 Debt/Cash Funding Mix**

<table>
<thead>
<tr>
<th>Management Objectives</th>
<th>Less Debt</th>
<th>More Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Efficiency</strong></td>
<td>Less debt means less interest and lower total cost over the life of an asset</td>
<td>More debt means more interest and higher total cost over the life of an asset</td>
</tr>
<tr>
<td><strong>Predictable Rates</strong></td>
<td>More cash funding required which if not available increases rate and charge volatility</td>
<td>Lower cash funding level maintains cash balances and limits any impact on rate and charge volatility</td>
</tr>
<tr>
<td><strong>Intergenerational Equity</strong></td>
<td>Current ratepayers contribute funds to pay for capital projects</td>
<td>Future ratepayers pay for capital projects financed with debt</td>
</tr>
</tbody>
</table>
Section 2.3 Water Authority Credit Ratings

Though high underlying credit ratings are not an end in-and-of themselves, they are one of the best measures of success in creating a financially sustainable enterprise. The Water Authority has underlying credit ratings from Standard & Poor’s, Fitch Ratings, and Moody’s Investors Service. Table 2-5 provides each agency’s rating scale for investment grade securities with the Water Authority's long-term underlying ratings highlighted. These ratings show that the Water Authority is a highly rated entity.

In 2010, Moody's and Fitch recalibrated their municipal ratings. Both agencies recalibrated municipal ratings to its global rating scale which is used to rate other credits including sovereign, sub-sovereign, financial institution, project finance, structured finance and corporate obligations. This was a response to the increase in “cross-over” investors in municipal bonds, driven by the high levels of taxable municipal bond issuance due to the authorization of the Build America Bond program. Cross-over investors wanted to be able to more easily compare municipal and non-municipal credit quality. While the recalibration did not represent change in either rating agency’s opinion of the Water Authority’s underlying credit quality, the Water Authority’s Moody's rating was revised from Aa3 to Aa2 and its Fitch rating was revised from AA to AA+ due to the new global scale criteria.

Credit ratings are a combination of both quantitative and qualitative analysis. Table 2-6 presents information from a recently published Fitch Ratings research report that contain median ratings ratios for the universe of Fitch-rated water and sewer credits. The median ratios are provided for each of the ‘A’ through ‘AAA’ rated categories. The table shows that the Water Authority finances a moderate share of its CIP from debt, has a lower debt service coverage ratio and less cash on hand than the Fitch medians. The difference reflects a number of factors including the fact that the Water Authority is a large wholesale agency with low outstanding debt per customer, and has a very favorable ratio of fixed revenues to fixed costs. Other positive rating factors include a strong and diversified regional economy, exceptional long-term planning, water supply diversification, a track record of execution, and prudent and capable financial management.

The direct financial value of a strong credit rating is a function of investor perceptions of risk. Chart 2-4 shows the value of ‘AA’ credit rating vs. ‘A’ credit rating since 1999 in terms of basis points savings on long-term debt. What the graph clearly demonstrates is that the value of a strong credit rating varies over time.
### Table 2-6  Fitch Ratings 2015 Water & Sewer Median Statistics

<table>
<thead>
<tr>
<th>Statistic</th>
<th>AAA (median)</th>
<th>AA (median)</th>
<th>A (median)</th>
<th>Water Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>339,172</td>
<td>188,163</td>
<td>139,915</td>
<td>3,140,181</td>
</tr>
<tr>
<td>Median Household Income</td>
<td>62,688</td>
<td>50,597</td>
<td>43,197</td>
<td>59,830</td>
</tr>
<tr>
<td>Total Outstanding Long-Term Debt/Customer</td>
<td>1,259</td>
<td>1,934</td>
<td>2,218</td>
<td>543</td>
</tr>
<tr>
<td>Percent CIP Debt Financed</td>
<td>0%</td>
<td>35%</td>
<td>64%</td>
<td>77%</td>
</tr>
<tr>
<td>Current Senior Lien Debt Service Coverage</td>
<td>4.4x</td>
<td>2.5x</td>
<td>2.4x</td>
<td>1.5x</td>
</tr>
<tr>
<td>Minimum Projected Debt Service Coverage</td>
<td>2.3x</td>
<td>1.6x</td>
<td>1.3x</td>
<td>1.5x</td>
</tr>
<tr>
<td>Days Cash On Hand</td>
<td>481</td>
<td>442</td>
<td>366</td>
<td>87¹</td>
</tr>
<tr>
<td>Days of Working Capital</td>
<td>537</td>
<td>439</td>
<td>285</td>
<td>267</td>
</tr>
</tbody>
</table>

(1) Fitch August 2015 Ratings Report  
Source: Fitch Ratings

The Great Recession ushered in the demise of the bond insurance industry, which historically provided an easy and available way to access competitive rates. Since 2008, the lack of AAA bond insurance caused more municipal issuers to issue debt based on their underlying ratings, resulting in increased scrutiny from the investor community and wider credit spreads between AAA, AA, and A rated credits. While the bond insurance industry has rebounded somewhat, not one of the insurance providers is rated triple AAA from any of the three main rating agencies, and capacity is limited. Therefore, maintaining strong credit ratings is still crucial to successfully managing long-term borrowing costs.

Additionally, strong credit ratings will allow the Water Authority more market access and will provide greater flexibility to respond to market changes. This is especially important due to the nature of the Water Authority’s debt portfolio, which includes $50 million of extendable commercial paper. Extendable commercial paper is not backed by a bank liquidity or credit facility. In the event that extendable commercial paper cannot be remarketed, it will bear interest at a penalty rate for up to 150 days. During this time, the Water Authority would have to either use cash or issue debt to pay off the extendable commercial paper. Strong market access and flexibility to respond to market changes will help keep the Water Authority in a strong financial position, especially during volatile market conditions.

![Chart 2-4  Spread Between “AA” & ‘A’ Rated Debt - The Benefit of Staying “AA”](chart)

* 100 basis points equal 1%; As of September 30, 2015.
3.0 Regional Water Sales Projections

In keeping with its mission of providing a safe and reliable water supply, the Water Authority has actively pursued a strategy of supply diversification that includes the acquisition and importation of additional water supplies, the development of additional local water supply projects, and enhancements to the reliability of its water supply via augmentation of local and regional water storage capacity. The Water Authority’s service area receives its water supply from two sources:

- Imported Water
- Local Supplies

Local supply sources consist of surface water, groundwater and recycled water, and seawater desalination starting in December 2015. Water Authority imported supplies include a water conservation and transfer agreement with the Imperial Irrigation District (IID) and water conserved by two projects, the All-American Canal Lining Project and the Coachella Canal Lining Project. Since 1990, an average of approximately 15% of the region’s water supply has come from local sources within Water Authority’s service area. Two of these local supplies, surface water and groundwater, are cyclical in nature and can be heavily dependent upon annual rainfall.

This section provides an overview of fundamental assumptions used to develop the water sales projections utilized in the Long-Range Financing Plan (LRFP). Included in this LRFP is discussion on how water sales are projected considering near-term and long-term impacts from the State Water Resources Control Board (SWRCB) Emergency Regulation, mandatory supply allocation from Metropolitan Water District (MWD), the Water Authority’s “When in Drought” conservation campaign, member agency local supply development, and future water supply challenges.

3.1 Water Demand and Sales Forecast

Demand for water in the Water Authority’s service area can be divided into two basic categories: Municipal and Industrial (M&I) and agricultural water certified under the Water Authority’s Transitional Special Agricultural Water Rate program (TSAWR). On an average annual basis, M&I demand constitutes approximately 85% to 90% of the San Diego region’s water consumption. While agricultural water, used mostly for irrigating groves and crops, accounts for the remaining 10% to 15% of demand. Water demand in Fiscal Year 2015 totaled approximately 539,400 acre-feet, with 498,300 acre-feet of M&I and 41,100 acre-feet of agricultural water use.

Since the mid-1990’s, the Water Authority has utilized an econometric modeling approach to forecast long-range water demands (25-year planning horizon) within its service area. Demand projections are updated every five years, coinciding with the Urban Water Management Plan (UWMP) update required by the California Department of Water Resources. These projections are developed using multiple regression analysis that correlate sector-level water demands to weather (precipitation and temperature), price of water, and forecasted demographic and economic variables provided by the San Diego Association of Governments (SANDAG) - the San Diego area regional land use planning agency. Since SANDAG’s projections are based on general plan
data provided by local land use jurisdictions, this process ensures direct linkage between forecasted long-range water demands and projected development identified in local general plans.

The normal-year UWMP demand forecast serves as the foundation and starting point for development of the Water Authority’s water sales forecast. Adjustments are made to the normal-year demand projections to account for factors influencing near term (2017-2019) water sales and anticipated changed conditions from the UWMP assumptions. Modifications to the forecast start with incorporating the impact of the Water Authority’s response to ongoing dry conditions across California. With the SWRCB adoption of an Emergency Regulation in May 2015, one of the key factors influencing near-term water sales was set in motion. The Emergency Regulation was in response to Governor Brown’s unprecedented Executive Order aimed at reducing urban water use statewide by 25%. For Water Authority member agencies, this equates to required reductions varying from 12% to 36% over the June 2015 through February 2016 timeframe - compared to water use over the same period in 2013. Through November 2015, cumulative regional total potable M&I water use was down 24% compared to 2013 totals.

Additionally, in response to MWD’s decision to implement a 15% cutback to its supplies in Fiscal Year 2016, the Water Authority Board took action in May 2015 to declare the Mandatory Supply Cutback Stage of the Water Authority’s Water Shortage and Drought Response Plan. As part of this action, the Water Authority Board approved establishing member agency supply allocations for the M&I and TSAWR classes of service for Fiscal Year 2016. MWD’s allocation commenced July 1, 2015 and is scheduled to terminate on June 30, 2016. In May 2015, the Water Authority Board also took action to limit outdoor irrigation of ornamental landscape and turf to two days per week.

In April 2014, the Water Authority launched a water conservation campaign targeting retail customer water use in response to continuing drought conditions. As a result of Water Authority and member agency ramped-up conservation efforts, demands within the Water Authority’s service area dropped by roughly 55,200 acre-feet or nine percent between Fiscal Year 2014 and Fiscal Year 2015.

The influence of potential El Niño impacts was also incorporated into the near-term sales projections. Scientists from the National Weather Service’s Climate Prediction Center (CPC) stated that atmospheric and oceanic anomalies in 2015 continue to reflect a strong El Niño. In December 2015, the CPC indicated the El Niño condition is expected to remain strong through the winter months of 2015-16, and gradually weaken through spring 2016. As a result, Southern California has a higher probability of experiencing wet winter conditions which can result in augmented member agency local surface water and groundwater supplies, as well as an overall damping effect on water demand.
Finally, out-year (2020-2026) sales were adjusted to account for member agency anticipated local potable reuse project development beyond the current suite of local water supply projects incorporated into the Water Authority’s 2010 UWMP supply projections. As a prudent financial planning measure, the potable reuse projects were factored into the LRFP water sales projections. These projects have long-term impacts on water sales due to the one-for-one offset to demands on the Water Authority. Table 3-1 contains a summary of potable reuse projects anticipated to be developed over the LRFP ten-year planning horizon.

Table 3-1  Member Agency Potable Reuse Projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Start Date</th>
<th>Annual Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of San Diego Pure Water</td>
<td>2021</td>
<td>16,800 af/yr</td>
</tr>
<tr>
<td>Padre Dam MWD Advanced Water Purification - Phase 1</td>
<td>2021</td>
<td>2,000 af/yr</td>
</tr>
<tr>
<td>Padre Dam MWD Advanced Water Purification - Phase 2</td>
<td>2025</td>
<td>9,000 af/yr</td>
</tr>
<tr>
<td>North County Potable Reuse</td>
<td>2025</td>
<td>8,000 af/yr</td>
</tr>
</tbody>
</table>

Chart 3-1 shows annual projected Water Authority M&I and agricultural sales over the LRFP planning period. Included in the forecast are estimated impacts associated with: water savings projections from conservation efforts by the Water Authority and its member agencies, the influence of projected El Niño weather effects, water use reductions due to the SWRCB Emergency Regulation and MWD supply allocation, modest demand recovery and growth, member agency local supply use and development, and additional local potable reuse development. Revenue projections presented in the LRFP are based on this water sales forecast.

Chart 3-1  Water Authority Projected Sales Forecast
### 3.2 Local Supplies

**Chart 3-2 Water Authority Supply Portfolio in 2025**

Local resources developed and managed by Water Authority member agencies are critical to securing a diverse and reliable supply for the region. As Chart 3-2 shows, these supplies include surface water, groundwater, recycled water, and desalinated seawater. Additionally, local recycled water and seawater desalination projects not only reduce demands for imported water, but also provide agencies with a drought-resilient supply.

**Figure 3-1 Local Reservoirs in the Water Authority Service Area**

*Figure 3-1* highlights surface water storage reservoirs in the San Diego region. Since 1980, median annual surface water yield regionwide has totaled 64,100 acre-feet. However, annual surface water yield has varied substantially due to fluctuating hydrologic cycles, from a low of 4,100 acre-feet in Fiscal Year 2015 to a high of 140,300 acre-feet in Fiscal Year 1984. Based on information provided to the Water Authority by its member agencies, local surface water supplies are projected to approach an average yield of 51,700 acre-feet annually toward the end of the ten-year forecast period.
In November 2012, the Water Authority entered into a formal Water Purchase Agreement (WPA) with Poseidon Water detailing commercial and financial terms for the purchase of desalinated ocean water produced at the Carlsbad Desalination Project (CDP) and delivered to the Water Authority’s regional aqueduct system. The CDP came on-line in December 2015 and will produce between 48,000 acre-feet and 56,000 acre-feet annually. The CDP is located on an approximate six-acre parcel adjacent to the Encina Power Station in Carlsbad, California. The project has been in development since 1998 and has been incorporated into the Water Authority’s supply and facility planning documents including the 2003 Water Facilities Master Plan and the 2005 and 2010 Urban Water Management Plans. Construction began on the project in late 2012, and commercial production began on December 23, 2015.

Even though groundwater is much less plentiful in the San Diego region than other areas of the state, maximizing groundwater development is another component of the region’s diversified water supply portfolio. The forecast assumes groundwater production, currently reduced due to ongoing drought conditions, will approach levels consistent with 2010 UWMP projections by 2020.

Fundamental to developing a diverse supply mix for the region is the use of existing water supplies more efficiently through implementation of water recycling projects. Water recycling is the treatment and disinfection of municipal wastewater to provide a water supply suitable for non-drinking purposes. Agencies in the San Diego region use recycled water to fill ponds and ornamental fountains; to irrigate parks, campgrounds, golf courses, freeway medians, and nursery stock; and to control dust on construction sites. Recycled water is also used in certain industrial processes and for flushing toilets and urinals in non-residential buildings. More recently, recycled water fill stations have been constructed to bring recycled water supplies closer to the customers that can use it. For the purposes of this forecast, the continued development of non-potable water recycling projects is assumed to be consistent with the recycled water projections shown in the 2010 UWMP.

Along with recycled water, development of potable reuse water supplies is viewed as the next increment of potable water supply for the San Diego region. The potable reuse process employs advanced multi-barrier and advanced oxidation treatment technologies that separate pollutants from the water, disinfecting and purifying it to a drinking water standard that fully complies with and exceeds both federal and state drinking water quality standards. Water Authority member agencies have indicated a high level of interest in developing potable reuse projects. Eleven member agencies have indicated their intent to implement potable reuse projects for a potential total production of over 100,000 acre-feet of drinking water per year by 2035. The Water Authority is assisting regional efforts to advance potable reuse through public outreach, technical collaboration, and coordination on regulatory issues. For the purposes of this ten-year forecast, development of potable reuse projects, as shown previously in Table 3-1, is additive to the recycled water projections shown in the 2010 UWMP.
Chart 3-3 shows projected local supply development within the region based on input from Water Authority member agencies. These supplies, which include the commissioning of the CDP in Calendar Year 2015, represent one-third of the overall regional demand by 2026.

### 3.3 Imported Water Supply Projections

Historically, the Water Authority has relied on imported water supplies purchased from MWD to meet a majority of its member agencies’ needs. Figure 3-2 shows the major water conveyance systems in California. MWD’s supplies come from the State Water Project (SWP) and the Colorado River. Until the late 1980s, MWD’s supplies were sufficient to meet its customers’ needs. However, during the 1987-1992 drought, MWD supplies dwindled to levels that forced it to reduce deliveries to its member agencies. As a result of the shortages, the Water Authority began aggressively pursuing actions to increase water supply reliability through diversification of the region’s supply sources.
### 3.3.1 Water Authority Supplies

In the mid-1990s, the Water Authority began negotiations with IID for a water transfer agreement. In 2003, the Water Authority solidified a historic agreement with IID for the long-term transfer of conserved Colorado River water to San Diego County. The Water Conservation and Transfer Agreement (Agreement) is the largest agriculture-to-urban water transfer in United States history. Through the Agreement, Colorado River water conserved by voluntary farmland fallowing programs, implementation of on-farm conservation methods, and development of IID water distribution system efficiency projects is transferred to the Water Authority for use in San Diego County. In Calendar Year 2003, the Water Authority received the first water transfer totaling 10,000 acre-feet. The volume of IID transfer water increases annually according to a pre-determined schedule until it reaches its maximum of 200,000 acre-feet per year in 2021. In Calendar Year 2016, the transfer volume will be 100,000 acre-feet.

Additionally, as part of the Quantification Settlement Agreement (QSA) and related contracts, the Water Authority was assigned MWD’s rights to 80,200 acre-feet per year of conserved water from projects that lined portions of the All-American and Coachella Canals. The projects reduce the loss of water that occurred through seepage, and the conserved water is delivered to the Water Authority. This conserved water will provide the San Diego region with a 8.5 million acre-feet over the 110-year life of the QSA Agreement.

*Chart 3-4* shows the breakdown of the projected imported Water Authority supplies (excluding MWD purchases) that will be used to meet water demands within the Water Authority’s service area. By 2021, deliveries of water from the IID transfer and the All-American and Coachella Canal lining projects are expected to yield 280,200 acre-feet per year.

**Chart 3-4** Projected Imported Supplies (Excludes MWD Purchases)
3.3.2 Metropolitan Water District Supplies

Although the Agreement and canal lining projects reduce the Water Authority’s demand for MWD supplies, water purchases from MWD continue to be an important element of the Water Authority’s supply portfolio.

As previously noted, MWD obtains its water from the Colorado River Aqueduct (which it owns and operates), and the SWP. Water availability from the Colorado River is governed by a system of priorities and water rights that has been established over many years. The Colorado River Lower Basin states (California, Arizona, and Nevada) have an annual apportionment of 7.5 million acre-feet (MAF) of water divided as follows:

- California, 4.4 MAF *
- Arizona, 2.8 MAF
- Nevada, 0.3 MAF

* MWD’s allocation of California’s apportionment is 550,000 acre-feet (MWD also receives yield from a conservation program with IID that dates to 1988).

MWD’s other water source, the SWP, is owned by the State of California and operated by the Department of Water Resources (DWR). MWD’s maximum contract amount of SWP supplies is 1.91 MAF per year, an amount it has received once. However, its SWP allocation is set each year by DWR based on winter runoff into reservoir storage and snow pack levels.

3.4 Future Supply Challenges

The Water Authority is closely monitoring potential water supply challenges and pursuing options to address those challenges, including developing contingency plans for the judicial pumping restrictions imposed, and partnering with Northern California agencies to augment water supplies. Additionally, the Water Authority has adopted a drought management plan in the event of a supply shortage.

3.4.1 State Water Project Pumping Restrictions

On December 15, 2008, the U.S. Fish and Wildlife Service (USFWS) released a biological opinion on the impacts of the SWP and Central Valley Project on Delta smelt. On June 4, 2009, the National Marine Fisheries Service released a biological opinion for salmonid species. These biological opinions contain water supply restrictions that impact deliveries from the SWP, depending on hydrologic conditions. The implementation of pumping restrictions has resulted in the loss of about 1.5 million acre-feet of State Project water for southern California since 2008. On October 6, 2014, the Federal Central Valley Project Contractors and State Water Contractors filed a petition with the U.S. Supreme Court requesting that the U.S. Supreme Court review the Ninth Circuit Court’s decision that upheld the restrictions. Impacts resulting from this litigation and ruling cannot be determined at this time.

The operational flexibility of the Delta pumps may be further impacted by the California Fish and Game Commission’s February 2008 designation of the longfin smelt as a candidate species. An agreement settling the longfin smelt litigation was approved on February 2, 2011. Acting under the provisions of the agreement, the USFWS on April 2, 2012 issued its finding that the Bay-Delta longfin smelt population warrants protection...
under the Endangered Species Act (ESA) and will be added to the list of candidates for ESA protection, to be reviewed annually. It should be noted that the restriction period may overlap those already in place for the delta smelt.

An initiative known as the Bay-Delta Conservation Plan/California Water Fix (Water Fix), commenced in late 2013 with release of a Draft Environmental Impact Report/Environmental Impact Statement. The Water Fix proposes to construct a new dual tunnel facility to convey water from the northern part of the delta to the existing SWP and Central Valley Project diversion facilities in the southern part of the delta. The Water Fix is envisioned to reduce adverse hydrologic conditions and improve ecosystem functions in the delta. However, the Water Fix does not provide any assurances that this very complex and expensive project will actually improve delta water supply reliability. Consequently, there is considerable uncertainty among the potential funding entities that the project is cost effective. It is anticipated that additional pumping restrictions will be imposed by state and federal regulatory agencies should the Water Fix not be pursued, or if the envisioned Water Fix ecosystem benefits are not realized by its construction. This would result in even less water supply reliability for the millions of Californians that rely on Bay-Delta supplies.

The Water Authority is addressing these issues through careful water supply planning.

3.4.2 Supply Augmentation

In response to the supply challenges, the Water Authority has taken prudent actions to implement water supply augmentation measures. The Water Authority initiated negotiations with northern California entities regarding potential multi-year water transfers and securing long-term storage capacity. As part of the QSA, the Water Authority received approximately $30.5 million for use in its groundwater program. In a demand and supply analysis utilizing data from its 2005 UWMP, the Water Authority acknowledged a maximum potential need for up to 95,000 acre-feet of additional carryover storage capacity beyond the 100,000 acre-feet of carryover storage provided by the newly expanded San Vicente Reservoir.

With this in mind, the Water Authority sought to partner with agencies overlying a groundwater basin for a conjunctive use project. The project would allow water to be delivered and stored during times of above normal precipitation and extracted from the basin and delivered to the Water Authority either by wheeling through various facilities, exchanges, or a reduction in demands on the Water Authority.

In June 2008, the Water Authority executed an agreement for 30,000 acre-feet of storage and capacity rights in the Semitropic Water Storage District’s Original Water Bank in the southern part of the San Joaquin Valley in Kern County. The cost was approximately $11.8 million. In August 2008, the Water Authority acquired 10,000 units (which equates to 40,000 acre-feet of storage, together with rights to certain capacities) in the Semitropic-Rosamond Water Bank Authority for $15 million. Subsequently, the Water Authority purchased 23,077 acre-feet of water from Butte Water District and Sutter Extension Water District. With conveyance and carriage losses, the Water Authority was able to put 16,117 acre-feet of water into Semitropic’s original water bank, where it remains stored for future use.
3.4.3 Water Shortage and Drought Response Plan

While the Water Authority and its member agencies have plans in place to ensure a reliable water supply, there is always some level of uncertainty associated with maintaining and developing local and imported supplies. Therefore, as a prudent water management measure, the Water Authority, in coordination with its member agencies, developed a regional Water Shortage and Drought Response Plan (WSDRP). The WSDRP contains a suite of regional actions the Water Authority may take to avoid water shortages that require allocation of supplies. However, if supply cutbacks are necessary, the WSDRP also contains a fair and equitable methodology to allocate Water Authority supplies to its member agencies. Section 5 of the WSDRP contains a description of the Water Authority’s water supply allocation methodology.

The WSDRP has been activated twice by the Board of Directors since its adoption by the Board in May 2006. The first activation occurred in June 2007, and was triggered by a report released by the MWD that characterized the 2007 water year as being dry throughout California and stated MWD would need to draw a significant amount of water from its storage supplies to meet demands. The WSDRP was most recently activated by the Water Authority Board in February 2014, in response to Governor Brown’s January 17, 2014 declaration of a statewide emergency due to drought.

On April 1, 2015, with the state in its fourth year of drought and the snowpack in the Northern Sierra Nevada at a historic low of five percent of average, Governor Brown issued an unprecedented Executive Order aimed at reducing urban water use statewide by 25%. On May 5, 2015, in accordance with the Governor’s directive, the SWRCB adopted Resolution No. 2015-0032 to put in place an Emergency Regulation for statewide urban water conservation. The Emergency Regulation includes specific conservation standards that took effect June 1, 2015 and requires urban water suppliers to reduce usage through February 2016, as compared to the amount used in 2013. The target reduction varies between 4% and 36% statewide; for Water Authority member agencies, the range is between 12% to 36%. This equates to an approximately 20% overall demand reduction for the San Diego region. Water Authority member agencies are mandated to reduce their potable urban demands by their required percentage reduction during the months of June 2015 through February 2016 compared to the same months in 2013. The conservation mandate does not apply to suppliers such as the Water Authority that function solely in a wholesale capacity.
Additionally, in response to MWD’s decision to implement a 15% supply reduction in Fiscal Year 2016 and the SWRCB Emergency Regulation for statewide urban water conservation, the Water Authority Board took the following actions at its May 14, 2015 meeting:

- Declared the Mandatory Supply Cutback Stage of the Water Authority’s WSDRP, and approved member agency supply allocations for M&I and TSAWR for Fiscal Year 2016
- Set penalties for local agencies that exceed their M&I and TSAWR supply allocations
- Restricted the irrigation of ornamental landscapes and turf with potable water to no more than two days a week across the region to help agencies meet their reduction targets

Since the SWRCB Emergency Regulation went into effect on June 1, 2015, the San Diego region has reduced potable water demand beyond the reduction required by the SWRCB Emergency Regulation. The unprecedented drop in San Diego region demands due to the Emergency Regulation has significantly influenced the Water Authority’s projected sales and resulting rate ramp. While water conservation is an important tool in managing drought, the Water Authority is advocating that if the state extends the Emergency Regulation it should adopt a more sustainable approach that combines demand management with investments made in drought-resilient supplies such as potable reuse, seawater desalination, long-term transfers of conserved water and other supplies not affected by California’s drought.
4.0 Capital Improvement Program

The Water Authority has a long history of planning and executing large and complex capital projects. A major part of the Capital Improvement Program (CIP) planning process is focused on maintaining accurate project construction schedules and cost estimates. This began with the 1987 Water Distribution Study, followed by the 2008 Comprehensive Reliability and Cost Assessment of the CIP, and the 2013 Master Plan Update. Most recently the Water Authority approved its Asset Management Plan to ensure the safety and reliability of the Water Authority’s pipelines and facilities. This close monitoring of the CIP and assets enables the Water Authority to base its Long-Range Financing Plan (LRFP) on timely and accurate data.

The Water Authority’s budget for the CIP peaked with the construction of major water infrastructure projects in Fiscal Year 2007. The current 30-year CIP budget of $2.8 billion, with an appropriation of $136.8 million for Fiscal Years 2016 and 2017, reflects the shift from major construction projects to asset management and the optimization of the existing aqueduct system. The Water Authority is projecting to spend $582 million over the next ten years on CIP projects. A significant portion of the current CIP is expected to be spent beyond the ten-year LRFP planning period.

This section provides a historical perspective on the evolution of the current CIP and a discussion of the adopted CIP. The adopted CIP is the basis for the capital expenditures, incorporated into the capital financing plan, presented in Section 5.0.

4.1 History of the Water Authority’s CIP

1987 Water Distribution Study. The beginnings of a capital improvement program within the Water Authority can be traced back to 1987. In November 1987, staff presented the Water Authority’s Board (Board) with the Water Distribution Study, which analyzed the population growth and water demand projections through the year 2010. The information was analyzed to project the future demands for supplemental water from the Metropolitan Water District (MWD) and to determine the future requirements for water transmission pipelines and water treatment facilities.

The study proposed eight pipeline projects to meet the projected demand and increase the reliability of the aqueduct system. The need at that time to increase the capacity of the aqueduct system was based on the conclusion that the projected total demand was estimated to exceed capacity by 1990. In addition to the capacity limitations, it was discovered that Pipeline 3, a prestressed concrete cylinder pipeline and the only pipeline to several agencies south of Interstate 8, was being damaged by corrosion at several locations. An additional pipeline, the proposed Pipeline 4 Extension, Phases I and II was needed to add reliability to the system in the event Pipeline 3 failed.
1989 Water Distribution Plan. The issues raised by the 1987 Water Distribution Study led to the creation of a Water Distribution Plan, which was finished in the summer of 1989. The Water Distribution Plan was presented to the Board and adopted in August 1989. In so doing, the Water Authority Board created its CIP. The plan was titled, “The Water Distribution Plan, A Capital Improvement Program Through the Year 2010.” The resolution of the Board adopting the CIP in 1989 stated in part that: “In order to meet the existing and future needs of its member agencies and the 2.25 million people whom they serve, it is necessary that existing pipeline capacities and filtration facilities be significantly improved.”

The Water Distribution Plan contained projects designed to meet the objectives of increased capacity, yield from existing water treatment plants, water supplies, and reliability of the aqueduct system.

Annual Review and Update of the CIP. In September 1990, staff proposed that the CIP be reviewed and revised annually. The annual review of the CIP allowed the program to be more responsive to changing conditions, particularly with respect to changes in demand projections and the changing needs of member agencies. The changes resulted in the addition of projects and the acceleration or delay of project schedules that resulted from adopted changes in project priorities. In addition, the review allowed for the update of cost estimates as detailed design information became available.

Adoption of the Water Authority Strategic Plan. In 1995, the Water Authority adopted the Strategic Plan. The Strategic Plan prioritized the goals required to achieve the mission of the Water Authority to provide a safe and reliable supply of water to its member agencies. In 2007, the Water Authority determined an update to the 1995 Strategic Plan was necessary in order to align the Strategic Plan and the Water Authority's Business Plan. An updated Strategic Plan was adopted in April 2008.

Capital Facility Planning. Facility needs are assessed by the Water Resources Department and are reviewed and approved through the Water Authority’s CIP. This program is annually brought to the Board for approval. The program provides for rolling ten-year infrastructure need forecasts based upon 30-year planning projections. The annual update identifies and categorizes needed facilities, estimates costs, and provides completion schedules. Progress towards meeting the objectives identified in the previous year’s CIP update are included in the annual Board review.

Regional Water Facilities Master Plan. In June 1997, the Board approved a Regional Water Facilities Master Plan project. The purpose of this project was to assess future water demands and supplies through the year 2030 and recommend the best facilities’ solution to the region’s needs. In March 2014, the Board approved an update to the Regional Water Facilities Master Plan as well as the first ever Water Authority Climate Action Plan. The update also included preparation of a Supplemental Program Environmental Impact Report (SPEIR), which was certified by the Board in March 2014. The Climate Action Plan and SPEIR were prepared to address, in a comprehensive manner, potential environmental and cumulative impacts in compliance with the California Environmental Quality Act (CEQA) and the California Global Warming Solution Act of 2006 (AB32).

The 2013 Regional Water Facilities Optimization and Master Plan Update will serve as the guiding document for new infrastructure improvements proposed by the Water Authority over the next 25 years to ensure the safe and reliable delivery of water to the 3.2 million people in the service area. This update focused on optimizing the substantial investments recently made by the Water Authority and its member agencies in new treatment, storage and conveyance facilities, determining facilities, and determining how best to integrate new water supplies, such as desalinated seawater, into the existing regional water system in the most cost-effective manner possible. Using supply and demand projections from the 2010 Urban Water Management Plan, the Master Plan
Update adopted a scenario planning approach to assess a reasonable range of future supply outcomes, including factors outside of the Water Authority’s control that may affect the need and timing for new infrastructure improvements and new supply development. An adaptive management approach, regarding future decisions on new supply development that considers future local and statewide water supply conditions and actions was recommended.

**Adoption of the Emergency Storage Project.** The Emergency Storage Project (ESP) was one of the initial ten projects included in the first CIP but only as a planning phase project. As planning work moved forward to include best alternative selection and a programmatic Environmental Impact Report (EIR) process, the costs of the project came into focus. In June 1998, the ESP project was adopted by the Board with a budget of $730 million with the goal of providing adequate storage to meet emergency needs. The ESP is a system of reservoirs, interconnected pipelines, and pumping stations designed to make water available to the San Diego region in the event of an interruption in imported water deliveries. Currently the ESP is a $1.5 billion program and consists of 18 projects with only six remaining to be completed, three of which are substantially complete.

**The San Vicente Dam raise**

(part of the Emergency Storage Project)

is the tallest dam raise in the United States and the tallest of its type in the world. The dam was raised 117 feet using roller-compacted concrete. The dam was raised to store additional water for regional use during times of water scarcity. The dam’s original height was 220 feet with a storage capacity of 90,000 acre-feet of water. The new height of the dam allows for an additional 152,000 acre-feet of water storage, for a total of 242,000 acre-feet.

**Water Authority Business Plan.** In late 2003, staff began work to refine the focus of its efforts to align its activities with the evolving vision of the Regional Water Facilities Master Plan, which was adopted by the Board in June 2004. What resulted was the implementation plan to diversify the water supplies portfolio and build new facilities that could store, transport, and treat those new supplies to meet future regional demands. The staff presented the Water Authority’s Business Plan to the Board in 2004. The Business Plan is updated biennially and is based on a five-year horizon. The most recent update is the 2014-2019 Business Plan, presented to the Board in July 2014. The plan describes the key focus areas (water supply, water facilities, and core business), programs, key issues, management strategies and goals necessary to carry out the policies, and strategic direction set forth by the Water Authority Board of Directors in support of its mission. The LRFP is a Core Business goal in the 2014-2019 Business Plan.
**CIP Re-costing and Comprehensive Reliability and Cost Assessment.** In March 2006, the Board formed a construction ad hoc committee to provide policy guidance to the staff on the issue of escalating costs of construction. The central issue proved to be demand for construction materials, and services were outstripping the supply of these resources resulting in significantly higher costs. Following the CIP re-costing activities, a second board ad hoc committee was formed in September 2006 to provide guidance to staff in determining the most appropriate mix of water supply, facilities, and core business policies that impact revenues, costs, and member agency rates. The goal was to find the best balance of policies and actions to deliver the highest level of reliability to the region at the most affordable cost.

**Asset Management.** The Water Authority’s infrastructure is worth an estimated $3.2 billion. The Water Authority adopted an Asset Management Plan in January 2009 to define which assets will be included in the Asset Management Program and how asset management will be implemented and managed within the organization. Asset management is the second largest component of the CIP and includes all activities required to derive the most value from an asset through its life cycle. The overarching goal of the program is that planning, design, construction, operation, maintenance, or the surplus of assets is completed at the optimum time to ensure water delivery system reliability at the lowest cost and least impact to member agencies. During the Fiscal Years 2016 and 2017 budget development process the Water Authority reviewed current and future asset management needs. The process included condition assessment, risk assessment, and prioritization. An effective Asset Management Program will ensure a high degree of reliability and lower overall costs.

The Asset Management Program is comprised of several projects, the largest of which are Infrastructure Rehabilitation and the Relining and Pipe Replacement Program. The Infrastructure Rehabilitation Project represents the implementation of several industry best practices such as performing condition assessments, developing an asset registry, determination of remaining useful life, undertaking risk assessments, and planning rehabilitation or replacement projects. The Relining and Pipe Replacement Program represents the rehabilitation efforts specifically related to prestressed concrete cylinder pipe. Due to the higher risks associated with failure of this type of pipe, it remains the priority for rehabilitation.
4.2 Adopted Capital Improvement Program

Through June 30, 2015, over $3.2 billion has been spent to complete various capital projects since 1989. The present 30-year CIP budget is $2.8 billion. When a project has been completed and placed in service it is no longer included in the CIP budget. A significant portion, approximately $1 billion, of the CIP budget is projected beyond the LRFP planning period.

Projects in the CIP. Table 4-1 summarizes the status of the CIP budget as of June 30, 2015 by project category. The projects are primarily a mix of pipeline, Asset Management, ESP, water supply, system-wide improvements, flow control and pumping facilities, and projects that are reimbursable through state and federal funding.

Table 4-1 Summary of CIP Categories & Projected Expenditures ($ Millions)

<table>
<thead>
<tr>
<th>CIP Category</th>
<th>Lifetime Budget</th>
<th>Cumulative Expenditures June 30, 2015 *</th>
<th>Projected Expenditures FY 2016 - FY 2026</th>
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</thead>
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<tr>
<td>Asset Management</td>
<td>$730.0</td>
<td>$322.5</td>
<td>$247.2</td>
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<td>Emergency Storage Project (ESP)</td>
<td>846.0</td>
<td>734.7</td>
<td>111.4</td>
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<td>Planning Studies 1</td>
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<td>New Facilities</td>
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<td>Mitigation and Other</td>
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<td><strong>$1,952.8</strong></td>
<td><strong>$1,206.12</strong></td>
<td><strong>$582.5</strong></td>
</tr>
</tbody>
</table>

* Estimated expenditures
(1) Dollar value includes design, planning and construction dollars.

- The largest single aggregation of projects for Fiscal Years 2016-2026 is Asset Management.
- A substantial amount of future facilities work will be in the relining and replacement of aging pipelines and rehabilitation of existing infrastructure. Expenditures in support of these activities are forecast to average $22 million a year over the next ten years.
- The balance of projects over the next 20 years beyond the ESP and Asset Management will be in the construction of additional pipelines, pump stations, a flow regulatory structure and various system improvements.
The Water Authority is projecting expenditures of $582 million over the next ten years on capital improvement projects. *Chart 4-1* shows the breakout of projects, with a significant portion of the Asset Management Program allocated to the Relining Program. Approximately one quarter of the projected $582 million (or $136 million), will be spent in Fiscal Years 2016 and 2017.

*Chart 4-2* shows the projected annual CIP expenditures for all 39 projects over the next ten years. These projected annual expenditures form the capital funding needs of the Water Authority during the LRFP planning period. As shown, the funding needs diminish over time as the projects are completed. The Water Authority’s Relining and Pipe Replacement Program and the Infrastructure Rehabilitation projects represent the majority of projected continuing expenditures after Fiscal Year 2020 and through Fiscal Year 2026.
5.0 Capital Financing Plan

The capital financing plan for the Water Authority's Capital Improvement Program (CIP) is an important driver of the Long-Range Financing Plan (LRFP). The capital financing plan considers the Water Authority's financial goals and objectives and the mix of current and future funds available for capital investment to determine the optimal funding sources for the projected CIP expenditures. The optimal funding mix is achieved by balancing the use of Pay-As-You-Go (PAYGO) funds and debt proceeds to fund the CIP against the rate and charge increases required to support the funding mix. Figure 5-1 illustrates the forces shaping the LRFP.

The capital financing plan also looks at the appropriate mix of debt instruments, particularly the balance between fixed-rate and variable-rate obligations, to minimize the Water Authority's cost of capital and interest rate risk. With the goal of enhancing the Water Authority's ability to manage interest rate risk, the staff periodically reviews new financial products available. The Water Authority has never considered or utilized any derivative products.

This section provides a detailed overview of the debt instruments that the Water Authority anticipates using to finance the current CIP, the methodology used to optimize the CIP financing mix, and the fundamental assumptions underlying the new debt service projections and the projected debt service schedules for new debt.

5.1 Water Authority Borrowing Options

The California State Constitution and various State Supreme Court decisions interpreting the Constitution set forth the powers of public agencies to borrow money. The powers of the Water Authority to incur indebtedness are further dictated by California statutes, most importantly the legislation under which it is organized, the County Water Authority Act (Act), which was adopted in 1943 and has been amended from time to time. The Act authorizes the Water Authority to issue general obligation bonds secured by property taxes when approved by voters (Section 45-7), and to issue voter-approved revenue bonds (Section 45-7.5). The Act also authorizes the Water Authority to enter various obligations without voter approval. The Act authorizes "contracts to incur indebtedness" (Section 45-8) and authorizes the Water Authority to purchase property (Section 4.5-5(4)); both such forms of contract can be used to secure a borrowing through the issuance of Certificates of Participation (COPs) and Joint Powers Authority (JPA) Revenue Bonds. The Act also authorizes short-term revenues certificates (Section 45-8.2), under which the Water Authority has issued commercial paper (CP) and extendable commercial paper (ECP). The Water Authority may issue water revenue refunding bonds under the Local Agency Revenue Bond Refunding Law (Articles 10 and 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the California Government Code).
The following describes the Water Authority’s debt instrument options. Of these available tools, the Water Authority has and anticipates continuing to utilize JPA Revenue Bonds, CP and ECP, to finance the CIP.

**General Obligation Bonds.** With two-thirds voter approval, the Water Authority can issue General Obligation (GO) bonds, which are secured by a supplemental ad valorem property tax. The Water Authority last issued such bonds in 1966 and retired the last of such debt in 2004. Due to voter-approval requirements and the lack of a direct link between the assessed value of a property and the use of water, there are no current plans to utilize such debt in the future.

**Revenue Bonds.** The Act also provides for issuance of revenue bonds under another statute, the Revenue Bond Act of 1941. Bonds issued under this act require majority voter approval. Due to voter-approval requirements and a number of outdated provisions, the statute is rarely used by any California entity, including the Water Authority.

**Taxable Build America Bonds.** The Water Authority has issued taxable Build America Bonds (BABs) under the same authorization as the JPA Revenue Bonds. In 2009, the U.S. government introduced the BABs program into an ailing tax-exempt bond market to help states and localities pursue needed capital projects. BABs provided a direct federal payment subsidy equal to 35% of the taxable borrowing costs on taxable bonds. The subsidy led to a lower net borrowing cost. It should be noted that the subsidy payments have been reduced as a result of the United States federal government budget sequestration. The BABs program has expired, but similar subsidy based programs may be established in the future.

**JPA Revenue Bonds.** The Water Authority may also finance projects through Chapter 5 of Division 7 of Title 1 of the California Government Code, water revenue bonds issued by a joint exercise of powers authority, pursuant to the Joint Exercise of Powers Act. In 2009, the Water Authority and the California Municipal Finance Authority formed the San Diego County Water Authority Financing Agency to assist the Water Authority in the financing of public capital improvements. Pursuant to the Joint Exercise of Powers Act, the San Diego County Water Authority Financing Agency is authorized to issue bonds for the purpose of financing, refinancing or providing reimbursement for costs incurred in connection with the construction, expansion, remodeling, renovation, furnishing, equipping or acquisition of public capital improvements.

The structure of the JPA revenue bonds is the same as COPs, as shown in **Figure 5-3.** Bonds are secured by contracts of indebtedness or installment sale agreements, which are payable from Net Water Revenues. The final maturity for JPA revenue bonds can be up to 40 years. Legal provisions also require that senior debt service is covered by net revenues by at least 120% and additional issuance is governed by the same requirements set forth for COPs.
While JPA revenue bonds are not structurally different from COPs, they are preferred by investors and price and trade at stronger levels. This is due to investor perceptions that COPs are an inherently weaker credit than JPA revenue bonds because other COP structures can be subject to appropriation risk and extraordinary redemption provisions. While the Water Authority’s COPs do not carry either of these risks, investor misperception and misunderstanding remains, making JPA revenue bonds the preferable instrument for new money borrowing going forward.

**Water Revenue Refunding Bonds.** Under the Local Agency Revenue Bond Refunding Law, the Water Authority may issue water revenue refunding bonds to refund outstanding installment sale agreement, contracts of indebtedness and commercial paper obligations of the Water Authority. Such bonds are payable from water revenues on the same basis as COPs and JPA Revenue Bonds. Water revenue refunding bonds are well received by investors, but can only be used if all of the bond proceeds will be used for refunding (i.e., if there is no new money borrowing).

**Water Revenue Certificates of Participation.** In the past the Water Authority has used COPs as its primary long-term debt funding instrument. COPs are a common vehicle by which California governments borrow money, and are viewed by investors as a form of municipal revenue bond. Typically, a COP securitizes a governmental payment obligation under some form of contract other than a bond indenture. COPs can be used in connection with a variety of municipal financings, such as governmental lease financing, conduit financing of non-profit organizations and, as is the case with the Water Authority, for enterprise revenue financing.

Two forms of contracts have supported the Water Authority’s COPs. Contracts to incur indebtedness are specifically authorized by the Act (the actual contract the Water Authority executes has been called a “Contract of Indebtedness”). The amount of debt authorized by this vehicle cannot exceed one-tenth of one percent of the assessed value of the Water Authority’s service area. This limitation constrains the maximum amount of outstanding Contracts of Indebtedness to approximately $382 million.

**Subordinate Fixed Rate Bonds**

In 2011 as part of a debt optimization effort, the Water Authority issued its first subordinate fixed-rate obligation. The Series 2011S-1 Water Refunding Bonds were used to fix out a portion of the outstanding Commercial Paper to diversify and stabilize the Water Authority’s exposure to interest rate volatility.

**Figure 5-3 Structure of COP Issue**

![Structure of COP Issue Diagram](image)
(based upon the Fiscal Year 2014 assessed valuation), a small amount relative to the Water Authority’s overall capital needs. The Water Authority currently has approximately $148.5 million of Contracts of Indebtedness outstanding, all securing COPs, and does not intend to issue such Contracts of Indebtedness in the foreseeable future.

In addition, the Water Authority can exercise its power to acquire property and enter into installment purchase or installment sale agreements, which are then used to secure COPs. This legal structure is a common form of water enterprise financing used by general law cities, counties, and special districts throughout the State to accommodate efficient borrowing practices. For the Water Authority, this approach to COPs allows for borrowing in excess of the limitation on Contracts of Indebtedness.

Both of the types of contracts that support Water Authority COPs—Contracts of Indebtedness and installment sale agreements—are limited by the Act to 40 years. As such, the Water Authority’s COPs are limited to a term not to exceed 40 years as well. Prior to adoption of State Bill 290 in 1999, the limitation on installment sale agreement contracts was 20 years. Since then, the Water Authority’s practice has been to issue 30-year COPs, although it may wish to consider the possibility of issuing 40-year COPs.

The Water Authority’s COPs provide a strong form of security to an investor, very similar to the security provided by revenue bonds. These security features include a pledge of Net Revenues (total revenues less operating and maintenance expenses), a covenant to maintain rates so as to produce net revenues that are at least 120% of total COP debt service, and requirements that must be met prior to the issuance of additional indebtedness.

The Water Authority’s issuance of COPs is facilitated by the San Diego County Water Authority Financing Corporation (SDCWAFC), a California nonprofit benefit corporation, which was created by the Water Authority specifically to facilitate these financings by serving as counterparty to the installment sale agreements and Contracts of Indebtedness securing Water Authority COPs. The SDCWAFC has no assets or liabilities, and assigns all of its interests in the contracts, including its right to receive COP payments, to a bank acting as a trustee. The basic structure of a Water Authority COP issue is portrayed in Figure 5-3.

COPs can be issued as either fixed-rate or variable-rate instruments. To date, all of the Water Authority’s COPs have been fixed-rate. There are two types of variable-rate COPs the Water Authority would likely consider. One, variable-rate demand obligations, are typically remarketed on a daily or weekly basis. A bank liquidity facility, similar to that provided for the CP program, insures that an investor can “put” the bonds back to the issuer when the bonds cannot be immediately remarketed to new investors.

The second form of variable-rate COP would be indexed notes. The interest rates on these notes reset weekly based on the Securities Industry and Financial Markets Association (SIFMA) index or a percentage of the London Interbank Offered Rate (LIBOR) index plus a fixed spread that would be determined at the initial pricing of the bonds. The bonds would be sold with a long-dated nominal final maturity but have a mandatory tender date between one and five years. On the mandatory tender date, the Water Authority would be required to either remarket the bonds at a new spread to the index, refund the bonds with another debt instrument, or pay the bonds with cash on hand. The benefit of indexed notes over variable-rate demand obligations is that indexed notes do not require a bank liquidity facility, which can be expensive or difficult to secure depending on market and regulatory conditions.
**Commercial Paper.** Under Section 8.2 of the Act, the Water Authority may issue short-term revenue certificates with a maturity of up to 270 days. This provision accommodates the issuance of CP, a form of variable-rate financing. Like COPs, the Water Authority’s CP is secured by net revenues, but on a subordinate basis to the Water Authority's long-term debt (i.e., COP payments). The rate covenant related to CP requires the Water Authority to maintain net revenues at a level that covers all Water Authority obligations by 100%.

While each issuance of CP has a maturity of 270 days or less, as shown in Figure 5-4, the principal payments of maturing securities are usually funded with a subsequent issue of CP; this process is referred to as “rolling” the CP. A bank line of credit in the form of a revolving note purchase agreement, commonly referred to as a liquidity facility, is used to ensure that funds are available to pay investors at each maturity in the unlikely event of a failed reissuance. While some entities use CP for temporary financing during construction, and refund their CP with some form of long-term debt, the Water Authority has utilized this form of financing to create a more permanent variable interest rate component of its capital structure. Table 5-1 on the following page summarizes key characteristics of the various types of debt.

**Extendable Commercial Paper.** In 2014, the Water Authority authorized the issuance of ECP in its debt policy. Mechanically, ECP is similar to traditional CP. The notes also carry the same security provisions as CP, wherein principal and interest are paid from a subordinate lien on net revenues and the rate covenant requiring that net revenues cover all Water Authority obligations by 100% still applies. The main difference is that ECP does not require a bank liquidity facility which is why ECP offers a lower cost of funds than traditional CP. Instead, ECP notes are issued with an original final maturity of up to 120 days, as shown in Figure 5-5. If the ECP notes are not remarketed on the original final maturity, the maturity date is extended up to 150 days and the ECP notes will bear interest at a higher predetermined reset rate. During the 150 days, the Water Authority must either remarket the ECP, refund it with another debt instrument, or pay it off with cash.
### Table 5-1  Characteristics of Various Types of Debt

<table>
<thead>
<tr>
<th>Types of Debt</th>
<th>Security</th>
<th>Repayment Term Limit</th>
<th>Procedure</th>
<th>Credit Quality [from Highest to Lowest]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GO Bonds</strong></td>
<td>- Ad valorem property taxes</td>
<td>50 Years</td>
<td>2/3 voter approval</td>
<td>Strongest credit quality</td>
</tr>
<tr>
<td><strong>Repayment Bonds</strong></td>
<td>- Water sales net revenue</td>
<td>40 Years</td>
<td>Majority voter approval</td>
<td>Strong credit quality (not as strong as GO Bonds)</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Standby charges</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Capacity charges</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>- Interest on cash balances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Taxable Build America Bonds</strong></td>
<td>(BABs) only available in 2009 and 2010</td>
<td>40 Years</td>
<td>Board action</td>
<td>Strong credit quality (on par with Revenue Bonds)</td>
</tr>
<tr>
<td></td>
<td>- Water sales net revenue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
<td></td>
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<td>- Standby charges</td>
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<td>- Capacity charges</td>
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<td>- Interest on cash balances</td>
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<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>JPA Revenue Bonds</strong></td>
<td>- Water sales net revenue</td>
<td>40 Years</td>
<td>Board action</td>
<td>Better than COPs Slightly worse than Revenue Bonds</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Standby charges</td>
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<td></td>
<td>- Capacity charges</td>
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<td></td>
<td>- Interest on cash balances</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Water Revenue Refunding Bonds</strong></td>
<td>*</td>
<td>40 Years</td>
<td>Board action</td>
<td>Better than COPs Slightly worse than Revenue Bonds</td>
</tr>
<tr>
<td></td>
<td>- Water sales net revenue</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>- Infrastructure access charges</td>
<td></td>
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<td>- Standby charges</td>
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<td>- Capacity charges</td>
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<td>- Interest on cash balances</td>
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<tr>
<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>COPs</strong></td>
<td>- Water sales net revenue</td>
<td>40 Years</td>
<td>Board action</td>
<td>Slightly worse than JPA Revenue Bonds</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
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<td>- Standby charges</td>
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<td>- Interest on cash balances</td>
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<tr>
<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Commercial Paper</strong></td>
<td>- Water sales net revenue</td>
<td>Rates reset periodically but are limited to 270 days or less</td>
<td>Board action</td>
<td>Subordinate lien, but strengthened with highly-rated liquidity facility</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
<td></td>
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<td></td>
<td>- Standby charges</td>
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<td>- Capacity charges</td>
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<td>- Interest on cash balances</td>
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<tr>
<td></td>
<td>- Property taxes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Extendable Commercial Paper</strong></td>
<td>- Water sales net revenue</td>
<td>Rates reset periodically but are limited to 120 days or less</td>
<td>Board action</td>
<td>Subordinate lien without a liquidity facility</td>
</tr>
<tr>
<td></td>
<td>- Infrastructure access charges</td>
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<td>- Standby charges</td>
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<td>- Interest on cash balances</td>
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<td></td>
<td>- Property taxes</td>
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</tbody>
</table>

* Series 2011S-1 subordinate bonds are issued under this authority.
5.2 Optimizing the Capital Financing Mix

The Water Authority’s CIP funding sources include accumulated revenues (fund balances), future revenues allocated towards capital expenditures (pay-as-you-go financing) and future revenues allocated towards debt service (sometimes referred to as “pay-as-you-use” financing). All of these funding sources must be integrated into the capital financing plan.

Desalination Facility Financing and Water Authority Obligations

The project incorporates an innovative risk transfer arrangement within the financing structure. The project is being delivered through a public-private-partnership model with Poseidon Water under which risks associated with the design, construction, and operation of the desalination plant were transferred from the Water Authority to Poseidon Water and its investors.

The project was financed in part with proceeds of two series of bonds issued by the California Pollution Control Financing Authority in December 2012. The Water Authority has entered into a take and pay water purchase agreement under which it will pay only for water delivered which meets specific quality standards.

Any financial shortfalls resulting from reductions in water deliveries meeting such quality standards are borne by Poseidon Water.

Optimizing the capital financing plan is a complex and iterative process that involves several key steps. These steps are: determining the annual CIP funding mix of cash and debt; determining the mix of types of debt; and creating principal amortization schedules for proposed debt. Each step must balance the goals outlined in Section 2.0: cost efficiency, predictable rates, and intergenerational equity with rate and charge increases. Chart 5-1 shows the target CIP funding mix. A discussion of the optimization steps are provided next.
5.2.1 Target Cash and Debt Financing Profile

Like any business enterprise, the Water Authority needs to determine the best mix of resources to finance both its operations and its CIP. The cash and debt financing profile identifies the annual use of fund balances (cash) and debt to fund CIP outlays. The cash/debt profile seeks to maintain a level of cash investment into existing (renewal and replacement) and new system assets that both minimizes the Water Authority’s debt and maintains intergenerational equity among ratepayers.

Even though most of the assets that will be financed in the CIP have long useful lives, there are several reasons why a mix of pay-as-you-go and debt financing is recommended. First, cash funding throughout the CIP horizon ensures that current customers are always contributing funds towards the capital investments they are benefiting from, and not deferring these costs entirely to future generations of ratepayers. In addition, there are certain sources that should be available for such funding: Generally Accepted Accounting Principles requires that the Water Authority expense its prior capital expenditures by recording depreciation, which was $45.8 million for the fiscal year ending June 30, 2015. If rates are set to create balanced operations, there should be some rate revenues to offset that expense, which can be used to fund renewal and replacement of the expiring existing capital assets.

Furthermore, the bond market requires that an agency’s rate structure generate a margin of revenues over operating and debt expenditures. The Water Authority has covenanted as part of its senior lien debt issues to maintain a minimum debt service coverage ratio of 1.20 times; that is, total revenues, minus operating and maintenance expenses, ignoring depreciation (standard for water revenue enterprise debt) must be at least 1.20 times the amount of annual senior lien debt service. The Water Authority has adopted internal policies that set the goal for senior lien debt service coverage even higher at 1.50 times. This policy reflects a desire to bolster the Water Authority’s credit quality, which in turn serves to lower the Water Authority’s cost of debt and to mitigate the amount of debt borne by the water system in the future by increasing the cash funding of the CIP. The additional revenue required to meet the coverage target of 1.50 times is available for capital investment.

As shown in Charts 5-2 and 5-3, over the projection period the Water Authority expects to meet its enhanced debt service coverage target of 1.50 times and its overall coverage requirement of 1.00 times.

![Chart 5-2 Senior Lien Debt Service Coverage](image-url)
By meeting this 1.50 times coverage target, the Water Authority’s revenues would generate sufficient resources to fund approximately 30% of future CIP expenditures with cash, or approximately $594 million, and the balance financed with debt. Of the $2.8 billion CIP budget, approximately $1.2 billion has been expended on various projects, leaving an unspent balance in the CIP budget of approximately $1.6 billion. Under the high-rate scenario assumption, during the LRFP planning period, cash is projected to fund $423 million of the $1.6 billion of the unspent CIP budget. The percent of capital expenditures financed with cash is a common performance metric used by the credit markets and rating agencies in evaluating utilities. A common target for this performance metric is 20% or more.

Another factor in a long-term plan of finance is the timing of the use of cash funds. By varying the financing source mix over time, different pressures are alleviated or created. For instance, as more debt is used to finance the CIP, debt service coverage requirements also increase, putting stress on water rates. At the same time, cash can be invested at taxable interest rates; the potential for investments to yield higher rates of return than the cost of borrowing. The availability of fund balances also enhances the Water Authority’s ability to pay for unanticipated capital expenditures. These factors make it advantageous to maintain some level of cash and investments. The financing mix profile balances these options to achieve efficient and stable water rates.

**Cash Funding Target Level**

The long-term (2008-2026) cash funding target level increased from 23% to 30%, which is equal to approximately $423M of the CIP’s expenditures during the LRFP planning period.
SECTION 5.0  

Capital Financing Plan

Chart 5-4 below illustrates the mix of cash and debt planned to be used to finance the CIP over the projection period. As the chart shows, the amount of cash and debt used varies from year to year.

**Chart 5-4  CIP Funding Mix***

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>PAYGO</th>
<th>Existing and New Debt Proceeds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>12.7</td>
<td>60.1</td>
</tr>
<tr>
<td>2017</td>
<td>17.9</td>
<td>32.9</td>
</tr>
<tr>
<td>2018</td>
<td>75.1</td>
<td>35.0</td>
</tr>
<tr>
<td>2019</td>
<td>77.3</td>
<td>19.3</td>
</tr>
<tr>
<td>2020</td>
<td>45.8</td>
<td>30.5</td>
</tr>
<tr>
<td>2021</td>
<td>101.7</td>
<td>25.4</td>
</tr>
<tr>
<td>2022</td>
<td>16.6</td>
<td>18.6</td>
</tr>
<tr>
<td>2023</td>
<td>18.6</td>
<td>20.1</td>
</tr>
<tr>
<td>2024</td>
<td>21.1</td>
<td>22.1</td>
</tr>
<tr>
<td>2025</td>
<td>15.5</td>
<td></td>
</tr>
</tbody>
</table>

* Expenditures are based upon the high-rate CIP projections.

5.2.2  Fixed/Variable Debt Mix (Target)

The next step in developing the capital financing plan is selecting the appropriate mix of fixed and variable-rate debt. To determine the optimal amount of fixed and variable-rate debt to fund the CIP, the benefits and risks each has to offer must be evaluated in the context of the prevailing interest rate environment, governing policy goals and objectives and the current and projected fund balances.

Fixed-rate debt offers the advantage of a set debt service payment schedule upon which budgets and projections can be based, but typically requires higher interest rates. In 2015, approximately 76% of the Water Authority’s outstanding debt is fixed-rate debt.

Variable-rate debt, on the other hand, offers a few potential benefits over fixed-rate debt. First, variable-rate debt typically offers lower interest rates because interest rate risk is borne by the issuer not the investor. Often, variable-rate debt represents the longest term bonds in a debt portfolio, as the interest rate savings are greatest when compared to the fixed-rates of a comparable long-term bond. Second, it offers a great deal of flexibility in regards to principal repayment. These bonds can be refunded or prepaid on any payment date with no prepayment penalty.

Because the interest rate paid on variable-rate debt changes as often as on a daily basis, this type of debt introduces uncertainty into debt service payment budgets and projections. In the current interest rate environment, projecting short-term interest rate movements can be challenging. Another challenge associated with variable-rate debt is the potential for interest rates to rise steeply causing debt service payments to increase as well. This is often referred to as interest rate risk.
An important factor that mitigates the interest rate risk associated with variable-rate debt is the cash resources held by the Water Authority in the Operating, Stored Water, and RSF funds. To the extent that the Water Authority maintains cash resources, any increase in interest rate paid on variable-rate debt is offset, or hedged, by an increase in investment earnings on cash reserves. This is due to the fact that investment earnings tend to move parallel to the interest rates on variable-rate debt. It should also be noted that lower interest rates reduce investment earnings (interest rate risk is inherent on the investment side). Thus variable-rate debt can actually reduce budgetary risk, as the impacts of lower interest rates can be offset by lower than budgeted payments on outstanding variable-rate debt.

The relative desirability of fixed and variable-rate debt also depends on the interest rate environment and the shape of the yield curve at any given point in time. For example, during a period where interest rates are near historical lows, fixed long-term debt may be very attractive. On the other hand, in an environment where interest rates are high and expected to decline, variable-rate debt may be attractive. As shown in Chart 5-5, the current interest rate environment is very favorable for both fixed and variable-rate debt with rates near historical lows.

The Water Authority currently limits the amount of variable-rate debt to a maximum of 30% of the outstanding debt. The projected use of fixed and variable is developed based upon projected fund balances and meeting the policy limit. The mix of fixed and variable-rate debt used to fund the CIP during the LRFP planning period is shown in Chart 5-6. It should be noted that the actual use of debt in the future may vary slightly from what is shown. A total of approximately $168.5 million in debt is planned to be issued over the LRFP planning period which includes the cost of issuance. Of the $168.5 million 59% is fixed-rate debt with the remaining 41% being variable-rate debt.

2010B Bonds

The 2010B Bond proceeds are expected to be drawn down in Fiscal Year 2017.

* Expenditures are based upon the high-rate CIP projections.
5.2.3 Debt Structure and Principal Amortization

The last step is developing the debt structure and principal amortization schedules for the new fixed and variable-rate debt. Generally, the Water Authority structures each bond issue to provide a smooth and level total debt service payment schedule over the subsequent 30 years to minimize near and long-term water rate impacts and to equitably spread the cost of the debt over current and future ratepayers. To achieve this debt service structure, a large share of the principal retirement for each new bond issue is placed in the latter years, after previously issued debt has been retired. By deferring the amortization of the principal of the new debt issued during the peak years of CIP expenditures and paying interest only on a portion of the new debt over the earlier years, the total debt service can remain fairly level.

Longer-term debt better matches the expected useful service life of many of the assets financed by public utilities, and help mitigate the rate impacts from new debt issues by enhancing the Water Authority’s ability to “wrap” the new debt around the existing debt. Debt longer than 30 years has become more common among utilities as a result of a relatively flat yield curve, with 40-year interest rates being only moderately higher than 30-year rates. In 2010, the Water Authority issued a 39-year Build America Bond (BABs).

Even with a 40-year term, many of the assets funded with debt will still be in service after the debt is retired. For example, many of the Water Authority’s existing pipeline assets are now over 30 years old and have been fully financed by previous ratepayers; the San Vicente Dam is expected to have a 100-year service. Therefore, extending the term of the debt does not necessarily violate the goal of intergenerational equity by shifting costs to future ratepayers. To the contrary, it may better match the benefits of long lived assets to all ratepayers, now and in the future.

The Water Authority’s variable-rate debt, which is made up of the traditional and extendable commercial paper programs assumes a 30-year amortization schedule. This ensures that the amortization schedule matches the expected service life of the assets funded with the proceeds.
The Water Authority's Commercial Paper Program assumes principal is amortized over a 30-year period. Chart 5-7 and Table 5-2, 5-3, and 5-4 below shows the Water Authority’s current debt obligations and projected debt repayment schedules. Section 5.4 shows the projected debt service payments for new debt over the planning period.

### Table 5-2  Outstanding Long-Term Debt as of October 31, 2015

<table>
<thead>
<tr>
<th>Issue Name</th>
<th>Final Maturity</th>
<th>Original Par Amount</th>
<th>Amount Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Revenue Certificates of Participation:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series 1998A</td>
<td>2028</td>
<td>$180,000,000</td>
<td>$11,685,000</td>
</tr>
<tr>
<td>Series 2005A</td>
<td>2022</td>
<td>107,455,000</td>
<td>57,375,000</td>
</tr>
<tr>
<td>Series 2008A</td>
<td>2038</td>
<td>558,015,000</td>
<td>370,205,000</td>
</tr>
<tr>
<td><strong>JPA (Water Authority Financing) Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series 2010A</td>
<td>2027</td>
<td>98,495,000</td>
<td>41,990,000</td>
</tr>
<tr>
<td>Series 2010B (Taxable Build America Bonds)</td>
<td>2049</td>
<td>526,135,000</td>
<td>526,135,000</td>
</tr>
<tr>
<td><strong>Water Revenue Refunding Bonds:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Series 2011A</td>
<td>2027</td>
<td>139,945,000</td>
<td>119,100,000</td>
</tr>
<tr>
<td>Series 2011B</td>
<td>2031</td>
<td>94,540,000</td>
<td>94,540,000</td>
</tr>
<tr>
<td>Series 2013A</td>
<td>2034</td>
<td>299,105,000</td>
<td>299,105,000</td>
</tr>
<tr>
<td>Series 2015A</td>
<td>2029</td>
<td>184,795,000</td>
<td>184,795,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>$2,118,485,000</td>
<td>$1,704,930,000</td>
</tr>
</tbody>
</table>

### Table 5-3 - Subordinate Lien Fixed-Rate Debt as of October 31, 2015

<table>
<thead>
<tr>
<th>Issue Name</th>
<th>Final Maturity</th>
<th>Original Par Amount</th>
<th>Amount Outstanding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Revenue Refunding Bonds, Series 2011S-1</td>
<td>2017</td>
<td>$86,630,000</td>
<td>$86,630,000</td>
</tr>
</tbody>
</table>

### Table 5-4 - TECP & ECP Program Summary as of October 31, 2015

<table>
<thead>
<tr>
<th>Active Debt Instruments</th>
<th>Size</th>
<th>Liquidity Provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 1 (ECP)</td>
<td>$50,000,000</td>
<td>n/a</td>
</tr>
<tr>
<td>Series 5</td>
<td>100,000,000</td>
<td>Wells Fargo Bank, N.A.</td>
</tr>
<tr>
<td>Series 7</td>
<td>100,000,000</td>
<td>J.P. Morgan Chase Bank N.A.</td>
</tr>
<tr>
<td>Series 8</td>
<td>110,000,000</td>
<td>Bank of Tokyo Mitsubishi, UFJ</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$360,000,000</td>
<td></td>
</tr>
</tbody>
</table>

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5.3 Significant Debt Program Assumptions

A variety of structuring decisions are made each time the Water Authority issues debt and a number of similar assumptions are incorporated in the planning process to project future debt service. These key assumptions governing new debt projections are discussed below.

**Term.** All debt is assumed to be amortized over a 30-year term. This includes fixed and variable-rate debt. While long-term 40-year debt will be considered, 30-year debt represents a more conservative assumption.

**Fixed and Variable Interest Rates.** In projecting fixed-rate debt for the capital financing plan, interest rates are derived from the ten-year historical average of a municipal interest rate index, adjusted for the Water Authority’s strong credit characteristics.

For short-term debt interest rate projections, the current interest rate of 0.15% is trended to a historical interest rate of 2.5% over the next three years. All long term debt projections assume a 5.5% interest rate.

All of the debt that has been issued by the Water Authority meets the Federal Tax Code requirements for tax-exempt debt, reducing the cost of borrowing. The capital financing plan assumes that all future debt will be tax-exempt as well, and that any expenditure that would not qualify for tax-exempt financing would be financed with Water Authority cash or within the de minimis portion of bond proceeds allowed for under the Tax Code for “private activity” projects. That being said, the Water Authority may find it appropriate to issue some taxable debt from time-to-time and accept the higher interest cost in exchange for greater flexibility in the use of proceeds.

**Issuance Costs and Capitalized Interest.** The Cost of Issuance is projected at 1.5% of the par amount and annual fees are based upon current fees escalated. These costs will include underwriting fees, legal fees, financial advisory fees, credit enhancement fees, and other miscellaneous fees typically associated with a bond financing.

The projections may assume that interest during project construction is funded out of debt proceeds (called “capitalized interest”). Since it is assumed that debt is issued in three-year increments, the interest expenditures during this three-year period may be capitalized.

**Principal Amortization.** In some instances principal payment is deferred to smooth debt service. This is done on a case by case basis and is reflected in the projected debt service payments.

**Debt Service Reserve.** Unless otherwise stated, all new debt issuances include funds for the debt service reserve requirements. The required reserve for each issuance is set to the maximum annual debt service payment for that issue.
5.4 Schedule of Future Debt Issuance

Future fixed-rate debt issuances and their estimated size are summarized in Table 5-5 below. It should be noted that all fixed-rate debt is issued on a senior lien basis and is included in the debt service coverage ratio presented in Chart 5-2. Chart 5-7 shows the projected debt service payments for existing and proposed debt. In addition to the fixed rate debt issuances, approximately $68.6 million of new CP will be issued from time to time over the LRFP planning period as shown in Chart 5-6. The projected debt service payments shown in Chart 5-7 includes projected payments on new CP issuances.

Table 5-5  Projected Senior Lien Debt Issuances*

<table>
<thead>
<tr>
<th>Projected Issuance</th>
<th>Issue Amount (Millions $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 2017A</td>
<td>41.7</td>
</tr>
<tr>
<td>Series 2020A</td>
<td>26.0</td>
</tr>
<tr>
<td>Series 2023A</td>
<td>32.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$99.9</strong></td>
</tr>
</tbody>
</table>

* Does not include variable-rate debt.

Chart 5-8 shows the impact of the projected senior lien and CP debt issuances on the Water Authority’s annual debt service payments. As shown, the debt service payment increases over the LRFP planning period are minor and reflect the reduced CIP spending levels. The projections presented here reflect a 30-year term. It is important to note that at the time of issuance longer-term debt will be considered.
6.0 Water Authority Financial Forecast

In 2003, the Water Authority’s Board implemented a new rate structure designed to more effectively allocate the cost of service to its customers and to increase the proportion of revenues collected by fixed charges. The new rate categories include fixed Storage and Customer Service Charges, and variable Transportation, Melded Municipal and Industrial (M&I) Treatment and Melded M&I Supply Rates. In March 2015, the Board further enhanced the rate and charge structure by creating the Supply Reliability Charge (SRC). The rate and charge structure provides a balance of fixed and variable revenues limiting the financial impact of fluctuations in water sales.

This section provides a brief description of the Water Authority’s rates and charges and a forecast of the Water Authority’s sources and uses of funds. The forecast represents the Water Authority’s conservative projections, which are based upon current and historical data. It is important to note that these projections are subject to change and should be viewed as estimates. Section 8.0 provides an analysis of select non-deterministic (i.e. random) variables critical to the execution of this plan. The remainder of this section provides an overview of the Water Authority’s various sources and uses of funds and the financial projections.

6.1 Water Authority Rates and Charges

The Water Authority collects revenues from a variety of sources. Some sources are fixed, not dependent on water sales or the local economy, and others are variable, based upon the amount of water sold or the economy (capacity charges).

The Water Authority’s rates and charges are summarized in Figure 6-1 below. The water rates can be split into two types; fixed and commodity (variable). The Customer Service, Storage, and SRC are fixed while the Melded Supply and Treatment Rates, and the Transportation Rate are based upon water purchased. Other rates and charges include the Infrastructure Access Charge (IAC) and property taxes. Capital charges include the System Capacity and the Treatment Capacity Charges and the Water Standby Availability Charge. A description of each of the Water Authority’s rates and charges are provided below.

![Figure 6-1 Water Authority Rates & Charges](image-url)
6.1.1 Water Authority Fixed Water Charges

**Customer Service Charge.** The Customer Service Charge is set to recover costs that are necessary to support the functioning of the Water Authority, develop policies, and implement programs that benefit the region as a whole. The Customer Service Charge is allocated among the member agencies on the basis of each agency’s share of the three-year rolling average of all deliveries (excludes member agency wheeled water).

**Storage Charge.** The Storage Charge is set to recover costs associated with the Emergency Storage Project (ESP) and the Carryover Storage Program (CSP). The Storage Charge is allocated among the member agencies on the basis of each agency’s share of the three-year rolling average of all non-agricultural deliveries. In return for not paying the Storage Charge, agricultural customers (participants in the Transitional Special Agricultural Water Rate (TSAWR) program) agree to receive a level of service during an emergency that is less than that received by the Water Authority’s M&I customers. The level of service reduction agricultural customers experience will be double the rate of the targeted system-wide reductions, up to a maximum of 90%.

**Supply Reliability Charge.** This charge recognizes 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 principals and California law. As adopted by the Board, the SRC recovers a portion of the water supply costs associated with the Carlsbad Desalination Plant and the Imperial Irrigation District’s (IID) water transfers. Together these supplies are the cornerstones of the supply reliability diversification efforts and the Water Authority’s most reliable water supplies. In addition to recovering a proportionate share of the cost of water supply reliability, the SRC also helps to reduce water sales revenue volatility by increasing the amount of fixed revenues. The SRC is allocated to member agencies based upon their pro rata share of the Water Authority’s five-year rolling M&I deliveries (agricultural deliveries are not included).

6.1.2 Water Authority Commodity Rates

**Melded Untreated M&I Supply Rate.** The per acre-foot Melded Untreated M&I Supply Rate recovers the cost of water to the Water Authority. The melded supply rate includes the costs of water purchased from Metropolitan Water District of Southern California (MWD) and IID, the costs of water supplies from the canal lining projects, the MWD transportation costs for non-MWD supplies, desalination supply costs, and system losses. In addition, the rate recovers certain fixed costs associated with the Quantification Settlement Agreement (QSA), and may recover costs of certain operating budget expenditures associated with the procurement of water and wheeling.

The largest component of the Melded Untreated M&I Supply Rate is MWD’s water supply rates. In 2003, MWD replaced its “postage stamp” water rate structure and implemented a revised rate structure that recovers expenditures by different rate categories. The revised structure unbundles or itemizes MWD’s charges into system access/distribution, power, and treatment (included in the Melded M&I Treatment Rate), and establishes a two-tiered pricing (inclining block) structure for water supplies (see also Rate Case Litigation). In 2003, MWD member agencies were asked to make a ten-year financial commitment — termed “purchase orders” — to purchase at least 60% of each agency’s maximum historic annual firm (base) demand for MWD water “supply.” In exchange, the agency may purchase up to 90% of its base demand at the preferable Tier 1 rate. For an agency that does not enter into a purchase order agreement with MWD, it may purchase up to 60% of its base demand at the Tier 1 rate. MWD extended purchase orders for two years in 2013. In 2015, MWD “reset” the purchase orders for another ten years, with terms largely the same. Under the 2015 purchase orders, MWD would assess Tier 2 rate on an agency only if its purchases over the ten-year term exceed the 90% base demand. With the

(1) Water supply rate only, which does not include distribution, power, or treatment rates.
implementation of the Water Authority’s supply diversification plan, and associated reduced reliance on MWD, the Water Authority has not entered into a purchase order agreement with MWD since 2013.

**Melded M&I Treatment Rate.** Effective January 1, 2006, the Water Authority implemented a Melded Treatment Rate. This per-acre-foot rate is designed to recover the Water Authority’s water treatment costs. The Melded M&I Treatment Rate includes the costs of purchasing treated water from MWD, the operating and capital costs associated with the Water Authority’s agreement with Helix Water District’s Levy Water Treatment Plant, operating costs associated with the Olivenhain Treatment Plant, and the operating and capital costs associated with the Water Authority’s Twin Oaks Valley Treatment Plant.

**Transportation Rate.** The Transportation Rate is a uniform rate set to recover capital, and operating and maintenance costs of the Water Authority’s aqueduct system including all facilities used to physically transport the water to member agency meters. The Transportation Rate is charged to each acre-foot of water as delivered by the Water Authority through Water Authority facilities. An acre-foot is about 326,000 gallons, enough water to meet the average household needs of two families for one year. All users, member agencies, and third-party wheelers pay the Transportation Rate.

**Transitional Special Agricultural Water Rate.** Through the TSAWR program, agricultural water users are able to purchase untreated water at the MWD rate. The TSAWR program rates correspond to a lower level of water supply reliability for its participants than M&I customers receive. The Melded Treatment rate is paid by TSAWR customers for treatment services. This program has been extended through December 31, 2020.

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**RATE CASE LITIGATION**

Since 2010, the Water Authority has filed three lawsuits challenging rates set by MWD. A final judgment entered in San Francisco Superior Court in November 2015, affirmed earlier victories by the San Diego County Water Authority in two of the cases. Key elements of the judgment are:

- The invalidation of MWD’s unlawful transportation rates for 2011-2014
- An order directing MWD to pay the Water Authority $188.3 million in contract damages plus interest
- A finding that MWD has under-calculated the Water Authority’s right to MWD water by tens of thousands of acre-feet of water per year

The judge also ordered MWD to “enact only legal transportation and wheeling rates in the future” and set all rates and charges based upon cost causation. The third case has been stayed by stipulation of the parties.

The Water Authority’s Board of Directors already has determined that the agency will deduct its litigation expenses and return the remaining money to its 24 member agencies in proportion to their payment of MWD’s illegal overcharges over the four years in dispute.

MWD has said it will appeal the trial court’s decision, a move that could significantly delay payment of the Water Authority’s judgment.

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(1) As of November 2015, MWD owes the Water Authority $46.6 million in prejudgment interest, an amount that will continue to accrue simple post-judgment interest of 7% annually.
6.1.3 Other Rates and Charges

The Water Authority also levies other rates and charges on its member agencies. These include:

**Infrastructure Access Charges.** In June 1998, the IAC was adopted by the Board to provide an additional source of fixed revenue to help stabilize the Water Authority’s revenues. By increasing fixed revenues, the IAC helps to mitigate water sales revenue volatility that can result from sudden changes in water demand/availability and/or economic cycles. The IAC is a fixed charge that is levied on all retail water meters within the Water Authority’s service area. The IAC maintains a minimum ratio of projected fixed revenues to projected fixed expenditures of 25% in any future fiscal year, excluding fixed water rate revenues. Fixed expenditures are defined as debt service (principal and interest payments\(^{1}\)), 80% of operations and maintenance expenditures, and a portion of the Local Water Supply Development program costs.

**Property Taxes & In Lieu-Charges.** The Water Authority is empowered, under the Act, to levy taxes on all taxable property within its boundaries for the purpose of paying its voter-approved general obligation bonds (G.O. Bonds), or for other Water Authority purposes, subject to certain limitations in the Act, the California Revenue and Taxation Code, and the California Constitution.

The San Diego County Assessor determines assessed valuation, and the Water Authority’s Board of Directors levies the property taxes annually. The taxes levied are billed and collected by the County of San Diego and are remitted to the Water Authority throughout the year. The tax rate set by the Water Authority’s Board is based upon the assessed valuation of taxable property within the Water Authority’s service area. The City of San Diego pays the Water Authority an in-lieu charge instead of the tax levy. The Water Authority no longer receives the debt service assessment for the 1966 Waterworks Bonds, since this issue was retired in November 2003.

The Water Authority also receives a portion of the one-percent ad valorem property tax levied by the County pursuant to Article XIII A of the California Constitution, which it uses for annual operating expenditures and debt service.

6.1.4 Capital Charges

The Water Authority’s rates and charges include fees designed to recover a portion of the capital costs for the region’s water system. Revenues generated by these charges are restricted to capital costs, which includes debt service. These charges include:

**Water Standby Availability Charges.** On April 12, 1990, the Board of Directors adopted Resolution 90-17 for Standby Charges, under Section 45-5.2 of the Act and Article 23 of the Water Authority’s Administrative Code. The charge is $10 per acre per year, or $10 for a parcel less than one acre per year. The charge for each parcel that includes more than one acre shall be determined by multiplying the total number of acres in said parcel by $10. The charge is added to the Secured Tax Roll collected via the San Diego County property tax collection process and remitted by the County to the Water Authority.

\(^{1}\) Debt service and equity payments made for the desalination plant are excluded from this calculation. Payments for the desalination pipeline bonds are included.
**System Capacity Charges.** In May 1990, the Water Authority’s Board of Directors adopted a System Capacity Charge on all new or larger retail water meters installed. The charge is designed to recover a proportionate share of the capital costs associated with providing services to new connections in the Water Authority’s service area. This follows existing Government Code (Section 54991), which states that System Capacity Charges “shall not exceed the estimated reasonable cost of providing the service for which the fee or charge is imposed...” In May 2005, the Board approved a change in the System Capacity Charge calculation methodology, which balances the extra capacity present in the system financed by existing customers with the benefits of use by future customers.

**Treatment Capacity Charges.** In May 2005, the Board also approved the creation of a Treatment Capacity Charge to help fund the Water Authority’s regional water treatment facility. The charge recovers a portion of the capital costs from the future users of the facility. Like the System Capacity Charge, the fee is based upon the size of the meter installed.

### 6.1.5 MWD Pass-Through Charges

Additional charges include MWD’s Readiness-to-Serve Charge and MWD’s Capacity Charge, formerly known as the Capacity Reservation Charge. These charges are passed through to member agencies based upon the member agencies historical water usage. The charge and allocation method is discussed below.

**MWD Readiness-to-Serve Charge.** The Readiness-to-Serve Charge (RTS) recovers MWD’s debt service for construction projects necessary to meet the reliability and water quality needs of current water users, as opposed to new customers. MWD passes these costs to its member agencies based upon the member agency’s share of the ten-year rolling average firm water deliveries. This ensures that all member agencies pay a share of the fixed costs necessary to meet existing demand for MWD’s water. The MWD Standby Charge revenues, which MWD collects from ratepayers in the Water Authority’s service area, offset the RTS charge paid by the Water Authority. The charge is expected to increase as MWD’s debt service on new reliability and water quality related construction projects increases.

MWD recently began to collect payment of delinquencies on its Standby Charge revenue from the Water Authority. These delinquency charges are being paid by the Water Authority and are not passed on to the member agencies. The Water Authority keeps penalties and interest collected on the delinquent accounts.

**MWD Capacity Charge.** The Capacity Charge is a fixed charge levied on an agency’s maximum daily flows over the three previous fiscal years. It recovers the cost of providing peak capacity within the distribution system, and is designed to encourage member agencies to shift demands and avoid placing large daily peaks on the MWD system during the summer months. Daily flow measured between May 1 and September 30 for purposes of billing the Capacity Charge will include deliveries (except long-term seasonal storage deliveries) made by MWD to a member agency or member agency customer including water transfers, exchanges, and agricultural deliveries. As part of a separate surface reservoir operating agreement to manage seasonal peaking, the Water Authority is expected to reserve its full available capacity. The Water Authority’s Board has directed that the Capacity Charge be recovered proportionally based on a five-year rolling average of member agency flows during coincident peak weeks.
6.2 Projected Rates and Charges

Future rates and charges will be determined by many factors that include water supply availability, water demand, water supply costs, capital costs, operating costs, etc. These factors have long-term rate and charge impacts making it difficult to project the Water Authority long-term rates and charges. To provide guidance on the anticipated rate and charge trends, a high and low range of rates have been developed which deviate from the expected CIP and Water Sales shown in Sections 3 & 4. The high rate and charge projection is based upon a water sales outlook that includes continued restrictions on water demand, in addition to a slow rebound in future sales and the aggressive development of member agency local supplies. Other high sales assumptions include a win in the MWD litigation and a restructuring of their rates to comply with the law, a high-rate forecast for MWD’s rates that takes into account planning costs for Cal WaterFix (capital costs for the State’s current plan for addressing the Bay-Delta issues are not included in the LRFP projection period), and a higher than expected Capital Improvement Program (CIP) funding level. The low rate projection is based upon water demands and sales levels returning to levels in line with average demand growth and supply levels, a win in the MWD litigation, and a restructuring of their rates to comply with the law, the moderate development of member agency local supplies and a lower than expected CIP funding level.

Table 6-1 Projected M&I Treated Water Rates ($/AF) *(Calendar Year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High-Rate Scenario</td>
<td>1,493</td>
<td>1,674</td>
<td>1,647</td>
<td>1,766</td>
<td>1,841</td>
<td>1,929</td>
<td>2,007</td>
<td>2,089</td>
<td>2,182</td>
<td>2,302</td>
<td>2,393</td>
</tr>
<tr>
<td>Low-Rate Scenario</td>
<td>1,438</td>
<td>1,528</td>
<td>1,406</td>
<td>1,410</td>
<td>1,458</td>
<td>1,493</td>
<td>1,532</td>
<td>1,565</td>
<td>1,605</td>
<td>1,660</td>
<td>1,691</td>
</tr>
</tbody>
</table>

* Overall M&I water rates are estimated by including the Water Authority’s Melded Supply, Melded Treatment and Transportation rates, with the Customer Service, Storage, and Supply Reliability Charges converted to a dollar per acre-foot basis.

The rate and charge projections in Chart 6-1 show the overall M&I rate per acre-foot of treated water. The overall rate includes the Water Authority’s fixed water charges and commodity rates. The fixed water charges are converted to an average rate (i.e. $/acre-foot) by dividing them by the projected water sales. The commodity rates and the average fixed water rates are then summed to calculate the Water Authority’s overall M&I water rate. As the chart shows, rates and charges are projected to continue to increase throughout the LRFP planning period as the debt service payments related to the CIP ramp up and water supply costs continue to increase. The Compound Annual Growth Rates (CAGR) of the high and low projections are 4.8% and 1.6%, respectively. Chart 6-1 shows the estimated overall high and low M&I water rate estimates which includes both the fixed charges (i.e. Storage Charge) converted to a cost per acre-foot and the commodity water rates.
It is important to note that even if the Water Authority’s rates and charges do not change, the overall M&I water rate is subject to change if the water sales forecast changes. For example, the difference between the Calendar Year 2016 overall M&I water rate presented in the Water Authority’s Adopted Operating and Capital Improvement Program Multi-Year Budget for Fiscal Years 2016 & 2017 and what is presented in the LRFP is the result of changes in the water sales forecast (i.e. water conservation levels). The Water Authority’s Calendar Year 2016 adopted rates and charges have not changed. The overall M&I water rate is only intended to provide a simple summary of the Water Authority’s water rates and charges for illustrative purposes.

The projected IAC over the LRFP planning period are shown in Table 6-2. The IAC is projected to increase over the LRFP planning period as debt service and other fixed costs increase.

### Table 6-2  Infrastructure Access Charge (Calendar Year)

<table>
<thead>
<tr>
<th>Projected</th>
<th>2016</th>
<th>2018</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>IAC ($/ME per month)</td>
<td>2.76</td>
<td>3.01</td>
<td>3.20</td>
<td>3.27</td>
<td>3.32</td>
<td>3.37</td>
<td>3.40</td>
<td>3.44</td>
<td>3.46</td>
</tr>
</tbody>
</table>

### 6.3 Projected Sources of Funds

A financial projection for the Water Authority was developed using the high rate and charge assumptions for CIP, water sales, capital financing plan, and other assumptions provided in this section. This provides a conservative estimate of the Water Authority’s expected financial performance but deviates slightly from the expected CIP and water sales data provided in previous sections. Chart 6-2 and Table 6-3 below show the projected sources of funds for the planning period.

### Table 6-3  Revenues & Other Funding Sources* (Fiscal Year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Gross Water Sales</td>
<td>$479.31</td>
<td>$518.00</td>
<td>$527.36</td>
<td>$534.18</td>
<td>$571.66</td>
<td>$612.77</td>
<td>$656.83</td>
<td>$694.67</td>
<td>$725.78</td>
<td>$750.81</td>
<td>$774.35</td>
</tr>
<tr>
<td>Investment Income</td>
<td>4.43</td>
<td>4.31</td>
<td>4.37</td>
<td>3.98</td>
<td>3.98</td>
<td>3.90</td>
<td>3.82</td>
<td>4.54</td>
<td>5.30</td>
<td>6.06</td>
<td>6.63</td>
</tr>
<tr>
<td><strong>Capital Contributions</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System Capacity Charges</td>
<td>14.60</td>
<td>14.75</td>
<td>14.89</td>
<td>15.04</td>
<td>15.19</td>
<td>15.35</td>
<td>15.50</td>
<td>15.65</td>
<td>15.81</td>
<td>15.97</td>
<td>16.13</td>
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<tr>
<td>Treatment Capacity Charges</td>
<td>0.40</td>
<td>0.40</td>
<td>0.41</td>
<td>0.41</td>
<td>0.42</td>
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<td>0.43</td>
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<tr>
<td>Contributions in Aid of Construction</td>
<td>-</td>
<td>2.30</td>
<td>0.11</td>
<td>0.50</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Infrastructure Access Charges</td>
<td>30.43</td>
<td>31.25</td>
<td>32.66</td>
<td>33.88</td>
<td>34.94</td>
<td>35.81</td>
<td>36.51</td>
<td>37.08</td>
<td>37.55</td>
<td>37.94</td>
<td>38.27</td>
</tr>
<tr>
<td>Hydroelectric Revenue</td>
<td>3.54</td>
<td>3.54</td>
<td>3.44</td>
<td>3.45</td>
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<td>3.66</td>
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<td>3.67</td>
<td>3.67</td>
<td>3.68</td>
<td>3.68</td>
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<tr>
<td>Other Income</td>
<td>11.72</td>
<td>12.52</td>
<td>12.56</td>
<td>12.59</td>
<td>12.63</td>
<td>12.67</td>
<td>12.71</td>
<td>12.76</td>
<td>12.80</td>
<td>12.84</td>
<td>12.83</td>
</tr>
<tr>
<td><strong>Fund Withdrawals (Deposits)</strong></td>
<td>136.74</td>
<td>36.69</td>
<td>86.52</td>
<td>62.94</td>
<td>30.19</td>
<td>82.94</td>
<td>(24.27)</td>
<td>3.50</td>
<td>(24.39)</td>
<td>(27.64)</td>
<td>(33.75)</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>$704.12</strong></td>
<td><strong>$646.94</strong></td>
<td><strong>$705.76</strong></td>
<td><strong>$695.69</strong></td>
<td><strong>$696.63</strong></td>
<td><strong>$791.76</strong></td>
<td><strong>$729.72</strong></td>
<td><strong>$797.09</strong></td>
<td><strong>$802.03</strong></td>
<td><strong>$825.46</strong></td>
<td><strong>$844.23</strong></td>
</tr>
</tbody>
</table>

* Based upon the high rate and charge scenario assumptions. Numbers may not foot due to rounding.

(1) Includes the Build America Bonds (BABs) interest rate subsidy.
**Gross Water Sales.** Gross water sales projections were developed based upon the baseline assumptions. The increase in revenues over time is due to increasing rates and charges as well as a return to modest demand recovery and growth.

**Infrastructure Access Charge.** The IAC revenue forecast is based upon the IAC shown in Table 6-2. As discussed previously, the IAC is calculated to help cover a percentage of the Water Authority’s fixed costs. The increase in revenues is due to increases in the number of system meter equivalents (MEs), which is based upon SANDAG projections, and the IAC increases.

**Property Tax and in-Lieu Charges.** Property taxes and in-lieu charge revenues are projected using a 2% growth rate. The primary driver for increases in this revenue stream are increases in assessed value and improvements. In recent years, this revenue source has been relatively flat due to real estate market conditions. Going forward the region should see a slow increase in home values and home sales.

**Investment Income.** The Water Authority receives income from investing its cash balances. Investment income on the cash balances in the Operating Fund, Rate Stabilization Fund, and Debt Service Reserve Fund is available to fund general Water Authority operating expenditures. The Pay-As-You-Go (PAYGO) Fund investment income is restricted to pay for capital expenditures or debt service. The Construction Fund investment income is used to fund construction expenditures and is included as part of the available funds, thus reducing the issuance sizing accordingly.

Investment income projections are based upon projected cash balances and prevailing interest rates. Interest rate projections are based upon a three-year trend from current rates to the 15-year average earning rate.
**Capital Contributions.** Capital contributions are independent of water use and are fixed to recover costs associated with new system capacity/reliability or maintaining existing system capacity/reliability. The use of capital contributions revenue is restricted to paying for capital expenditures and is deposited in the PAYGO Fund to ensure proper use of the funds.

Capital contributions are made up of Water Standby Availability Charges, System Capacity Charges, Treatment Capacity Charges, and Contributions in Aid of Construction (CIAC). Each of these revenue sources is discussed below.

- **Water Standby Availability Charges** are based upon parcels/acres in the Water Authority’s service area. This revenue stream is projected to remain flat with no rate increases anticipated.

- **System Capacity and Treatment Charge** revenues are projected to initially drop and then remain relatively flat with increases in the charges being moderated by a slower rate of new system connections. Revenues are projected using a 1% annual increase. Section 8 of the LRFP provides an analysis of the potential impact variability in capacity charges have on the Water Authority’s financial position.

- **Contributions in Aid of Construction (CIAC)** are contributions from member agencies for capital projects. Typically these revenues are restricted to specific projects/uses. In some instances, a member agency may reimburse the Water Authority for improvements to their system as part of a Water Authority project.

**Hydroelectric Revenues.** The Water Authority owns and operates two hydroelectric facilities that generate revenues. These facilities include a facility at Lake Hodges and the Rancho Peñasquitos facility. The ability to produce power at the Rancho Peñasquitos facility can be impacted by low flow rates as a result of reduced member agency demands. These revenues are projected to remain flat with an annual inflation adjustment of 2%.

**Other Income.** Other income includes encroachment permits, easements, gain/loss on the sale of assets, delinquency fees, plan-check reimbursements, and operating grants. These revenues are projected to remain flat.

**Net Fund Withdrawals (Deposits).** Cash fund withdrawals provide an important source of funds for the Water Authority. Fund withdrawals may be made to meet annual operations and maintenance, CIP or debt service expenses, to stabilize water rates and charges, or to comply with debt service coverage and operating fund policies. Deposits are made when funds are available once all of the fiscal year operational or fund policy requirements are met (i.e. deposit into the RSF) or when planned (i.e. Stored Water Fund deposits).
6.4 Uses of Funds

The following chart and table shows the projected use of funds over the planning period. The largest uses of funds include:

- Water Purchases
- Capital Budget
- Debt Service
- Operations and Maintenance

### Table 6-4 Expenditures (Fiscal Year) *

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Purchases</td>
<td>$367.72</td>
<td>$394.77</td>
<td>$390.50</td>
<td>$387.72</td>
<td>$411.03</td>
<td>$450.08</td>
<td>$491.18</td>
<td>$522.81</td>
<td>$548.85</td>
<td>$574.32</td>
<td>$599.50</td>
</tr>
<tr>
<td>Capital Budget</td>
<td>72.85</td>
<td>50.75</td>
<td>110.09</td>
<td>96.66</td>
<td>76.29</td>
<td>127.16</td>
<td>18.41</td>
<td>50.17</td>
<td>20.15</td>
<td>22.13</td>
<td>15.47</td>
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<tr>
<td>Debt Service 1</td>
<td>124.64</td>
<td>135.06</td>
<td>137.03</td>
<td>142.55</td>
<td>144.60</td>
<td>147.96</td>
<td>148.87</td>
<td>150.87</td>
<td>151.73</td>
<td>151.60</td>
<td>151.56</td>
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<td>Operating Budget 2</td>
<td>49.39</td>
<td>48.96</td>
<td>50.43</td>
<td>52.12</td>
<td>53.69</td>
<td>55.30</td>
<td>56.96</td>
<td>58.66</td>
<td>60.42</td>
<td>62.24</td>
<td>64.10</td>
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<td>QSA Environmental/Other Commitments 3</td>
<td>15.02</td>
<td>17.40</td>
<td>17.71</td>
<td>16.63</td>
<td>11.02</td>
<td>11.26</td>
<td>14.30</td>
<td>14.57</td>
<td>20.88</td>
<td>15.18</td>
<td>13.61</td>
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<tr>
<td>Stored Water Expenditures *</td>
<td>74.50</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$704.12</td>
<td>$646.94</td>
<td>$705.76</td>
<td>$695.69</td>
<td>$696.63</td>
<td>$791.76</td>
<td>$729.72</td>
<td>$797.09</td>
<td>$802.03</td>
<td>$825.46</td>
<td>$844.23</td>
</tr>
</tbody>
</table>

* Based upon the high rate and charge scenario assumptions.

1. Includes management fees and charges.
2. Includes equipment purchases and hydropower operations and maintenance costs.
3. Other Commitments includes the 2012 Pipeline Bonds.
4. Stored water purchases and withdrawals are not shown due to their variability.

### Chart 6-3 Expenditures

**Water Purchases.** Water purchases include all expenditures incurred by the Water Authority for supply and treatment. The Water Authority purchases water from MWD, IID, and the Carlsbad Desalination Plant; and incurs costs associated with the canal lining program. Other expenditures include MWD’s transportation charges for transporting the IID and canal lining water to the Water Authority’s system, MWD’s RTS Charge, MWD’s Capacity Charge, and the Water Authority’s local supply development credit programs. Water treatment costs are those associated with either MWD or water treatment contracts that the Water Authority has with other entities, including the operations contract for its Twin Oaks Water Treatment Plant.

1. Includes cost related to the plant operations and excludes payments on the pipeline bonds.
In addition to MWD's per acre-foot cost of water, MWD also charges its member agencies an RTS and Capacity Reservation Charge. These charges are passed through to the Water Authority's member agencies, so they have no net revenue or expenditure impact.

MWD water rates and charges for 2017-2026 are projected using an average annual increase of 7.4%. The IID water supply rate is inflated based upon expected inflation. Other water purchase costs are projected based upon MWD rates and other costs.

**IID Agreement & The Price Stability Realized**

In 2009, the Water Authority and IID reached an agreement setting the price schedule for the IID transfer water. A key element of that agreement was the annual escalation rate for the price of the water from 2016 through 2034. The agreement ties the annual increase of the IID supply rate to the Gross Domestic Product Implicit Price Deflator as published by the Bureau of Economic Analysis of the United States Department of Commerce, which is a general inflation index.

This stabilizes the price the Water Authority will pay for this highly reliable water supply, which is expected to be near 50% of the Water Authority's water supply mix once deliveries reach the full amount of 200,000 acre-feet.
Operating Budget. The operating budget makes up a small portion of the Water Authority’s overall expenditures, 6.8% for Fiscal Year 2016. In recent years, the Water Authority has seen increased demands including the commencement of operations at the Lake Hodges Hydroelectric Facility, regional conservation, community outreach, regulatory compliance, and supply development. Through judicious review of expenditures, prudent management of labor costs, and a culture of continuous improvement, the Water Authority has only seen minimal increases in recent years.

Debt Service (Existing and Projected). The Water Authority’s current debt service expenditures include three Certificates of Participation (COPs) issues, two Water Authority Financing Agency Bonds (Series 2010A&B), four Water Revenue Refunding bonds, three outstanding Commercial Paper (CP) series, and one Extendable Commercial Paper (ECP) series. The scheduled principal and interest payments are shown in Table 6-5. The projected debt service payments are based upon the assumptions provided in Section 5.3.

Total debt service is projected to slightly increase over the Planning Period as the CIP continues to be funded, as shown in Table 6-5 and Chart 6-5.

Table 6-5 Existing Long-Term Debt Service (Accrual Basis)*

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Interest</th>
<th>Principal</th>
<th>Total Long-Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$78,490,721</td>
<td>$26,550,000</td>
<td>$105,040,721</td>
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<tr>
<td>2017</td>
<td>$76,464,750</td>
<td>$41,560,000</td>
<td>$118,209,750</td>
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<tr>
<td>2018</td>
<td>$74,564,302</td>
<td>$44,620,000</td>
<td>$119,184,302</td>
</tr>
<tr>
<td>2019</td>
<td>$72,439,714</td>
<td>$42,390,000</td>
<td>$114,829,714</td>
</tr>
<tr>
<td>2020</td>
<td>$70,389,081</td>
<td>$44,925,000</td>
<td>$115,314,081</td>
</tr>
<tr>
<td>2021</td>
<td>$68,236,946</td>
<td>$49,040,000</td>
<td>$117,276,946</td>
</tr>
<tr>
<td>2022</td>
<td>$65,839,904</td>
<td>$51,410,000</td>
<td>$117,249,904</td>
</tr>
<tr>
<td>2023</td>
<td>$63,364,073</td>
<td>$51,290,000</td>
<td>$114,654,073</td>
</tr>
<tr>
<td>2024</td>
<td>$60,914,864</td>
<td>$53,700,000</td>
<td>$114,614,864</td>
</tr>
<tr>
<td>2025</td>
<td>$58,260,908</td>
<td>$56,325,000</td>
<td>$114,585,908</td>
</tr>
<tr>
<td>2026</td>
<td>$55,453,766</td>
<td>$59,460,000</td>
<td>$114,913,766</td>
</tr>
<tr>
<td>2027</td>
<td>$52,589,095</td>
<td>$62,315,000</td>
<td>$114,904,095</td>
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<tr>
<td>2028</td>
<td>$49,068,788</td>
<td>$63,020,000</td>
<td>$112,088,788</td>
</tr>
<tr>
<td>2029</td>
<td>$45,960,568</td>
<td>$66,105,000</td>
<td>$112,065,568</td>
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<tr>
<td>2030</td>
<td>$42,690,095</td>
<td>$70,475,000</td>
<td>$113,165,095</td>
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<tr>
<td>2031</td>
<td>$39,211,634</td>
<td>$73,925,000</td>
<td>$113,136,634</td>
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<tr>
<td>2032</td>
<td>$35,698,511</td>
<td>$69,700,000</td>
<td>$105,398,511</td>
</tr>
<tr>
<td>2033</td>
<td>$32,685,450</td>
<td>$72,685,000</td>
<td>$105,370,450</td>
</tr>
<tr>
<td>2034</td>
<td>$29,350,044</td>
<td>$86,620,000</td>
<td>$115,970,044</td>
</tr>
<tr>
<td>2035</td>
<td>$25,448,074</td>
<td>$60,900,000</td>
<td>$86,348,074</td>
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<tr>
<td>2036</td>
<td>$22,602,817</td>
<td>$63,725,000</td>
<td>$86,327,817</td>
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<tr>
<td>2037</td>
<td>$19,624,093</td>
<td>$66,685,000</td>
<td>$86,309,093</td>
</tr>
<tr>
<td>2038</td>
<td>$16,505,613</td>
<td>$69,770,000</td>
<td>$86,285,613</td>
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<td>2039</td>
<td>$13,635,664</td>
<td>$73,925,000</td>
<td>$86,560,664</td>
</tr>
<tr>
<td>2040</td>
<td>$12,604,693</td>
<td>$72,685,000</td>
<td>$85,289,693</td>
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<td>2041</td>
<td>$11,532,527</td>
<td>$72,765,000</td>
<td>$84,297,527</td>
</tr>
<tr>
<td>2042</td>
<td>$10,417,440</td>
<td>$78,870,000</td>
<td>$89,287,440</td>
</tr>
<tr>
<td>2043</td>
<td>$9,257,965</td>
<td>$30,020,000</td>
<td>$39,277,965</td>
</tr>
<tr>
<td>2044</td>
<td>$8,052,279</td>
<td>$31,220,000</td>
<td>$39,272,279</td>
</tr>
<tr>
<td>2045</td>
<td>$6,798,416</td>
<td>$32,465,000</td>
<td>$39,263,416</td>
</tr>
<tr>
<td>2046</td>
<td>$5,494,548</td>
<td>$33,760,000</td>
<td>$39,254,548</td>
</tr>
<tr>
<td>2047</td>
<td>$4,138,649</td>
<td>$35,110,000</td>
<td>$39,248,649</td>
</tr>
<tr>
<td>2048</td>
<td>$2,728,556</td>
<td>$36,510,000</td>
<td>$39,238,556</td>
</tr>
<tr>
<td>2049</td>
<td>$1,262,242</td>
<td>$37,965,000</td>
<td>$39,227,242</td>
</tr>
<tr>
<td>Total</td>
<td>$1,241,961,788</td>
<td>$1,693,245,000</td>
<td>$2,935,206,788</td>
</tr>
</tbody>
</table>

* Net of Build America Bond (BABs) subsidy.
**Capital Budget.** The capital budget reflects the CIP provided in Section 4. The projected costs are adjusted for inflation and represent the best estimate of annual project costs.

**Stored Water Fund Expenditures.** The Water Authority is currently purchasing water to fill the San Vicente Dam’s storage capacity. Sufficient funds are available to complete the initial fill, which is expected to be completed within the current budget period and to fill other Water Authority storage capacity. The sale of water from storage will depend on water supply conditions. Therefore only the initial purchases are currently being shown. The stored water fund will be reimbursed for the cost of inventory from water sale proceeds. This will provide ongoing working capital to utilize the region’s water storage capacity.

**QSA Environmental/Other Commitments.** These costs include Equipment Replacement Fund Transfers and are based upon scheduled payments. Other commitments include costs associated with plan-check reviews, conservation programs and operating grants that are reimbursable. These expenditures are only tracked for the budget period. Projected expenditures (beyond Fiscal Year 2016) are assumed to be offset by other revenues.

**Desal Pipeline Bonds: How Funds are Paid**

The Water Authority’s payment of the Carlsbad Desalination Project is split into two parts:

- Payments made pursuant to the Water Purchase Agreement for desalinated water are treated as Operations and Maintenance costs and included in the water purchases.
- Debt service payments for the Series 2012 Pipeline Bonds are made on a super-subordinate basis and show as part of the Water Authority’s Other Commitments.
## Table 6-6  Financial Projections (Fiscal Year) *

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Sales</td>
<td>$479,307</td>
<td>$517,996</td>
<td>$527,358</td>
<td>$539,179</td>
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<tr>
<td>Capital Contributions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Water Standby Availability Charges</td>
<td>11,250</td>
<td>11,258</td>
<td>11,275</td>
<td>11,292</td>
</tr>
<tr>
<td>- System Capacity Charges</td>
<td>14,600</td>
<td>14,746</td>
<td>14,893</td>
<td>15,042</td>
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<tr>
<td>- Treatment Capacity Charges</td>
<td>400</td>
<td>404</td>
<td>408</td>
<td>412</td>
</tr>
<tr>
<td>- Infrastructure Access Charges</td>
<td>30,434</td>
<td>31,250</td>
<td>32,659</td>
<td>33,880</td>
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<tr>
<td><strong>TOTAL OPERATING REVENUE</strong></td>
<td>$535,991</td>
<td>$575,654</td>
<td>$586,593</td>
<td>$599,805</td>
</tr>
<tr>
<td>Less Deposits to/plus Withdrawals from the Rate Stabilization Fund</td>
<td>24,178</td>
<td>30,827</td>
<td>17,500</td>
<td>(2,798)</td>
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<tr>
<td><strong>Non-Operating Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Investment Income (*1)</td>
<td>3,119</td>
<td>3,300</td>
<td>3,610</td>
<td>3,348</td>
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<td>Property Taxes and In-Lieu Charges</td>
<td>11,700</td>
<td>11,934</td>
<td>12,173</td>
<td>12,416</td>
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<td>Hydroelectric Revenue</td>
<td>3,540</td>
<td>3,540</td>
<td>3,440</td>
<td>3,450</td>
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<td>BABs Interest Rate Subsidy</td>
<td>10,534</td>
<td>11,303</td>
<td>11,303</td>
<td>11,303</td>
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<tr>
<td>Other Revenue</td>
<td>1,181</td>
<td>1,216</td>
<td>1,252</td>
<td>1,290</td>
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<tr>
<td><strong>TOTAL NON-OPERATING REVENUE</strong></td>
<td>$30,074</td>
<td>$31,293</td>
<td>$31,778</td>
<td>$31,807</td>
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<tr>
<td><strong>TOTAL REVENUE</strong></td>
<td>$560,065</td>
<td>$606,947</td>
<td>$618,371</td>
<td>$631,612</td>
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<tr>
<td>Operating Expenses</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cost of Sales</td>
<td>$367,716</td>
<td>$394,771</td>
<td>$390,499</td>
<td>$387,719</td>
</tr>
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<td>Other Maintenance and Operating Costs</td>
<td>49,390</td>
<td>48,960</td>
<td>50,429</td>
<td>52,122</td>
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<tr>
<td>Capital Equipment Purchases</td>
<td>(167)</td>
<td>(172)</td>
<td>(177)</td>
<td>(182)</td>
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<td><strong>TOTAL OPERATING EXPENSE</strong></td>
<td>$416,939</td>
<td>$443,559</td>
<td>$440,751</td>
<td>$439,659</td>
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<tr>
<td><strong>Net Water Revenue Available for Debt Service</strong></td>
<td>$173,046</td>
<td>$163,388</td>
<td>$177,620</td>
<td>$191,957</td>
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### Long-Term Debt Service *

#### Interest on Long-Term Debt

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<th>Year</th>
<th>1998A COPs</th>
<th>2001A COPs</th>
<th>2008A COPs</th>
<th>2010A COPs</th>
<th>2011A COPs</th>
<th>2012A COPs</th>
<th>2013A COPs</th>
<th>2014A COPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>555</td>
<td>555</td>
<td>555</td>
<td>555</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2,891</td>
<td>2,152</td>
<td>1,367</td>
<td>725</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>2018</td>
<td>19,688</td>
<td>18,332</td>
<td>17,583</td>
<td>16,792</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2019</td>
<td>2,319</td>
<td>1,717</td>
<td>1,551</td>
<td>1,370</td>
<td></td>
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<td></td>
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<tr>
<td>2020</td>
<td>32,294</td>
<td>32,294</td>
<td>32,294</td>
<td>32,294</td>
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<td>2021</td>
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<td>5,304</td>
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<td>4,569</td>
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</tr>
<tr>
<td>2022</td>
<td>4,707</td>
<td>4,707</td>
<td>4,707</td>
<td>4,707</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2023</td>
<td>13,982</td>
<td>13,982</td>
<td>13,982</td>
<td>13,982</td>
<td></td>
<td></td>
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<tr>
<td>2024</td>
<td>6,905</td>
<td>8,910</td>
<td>8,910</td>
<td>8,852</td>
<td></td>
<td></td>
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<tr>
<td>2025</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

#### Total Interest on Long-Term Debt |

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$89,025</td>
<td>$87,953</td>
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</table>

### Principal on Long-Term Debt

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>13,880</td>
<td>15,005</td>
<td>14,690</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>14,505</td>
<td>17,320</td>
<td>8,315</td>
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<tr>
<td>2018</td>
<td>3,975</td>
<td>4,130</td>
<td>4,295</td>
<td>4,470</td>
</tr>
<tr>
<td>2019</td>
<td>7,545</td>
<td>7,920</td>
<td>8,315</td>
<td>8,650</td>
</tr>
<tr>
<td>2020</td>
<td>7,405</td>
<td>7,805</td>
<td>8,255</td>
<td>8,605</td>
</tr>
<tr>
<td>2021</td>
<td>5,905</td>
<td>6,305</td>
<td>6,755</td>
<td>7,105</td>
</tr>
<tr>
<td>2022</td>
<td>5,405</td>
<td>5,805</td>
<td>6,255</td>
<td>6,605</td>
</tr>
<tr>
<td>2023</td>
<td>4,905</td>
<td>5,305</td>
<td>5,755</td>
<td>6,105</td>
</tr>
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</table>

### Total Principal on Long-Term Debt

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$26,550</td>
<td>$41,560</td>
<td>$44,620</td>
<td>$42,390</td>
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### Long-Term Debt Service

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$115,575</td>
<td>$129,513</td>
<td>$130,487</td>
<td>$126,133</td>
</tr>
<tr>
<td>2017</td>
<td>7,019</td>
<td>4,270</td>
<td>5,228</td>
<td>6,366</td>
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</table>

### Total Short-Term Debt Service

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$7,019</td>
<td>$4,270</td>
<td>$5,228</td>
<td>$15,014</td>
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</table>

### Fees on Debt

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$2,012</td>
<td>$2,032</td>
<td>$2,070</td>
<td>$2,158</td>
</tr>
</tbody>
</table>

### Total Fees

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$7,019</td>
<td>$2,032</td>
<td>$2,070</td>
<td>$2,158</td>
</tr>
</tbody>
</table>

### Total Debt Service

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$124,641</td>
<td>$135,542</td>
<td>$137,802</td>
<td>$143,322</td>
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</table>

### Senior Lien Debt Service Coverage Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
</tr>
</tbody>
</table>

### Overall Debt Service Coverage Ratio

<table>
<thead>
<tr>
<th>Year</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>1.41x</td>
<td>1.45x</td>
<td>1.44x</td>
<td>1.34x</td>
</tr>
</tbody>
</table>

* Projections are based upon the high rate and charge scenario assumptions.

1. Investment income earned on short-term- and long-term debt proceeds and the RSF fund are excluded.

2. Does not include debt related management or other fees, or super subordinate Desal Pipeline debt service.
## Long-Range Financing Plan

### Senior Lien Debt Service Coverage Ratio

<table>
<thead>
<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>2025</th>
<th>2026</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Fees</td>
<td>$633,511</td>
<td>$675,670</td>
<td>$720,610</td>
<td>$759,186</td>
<td>$790,940</td>
<td>$816,537</td>
<td>$840,582</td>
</tr>
<tr>
<td>Total Principal on Long-Term Debt</td>
<td>(7,810)</td>
<td>(6,399)</td>
<td>(8,616)</td>
<td>(12,976)</td>
<td>(17,619)</td>
<td>(16,533)</td>
<td>(13,599)</td>
</tr>
<tr>
<td>2020A Bonds</td>
<td>3,206</td>
<td>2,943</td>
<td>2,632</td>
<td>3,011</td>
<td>3,331</td>
<td>3,558</td>
<td>3,762</td>
</tr>
<tr>
<td>2015A Refunding Bonds</td>
<td>12,664</td>
<td>12,918</td>
<td>13,176</td>
<td>13,440</td>
<td>13,708</td>
<td>13,983</td>
<td>14,262</td>
</tr>
<tr>
<td>2013A Refunding Bonds</td>
<td>11,303</td>
<td>11,303</td>
<td>11,303</td>
<td>11,303</td>
<td>11,303</td>
<td>11,297</td>
<td>11,243</td>
</tr>
<tr>
<td>2011B Refunding Bonds</td>
<td>1,329</td>
<td>1,368</td>
<td>1,409</td>
<td>1,452</td>
<td>1,495</td>
<td>1,540</td>
<td>1,587</td>
</tr>
<tr>
<td>2005A COPs</td>
<td>32,152</td>
<td>32,192</td>
<td>32,180</td>
<td>32,876</td>
<td>33,507</td>
<td>34,058</td>
<td>34,534</td>
</tr>
<tr>
<td>Cost of Sales 5,555</td>
<td>$571,658</td>
<td>$612,769</td>
<td>$656,833</td>
<td>$694,669</td>
<td>$725,780</td>
<td>$750,808</td>
<td>$774,348</td>
</tr>
<tr>
<td>Operating Expenses</td>
<td>$416,939</td>
<td>$443,559</td>
<td>$440,751</td>
<td>$439,659</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infrastructure Access Charges</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water Standby Availability Charges</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total Operating Revenue</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
</tr>
<tr>
<td>BABs Interest Rate Subsidy</td>
<td>1.34x</td>
<td>1.33x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
</tr>
<tr>
<td>Investment Income</td>
<td>$3,119</td>
<td>3,300</td>
<td>3,610</td>
<td>3,348</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL OPERATING REVENUE</td>
<td>$464,527</td>
<td>$505,187</td>
<td>$547,932</td>
<td>$581,264</td>
<td>$609,059</td>
<td>$636,339</td>
<td>$663,377</td>
</tr>
<tr>
<td>$193,326</td>
<td>$196,276</td>
<td>$196,242</td>
<td>$197,822</td>
<td>$197,769</td>
<td>$197,723</td>
<td>$198,140</td>
<td></td>
</tr>
<tr>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td>1.50x</td>
<td></td>
</tr>
<tr>
<td>1.34x</td>
<td>1.33x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
<td>1.32x</td>
<td></td>
</tr>
<tr>
<td>Net Water Revenue Available for Debt Service</td>
<td>$148,733</td>
<td>$149,642</td>
<td>$151,642</td>
<td>$152,501</td>
<td>$152,363</td>
<td>$152,269</td>
<td></td>
</tr>
</tbody>
</table>
7.0 Funds and Reserves

The Water Authority maintains a number of different funds dedicated to support financial operations. Each fund serves a specific purpose which can be generally categorized as either an operating, capital, or debt service reserve fund. Funds categorized as operating provide monies for system operations, emergencies, working capital, debt service, and capital projects. The Water Authority’s operating funds include the Operating Fund, the Rate Stabilization Fund (RSF), and the Stored Water Fund. Capital funds hold monies for the Capital Improvement Program (CIP) and related asset expenditures. The Debt Service Reserve Fund contains reserves held in trust for the benefit of investors in the Water Authority’s long-term debt and currently consists of the 1998A Certificate of Participation (COP) debt issuances and was funded with cash from proceeds from the debt issuances; these funds are applied to debt service if pledged revenues are insufficient to satisfy the debt service requirements.

Figure 7-1 illustrates how the Water Authority’s rates and charges flow into the various funds. The funds are split into unrestricted and restricted. Unrestricted funds can be used for any type of expenditure while restricted funds are limited to capital expenditures such as in the case of the Pay-As-You-Go (PAYGO) Fund. It should be noted that the Construction and Debt Service Reserve Funds are not shown since their funding source is debt proceeds.

Figure 7-1 Flow of Revenues

<table>
<thead>
<tr>
<th>UNRESTRICTED REVENUES</th>
<th>RESTRICTED REVENUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating</td>
<td>Stored Water</td>
</tr>
<tr>
<td></td>
<td>Equipment Replacement</td>
</tr>
<tr>
<td></td>
<td>Rate Stabilization</td>
</tr>
<tr>
<td></td>
<td>Pay-As-You-Go</td>
</tr>
<tr>
<td>Net Water Sales Revenue</td>
<td>Operating Fund Transfers</td>
</tr>
<tr>
<td>Taxes</td>
<td>Operating Fund Transfers</td>
</tr>
<tr>
<td>IAC</td>
<td>Operating Fund Transfers</td>
</tr>
<tr>
<td>Interest Earnings</td>
<td>Operating Fund Transfers</td>
</tr>
<tr>
<td>Miscellaneous Revenue</td>
<td>Operating Fund Transfers</td>
</tr>
</tbody>
</table>

- Source: Permitted Expenditures/Draws
- Source: Operating Fund Transfers
- Source: CIP Cash Funding
- Source: Environmental

It is important to note that the Water Authority’s overall fund balances fluctuate over time, especially with respect to capital funds, which are funded by proceeds from debt issuances and then spent down over a two-to-three year period. The balance of this section provides a brief description of each fund held by the Water Authority and its function within the Long-Range Financing Plan (LRFP).
7.1 Description of Specific Funds and Policies

**Operating Fund.** The Operating Fund holds the Water Authority’s working capital and emergency operating reserve. In April 2003, the Water Authority amended its Operating Fund policy from a 60-day minimum balance of average annual operating expenditures to a target balance of 45 days of average annual operating expenditures. Common to both policies is a requirement that $5 million of such calculated amount must be designated and held available for emergency repairs to the Water Authority’s system due to unforeseen events. The Operating Fund provides working capital to ensure that even with mismatching cash receipts and disbursements, the Water Authority has ample liquidity/working capital.

**Rate Stabilization Fund.** In Fiscal Year 1990, the Water Authority established the RSF for the purpose of collecting amounts of water revenues greater than expenditures in years of high water sales. Funds can then be used to mitigate “rate shock” in years of low water sales and/or to manage the debt service coverage level. In August 2006, the Board adopted the current policy governing the RSF balances. The current policy replaced the old policy of setting a minimum and maximum balance with a target and a maximum balance. The RSF target balance is equal to the financial impact of 2.5 years of wet weather or mandatory drought regulations and the maximum fund balance is set equal to the financial impact of 3.5 years of wet weather or mandatory drought regulations. The effect of the current policy is to create a target for fund balances that is tied to the real financial impacts/risks that the fund is designed to protect against.

As a general rule, the Water Authority will transfer portions of its net water revenues exceeding the Board’s 1.5 times debt service coverage policy into the RSF. From time to time, as needed, the Water Authority will transfer amounts from its RSF into water revenues to manage its debt service ratio, or to help provide adequate working capital to the Operating Fund.

**Stored Water Fund.** In 2006, the Board created the Dam-Fill Fund as a separate fund to support the purchase of water for the initial filling of San Vicente Dam Raise Project water storage capacity. As such, the Dam-Fill Fund was structured as a sinking fund designed only to provide funds for the initial dam-fill water purchases and then be eliminated. In 2010, the Dam-Fill Fund was renamed to the Stored Water Fund.

The LRFP shows the Stored Water Fund as a permanent fund dedicated to maintaining the working capital necessary to utilize the Water Authority’s in-region storage facilities. With the completion of the San Vicente Dam Raise Project and the start of the fill, it is clear that the water inventory cycle, that is the repeating pattern of purchasing water for storage and then selling the stored water to member agencies, would introduce very large fund balance fluctuations into the Operating Fund. In addition to eliminating the large fluctuations in the Operating Fund, a permanent Stored Water Fund ensures that funds are available to purchase water for storage, and that stored water funds can be easily

---

**Figure 7-2 Water Inventory Cycle**

- **Purchase Water to Add to Storage**
- **Receive Payments for Delivered Water**
- **Deliver Water to Member Agencies**
- **Stored Water**
 tracked to ensure that they are used only for stored water purchases.

It is anticipated that the Stored Water Fund will be subject to large fluctuations as funds are drawn down to purchase water for storage. When the stored water is sold, the Stored Water Fund is reimbursed for the cost of water (i.e. inventory value) replenishing the working capital available for the purchase of water for storage. The maximum fiscal year-end balance for the Stored Water Fund is 110% of the expected cost to fill available in-region storage capacity. Therefore, if the storage capacity is full, the maximum balance of the Stored Water Fund would be $0. While the sale of stored water would be the primary source of funds, deposits would also be made based upon the amount budgeted for seepage and evaporation in the Water Authority's Storage Charge. In addition, it is possible that from time to time a deposit will be incorporated into the Storage Charge to increase the fund's balances to account for increases in the cost of water.

**Pay-As-You-Go Fund.** The PAYGO Fund was established in Fiscal Year 1990 to serve as a mechanism to collect System and Treatment Capacity Charges and Water Standby Availability Charges to be used to fund CIP expenditures. The PAYGO Fund is a capital fund; therefore, all monies in the fund, including investment income, are restricted to capital expenditures including debt service. Contributions in Aid of Construction (CIAC) from member agencies are also deposited into the PAYGO Fund. CIAC are funds paid to the Water Authority by its member agencies for capital projects constructed on their behalf.

The Water Authority has some flexibility when determining the annual draws from PAYGO. Typically, the expenditure of PAYGO funds occur when bond proceeds are exhausted or when a project does not qualify for tax exempt financing.

**Construction Fund.** Similar to the PAYGO Fund, the Construction Fund is a capital fund. The Construction Fund is funded with the proceeds from the Water Authority's sale of debt (See Section 5.0). The Water Authority's Construction Fund is currently comprised of unspent proceeds of the Series 2010B and investment income.

Upon the sale of any single issue of tax-exempt debt, federal tax law currently dictates that the Water Authority must spend the proceeds of the issue within a prescribed period of time. As a result, the Construction Fund will typically fluctuate over two-to-three year periods as funds are raised through debt issuance, and then spent prior to the next issuance. It is anticipated that the spend down of the Series 2010B proceeds will be completed in the spring of 2017.

**Debt Service Reserve Fund.** The Debt Service Reserve Fund was created to hold the required legal reserve for Water Authority debt issues. Such reserves are held for the purpose of making an issue's annual debt service payments in the event that the Water Authority’s pledged revenues are insufficient to make such payments.
The reserve requirement is held in this fund until it is expended, generally to fund the last payment of the debt issuance. Interest earned on the Debt Service Reserve Fund is transferred into the Operating Fund and is not restricted. In Fiscal Year 2015, the Debt Service Reserve Fund totaled $12.2 million comprised of a reserve for the Series 1998A COP debt issuance.

**Equipment Replacement Fund.** In 2003, the Board separated the Equipment Replacement Fund from the Operating Fund. The Equipment Replacement Fund is funded by annual draws from the Operating Fund per depreciation schedules for small capital and operating equipment, such as computers, vehicles, the Supervisory Control and Data Acquisition (SCADA) system, etc. It is used to replace equipment that has reached the end of its effective useful life.

### 7.2 Projected Fund Balances

Projected fund balances over the planning period under the high-rate scenario assumptions are presented in the Chart and Table 7-1. The fund balance projections are based upon the sources and uses of funds data presented in Section 6.0. The Construction Fund exhibits the most volatility as debt is issued and the proceeds are spent down. In general, the funds are relatively stable with the PAYGO fund being drawn down over the initial projection period to provide cash funding for the CIP. It should also be noted that the Operating Fund can be used to fund CIP projects.

![Chart 7-1 Projected Year-End Fund Balances](chart.png)

<table>
<thead>
<tr>
<th>Projected Fund Balance (Fiscal Year) *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funds</strong></td>
</tr>
<tr>
<td>Operating</td>
</tr>
<tr>
<td>Rate Stabilization</td>
</tr>
<tr>
<td>PAYGO</td>
</tr>
<tr>
<td>Construction</td>
</tr>
<tr>
<td>Debt Service Reserve</td>
</tr>
<tr>
<td>Equipment Replacement</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

* Based upon the high rate and charge scenario assumptions.

(1) Stored water purchases and withdrawals are not shown due to their variability. As discussed earlier, a $0 Stored Water Fund balance indicates that no available water storage capacity is available.
As shown in Chart 7-2, the Operating Fund meets the Water Authority's fund balance target throughout the planning period. Chart 7-3 illustrates the fluctuations in the RSF levels are primarily due to the financial impact of changes in water demand levels. The accumulated revenues in the RSF prior to Fiscal Year 2016 are used to support gradual increases in rates and charges to adjust to a new lower level of water sales while still meeting Board's debt service coverage reserve target. While withdrawals in the initial years support the transition to the lower level of sales, Chart 7-3 shows increases in RSF fund balance starting in 2020. The projected 2026 RSF fund balance is at the target level.
8.0 Risk Sensitivity Analysis

The Water Authority will be exposed to a mix of financial risks during the long-range financial planning period that are common to most water agencies. The financial crisis of 2008 showed that even the most careful planning can be disrupted by extreme conditions. Looking forward, there is the potential for major changes in both the economic and capital markets as the business cycle plays out. Preparing for them is a challenge. As part of its continuous improvement efforts, the Water Authority actively evaluates and prepares for different types of risk. The recent work done on the Water Authority’s fiscal sustainability evaluated several financial risks and resulted in the implementation of a new fixed charge.

Figure 8-1 provides an overview of the major financial risk factors that the Water Authority may face in the future. These factors are grouped into macroeconomic factors, local economic forces, and water sales. The foremost category of risk is water sales – the potential for diminished sales due to multiple years of wet/drought conditions or due to shortages of water available to sell. Reductions in water sales represent the most significant financial risk that the Water Authority will face during the planning period.

The principal local economic risk to the Water Authority is activity in the housing market, primarily significant swings in capacity charge revenues. As discussed in Section 6.0, these are fees paid when individuals and developers purchase water meters. Under typical economic conditions, capacity charges may be expected to supply about 17% of Water Authority net revenue during the planning period.

The primary macroeconomic factor affecting the Water Authority is the prevailing interest rate environment. Interest rates impact both the cost of borrowing and the investment income the Water Authority receives on its cash balances. As discussed previously, the impact of changes in interest rates depends on cash balances and the amount of variable rate debt outstanding.

This section describes the major risks identified above and provides an analysis of the potential impacts these risks may have on the future financial position of the Water Authority.
8.1 Water Sales Volatility

In 2003 and in 2015, the Water Authority modified its rate and charge structure to protect from wide swings in water sales revenue, by collecting a balanced mix of fixed and variable charges from its member agencies. In addition to enhancing revenue stability, the changes to the rate and charge structure also enhances the equity between member agencies when paying for long-term water reliability projects. Together, the Storage and Customer Service Charges makeup approximately 55% of the Water Authority’s projected net revenues and 35% of the estimated gross water sales revenue including the Supply Reliability Charge. This translates into better revenue stability in spite of water sales volatility.

Despite its fixed-rate structure, the Water Authority continues to have some exposure to water sales variability. The largest component of variability is on the per-acre-foot transportation rate, which directly varies with acre-foot sales. The second largest source of variability is the melded Municipal and Industrial (M&I) supply rate. This rate creates a weighted cost of sales from the different sources of water that the Water Authority purchases, and also recovers various other costs of supply, such as Imperial Irrigation District (IID) socioeconomic payments, annual costs of the Semitropic groundwater storage agreements, and a portion of debt service on the canal lining projects that is not reimbursed by state grants, etc. All of these costs are included in the melded M&I supply rate and factored into this variable-rate. If sales are lower than projected, the rates will under-recover the fixed cost components. In addition, at current pricing, supplies from MWD cost less in the near-term than supplies from either IID or the desalination plant, which have a contractually fixed delivery schedule. Therefore, in a reduced sales environment, the Water Authority will roll off of the less expensive Metropolitan Water District (MWD) supplies, and the higher-cost IID/desalination supplies will compose a larger share of the water purchases, again leading to under-recovery on the melded rate.

An additional, but lesser source of revenue variability is on the melded treatment rate. This rate is composed of several different sources of treated water with different costs. Some of these supplies are base-loaded due to contractual arrangements, or as in the case of the Water Authority’s Twin Oaks Valley Treatment Plant, must be used to the greatest possible capacity to operate at the lowest per unit cost rate. To the extent that the treatment facilities have different existing or implicit unit rates, variations in water sales may produce additional shortages or surpluses in revenue.

California is currently facing a variety of water supply and demand challenges. Table 8-1 illustrates the financial impact of additional reductions in water sales. It is important to note that the impact of the statewide mandatory demand reductions on the M&I sector and 15% cutback to Transitional Special Agricultural Water Rate (TSAWR) customers (based on MWD’s Fiscal Year 2016 supply allocation), are factored into the demand and financial projections provided in the document. Therefore, the table illustrates the financial impact of reducing demand below the regulated levels or if wet weather suppresses demand in spring of 2016.
Table 8-1  Financial Impact of Calendar Year 2016 Water Sales Volatility

<table>
<thead>
<tr>
<th>Percent Sales Loss</th>
<th>Sales Loss (Acre-Feet)</th>
<th>Revenue Impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water Sales</td>
<td>Treatment</td>
</tr>
<tr>
<td>Scenario 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in M&amp;I Demand 5%</td>
<td>(18,933)</td>
<td>(7,776)</td>
</tr>
<tr>
<td>Change in TSAWR     5%</td>
<td>(1,725)</td>
<td>(181,151)</td>
</tr>
<tr>
<td>Total</td>
<td>(20,658)</td>
<td>(7,776)</td>
</tr>
<tr>
<td>Units</td>
<td>370,800</td>
<td>359,721</td>
</tr>
<tr>
<td>Rate Impact</td>
<td>$5.85/AF</td>
<td>$9.79/AF</td>
</tr>
<tr>
<td>Scenario 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in M&amp;I Demand 15%</td>
<td>(56,798)</td>
<td>(23,328)</td>
</tr>
<tr>
<td>Change in TSAWR     15%</td>
<td>(5,176)</td>
<td>(543,454)</td>
</tr>
<tr>
<td>Total</td>
<td>(61,974)</td>
<td>(23,328)</td>
</tr>
<tr>
<td>Units</td>
<td>329,484</td>
<td>321,855</td>
</tr>
<tr>
<td>Rate Impact</td>
<td>$19.75/AF</td>
<td>$32.82/AF</td>
</tr>
</tbody>
</table>

The M&I decreases is significant and impacts transportation, supply, and treatment and the TSAWR cut results in a modest loss of transportation revenues. The net impact of the loss of revenues is reflected in the Revenue Impact column with corresponding Rate Impacts highlighted in gray. The Rate Impact shows the amount rates would need to increase to recover the loss of revenues. The Water Authority maintains adequate reserves to be able to prevent unscheduled mid-cycle rate increases resulting from unforeseen water sales decreases.

8.2 Changes in Interest Rates

The Water Authority uses Commercial Paper (CP), a short-term debt instrument with maturities not exceeding 270 days, to diversify its debt portfolio and achieve its variable-rate exposure. As a short-term tax-exempt borrowing instrument, interest rates have been quite low, averaging 1.1% over the past ten years. The Water Authority’s CP interest rates have ranged from a low of 0.06% to a high of 3.7%. The standard deviation (a standardized measure of the data’s dispersion) of the CP interest rate is 1.3%, indicating that 68% of the time, interest rates should range from almost 0% (the lower bound on interest rates) to 2.4%, and 95% of the time, representing two standard deviations, interest rates should range between almost 0% and nearly 3.7%.

At the time of this Long-Range Financing Plan, short-term variable interest rates have been trading near historical lows as the Federal Reserve had maintained the Federal Funds Target Rate at 0-0.25% from December 2008 to December 2015. The Water Authority has no variable rate debt exposure other than its CP Programs, which include traditional commercial paper and Extendable Commercial Paper (see Section 5.0 for full discussion) that performs similarly to traditional commercial paper. The Water Authority’s CP Programs continues to trade very favorably and its interest costs continue to be very low.

The Water Authority’s cash balances provide a natural hedge against short-term interest expense due to the fact that when interest rates on the CP programs rise they are offset by an increase in investment earnings. The Water Authority invests in taxable securities such as treasuries and agencies, corporate CP and the Local Agency Investment Fund. When compared to the Water Authority’s tax-exempt CP interest costs, these securities at a minimum tend to earn the difference in yield associated with a taxable interest earnings, and may earn additional yield corresponding to the longer term of the investment. The Government Code, with certain
exceptions, permits local government to invest in maturities for up to five years, whereas CP is limited to a maximum investment term of 270 days. At the time of publishing this plan, the average days to maturity of the Water Authority’s investment portfolio is 401 days, and the average term is 905 days.

Chart 8-1 shows a history of CP interest rate and investment earnings rates. As can be seen from the graphic, investment earnings rates have almost always exceeded CP interest rates. This is because investments earn returns at taxable levels and CP interest rates are based on tax-exempt levels.

Investment earnings and interest expense have a strong positive correlation. Over the ten-year period, investment earnings and interest expense had a correlation coefficient of 0.95 (zero indicates no degree of correlation, and one indicates a perfect correlation), so it is apparent then that cash fund balances provide a natural hedge against interest rate expenses. The green line shows the percent of outstanding CP to the Water Authority’s cash balances (excluding debt proceeds). Over the majority of this time period, the Water Authority had more cash and investments than outstanding CP, which provided a good hedge against interest rate fluctuations.

Chart 8-2 looks at projected CP usage and cash balances for the planning period. The cash balances presented only include cash funds that hedge variable rate debt interest expense. Therefore, the Construction and Debt Service Reserve Funds are not included because they typically earn a fixed rate of return (i.e. Guaranteed Investment Contract) and, therefore, do not hedge against changing interest rates. The percent hedged represents the amount of outstanding CP over certain investments.
The result of this analysis provides a range of net interest rate exposure to the Water Authority. Chart 8-3 shows the range of projected risks at average, minimum, and maximum computed at one standard deviation above the means. In the early years, the Water Authority’s CP interest expense is less than its cash and investment earnings, which mean the negative values represent additional investment earnings that offset the entire cost of the CP programs. As we move beyond 2017, the Water Authority’s cash and investment balance is drawn down over time so that the amount of cash and investments hedging the CP Program goes down to 35%, as shown in Chart 8-2. At this point in the curve, the Water Authority approaches its maximum interest rate exposure, at one standard deviation above the means, which ranges from $2.5 million to $6.3 million for the average rate and high-rate scenarios. There are several possible approaches that can be used to mitigate this risk.

- Manage the ratio of outstanding CP to cash balances by reducing the amount of CP or by increasing reserve levels
- Reduce the variability of interest rates by transitioning to a fixed-rate instrument
- When developing the biennial budget, use an adequately conservative interest rates for interest expense and investment earnings to make it unlikely that net interest rate exposure will increase above projected levels
- Maintain an adequate Rate Stabilization Fund (RSF) to accommodate variations in interest expense

The Water Authority relies on a certain amount of variable or short-term debt exposure to decrease its overall cost of capital, so the first option is not practical. The Water Authority does not have a swap policy at the present time, so the second option cannot be used. The Water Authority practices a combination of the third and fourth approaches. Budgets and financial plans use interest rates which are somewhat likely to understate investment returns, and potentially overstate interest rates payable for CP. In addition, the Water Authority maintains an RSF sized to provide protection against a 95% exceedance of 2.5 to 3.5 years of extremely wet weather. As discussed in the hydrologic risk section, unless all risks happen concurrently, this reserve capacity can also be used to protect against interest rate risk as well as connection fee revenue risk.
8.3 Capacity Charge Revenues

Capacity charge revenue is comprised of system and treatment capacity charges and are a highly variable form of revenue. The chart below examines capacity charge revenues that have been collected since the inception of the charge in 1991. The bars reflects the revenue received and the line reflects the calculated number of meter sales for each fiscal year.

Revenue received via capacity charges is indicative of the region’s housing market, as revenue is collected upon a building permit being issued. Chart 8-5 summarizes the historical building permits issued annually for single family and multi-family residences. Similar to the chart for capacity charge revenues, the housing slump in the mid-90’s and the recession that began in late 2007 are readily apparent and show an 80% reduction in revenues.

As a result of increases in building permit activity, a sign of an improving economy, revenue from capacity charges has also been increasing since a low in 2010.

The variability in the capacity charge data presented in Chart 8-4 can be expressed in terms of its standard deviation, a common statistical term. Over the 25-year period that the charge has been in effect, the average or mean is $17.0 million. Utilizing the standard deviation calculation, the most likely range of values (approximately 68%) will fall within one standard deviation from the mean (which equates to +/- $8.7 million). Based on these data points, it can be extrapolated that the Water Authority would most likely receive revenue between $8.3 million and $25.7 million. This aligns well with the Water Authority’s current conservative estimate of $15 million for Fiscal Year 2016.

In preparation of the LRFP, the Water Authority has maintained its current conservative approach to ensure that it is protected from excessive variability in capacity charge revenues. The overall projection takes into account historical data and forecasted information on growth.
9.0 Appendices

9.1 Summary of Outstanding Obligations

The Water Authority is authorized to issue Certificates of Participation (COPs), Tax Exempt Commercial Paper (TECP), General Obligation Bonds, Revenue Bonds, Assessment Bonds and Variable Rate Demand Bonds (VRDBs) to meet its funding needs.

9.1.1 Revenue Bonds

**Water Revenue Refunding Bonds, Series 2015A.** On September 9, 2015, the Water Authority issued $184,795,000 of Water Revenue Refunding Bonds, Series 2015A (the 2015A Bonds) to refinance a portion of the design, acquisition, and construction of various capital projects of the Water Authority's CIP by advance refunding a portion of the 2008A Certificates in the amount of $142,445,000 and a portion of the 2010A Water Revenue Bonds in the amount of $52,375,000.

The 2015A Bonds have stated interest rates ranging from 2.00 percent to 5.00 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2029. No debt service reserve fund was created to secure the 2015A Bonds. The 2015A bonds were issued at a Premium of $33,756,117.

**Water Revenue Refunding Bonds, Series 2013A.** On March 13, 2013, the Water Authority issued $299,105,000 of Water Revenue Refunding Bonds, Series 2013A (the 2013A Bonds) to refinance a portion of the design, acquisition, and construction of various capital projects of the Water Authority's CIP by advance refunding a portion of the 2004A Certificates in the amount of $344,785,000.

The 2013A Bonds have stated interest rates ranging from 3.00 percent to 5.00 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2034. No debt service reserve fund was created to secure the 2013A Bonds. The principal balance of outstanding bonds at June 30, 2015 was $299,105,000, or $345,507,557 net of unamortized premium of $46,402,557. The principal balance of outstanding bonds at June 30, 2014 was $299,105,000, or $347,960,549 net of unamortized premium of $48,855,549.

**Water Furnishing Revenue Bonds, Series 2012 (Series 2012 Pipeline Bonds).** On December 20, 2012, the California Pollution Control Financing Authority (the Issuer) issued $203,215,000 of Water Revenue Refunding Bonds, Series 2012 (the 2012 Pipeline Bonds) to pay a portion of the cost of constructing a pipeline to connect the Carlsbad reverse osmosis desalination plant (Plant) to the existing distribution system of the San Diego County Water Authority. The issuer loaned the proceeds to the San Diego County Water Authority Financing Agency to construct the Pipeline. Upon completion of the Plant and Pipeline, the Water Authority is obligated to make installment payments to the San Diego County Water Authority Financing Agency.

The 2012 Pipeline Bonds have stated interest rate of 5.00 percent payable semi-annually on January 1 and July 1. Their maturities extend to November 21, 2045. No debt service reserve fund was created to secure the 2012 Pipeline Bonds. The 2012 Pipeline Bonds are limited obligations of the issuer payable solely from...
pipeline loan repayments and contracted shortfall payments should they be necessary from Poseidon Resources (Channelside) L.P. per the terms of the Water Purchase Agreement. The principal balance of outstanding bonds at June 30, 2015 and 2014 was $203,215,000.

**Water Revenue Refunding Bonds, Series 2011A.** On August 11, 2011, the Water Authority issued $139,945,000 of Water Revenue Refunding Bonds, Series 2011A (the 2011A Bonds) to refinance a portion of the design, acquisition, and construction of various capital projects of the Water Authority’s CIP by advance refunding a portion of the 2002A Certificates in the amount of $150,270,000.

The 2011A Bonds have stated interest rates ranging from 0.45 percent to 5.00 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2027. No debt service reserve fund was created to secure the 2011A Bonds. The principal balance of outstanding bonds at June 30, 2015 was $119,100,000, or $131,462,389 net of unamortized premium of $12,362,389. The principal balance of outstanding bonds at June 30, 2014 was $126,285,000, or $139,684,789 net of unamortized premium of $13,399,789.

**Water Revenue Refunding Bonds, Series 2011B.** On September 28, 2011, the Water Authority issued $94,540,000 of Water Revenue Refunding Bonds, Series 2011B (the 2011B Bonds) to refinance a portion of the design, acquisition, and construction of various capital projects of the Water Authority's CIP by advance refunding a portion of the 2002A and 2004A Certificates in the amount of $62,085,000 and $36,290,000, respectively.

The 2011B Bonds have stated interest rates ranging from 3.00 percent to 5.00 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2031. No debt service reserve fund was created to secure the 2011B Bonds. The principal balance of outstanding bonds at June 30, 2015 was $94,540,000, or $104,449,447 net of unamortized premium of $9,909,447. The principal balance of outstanding bonds at June 30, 2014 was $94,540,000, or $105,072,031 net of unamortized premium of $10,532,031.

**Subordinate Lien Water Revenue Refunding Bonds, Series 2011S-1.** On July 21, 2011, the Water Authority issued $86,630,000 of Subordinate Lien Water Revenue Refunding Bonds, Series 2011S-1 (the 2011S-1 Bonds) to refinance a portion of the design, acquisition, and construction of various capital projects of the Water Authority’s CIP by refunding the Water Authority Commercial Paper Notes, Series 2 in the amount of $100,000,000.

The 2011S-1 Bonds have stated interest rates ranging from 3.00 percent to 5.00 percent payable semi-annually on January 1 and July 1. Their maturities extend to July 1, 2016. No debt service reserve fund was created to secure the 2011S-1 Bonds. The principal balance of outstanding bonds at June 30, 2015 was $86,630,000, or $89,424,701 net of unamortized premium of $2,794,701. The principal balance of outstanding bonds at June 30, 2014 was $86,630,000, or $92,219,417 net of unamortized premium of $5,589,417.

**Water Revenue Bonds, Series 2010A (Non-AMT Tax Exempt).** On February 4, 2010, the SDCWFAA issued $98,495,000 of Water Revenue Bonds, Series 2010A (Non-AMT Tax-Exempt) (the 2010A Bonds) for the design, acquisition, and construction of various capital projects in furtherance of the Water Authority’s CIP. In addition, proceeds were used to refund a portion of the 1998A Certificates in the amount of $51,005,000. The balance of proceeds were be used to finance CIP projects, including interest incurred during construction.
SECTION 9.0

Long-Range Financing Plan

The 2010A Bonds have stated interest rates ranging from 4.00 percent to 5.25 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2027. No debt service reserve fund was created to secure the 2010A Bonds. The principal balance of outstanding bonds at June 30, 2015 was $94,365,000, or $100,115,204 net of unamortized premium of $5,750,204. The principal balance of outstanding bonds at June 30, 2014 was $96,925,000, or $103,171,620 net of unamortized premium of $6,246,620.

Water Revenue Bonds, Series 2010B (Taxable Build America Bonds). On February 4, 2010, the SDCWAFA issued $526,135,000 of Water Revenue Bonds, Series 2010B (Taxable Build America Bonds) (the 2010B Bonds) for the design, acquisition, and construction of various capital projects in furtherance of the Water Authority’s CIP. The 2010B Bonds have a stated interest rate of 6.138 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2049. No debt service reserve fund was created to secure the 2010B Bonds.

The 2010B Bonds were designated as Taxable Build America Bonds (BABs) under the provisions of the American Recovery and Reinvestment Act of 2009, the interest with respect to which is not excluded from gross income for federal income tax purposes, but is exempt from State of California personal income taxes. The Water Authority receives semi-annual subsidy payments from the United States Treasury equal to 35 percent of the interest payable on the 2010B Bonds. Subsidy payments were reduced by 7.3 percent and 7.2 percent in Fiscal Years 2015 and 2014, respectively, under Congressionally-mandated sequestration. Sequestration consists of across-the-board federal budget cuts that were implemented in March 2013, triggered by Congress’ failure to reach agreement over how to significantly cut the federal deficit. The sequestration reduction rate will be applied unless and until a law is enacted that cancels or otherwise impacts the sequestration, at which time the sequestration reduction rate is subject to change. Although the sequestration was effective March 2013, the Water Authority received the full amount of the subsidy during Fiscal Year 2013. The principal balance of outstanding bonds at June 30, 2015 and 2014 was $526,135,000.

9.1.2 Certificates of Participation (COPs)

Water Revenue Certificates of Participation, Series 2008A. On May 21, 2008, the Water Authority issued $558,015,000 of Water Revenue Certificates of Participation, Series 2008A (the 2008A Certificates) for the design, acquisition, and construction of various capital projects in furtherance of the Water Authority’s CIP. In addition, proceeds were used to refund a portion of the 1997A Certificates in the amount of $63,165,000.

The 2008A Certificates have stated interest rates ranging from 4.00 percent to 5.00 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2038.

The 2008A Certificates require that a reserve be maintained in an amount equal to the lesser of $23,670,625 or one-half of maximum annual debt service on the 2008A Certificates. At June 30, 2015, the reserve requirement was fully satisfied by a Reserve Surety Policy issued by FSA. The 2008A Certificates are also insured by FSA.

On February 3, 2015, the Water Authority legally defeased a portion of the 2008A Certificates maturing on May 1, 2016 in the aggregate principal amount of $12,100,000. The principal balance of outstanding certificates at June 30, 2015 was $512,650,000, or $526,730,058 net of unamortized premium of $14,080,058. The principal
balance of outstanding certificates at June 30, 2014 was $536,110,000, or $550,804,458 net of unamortized premium of $14,694,458.

**Water Revenue Refunding Certificates of Participation, Series 2005A.** On February 1, 2005, the Water Authority issued Water Revenue Refunding Certificates of Participation in the amount of $107,455,000 to refund, in advance, $117,310,000 of the 1998A Certificates with stated interest rates between 4.75 percent and 5.25 percent. The Serial Certificates, with an aggregate principal amount of $107,455,000, have stated interest rates ranging from 5.00 percent to 5.25 percent payable semi-annually on May 1 and November 1.

These certificates mature serially through May 1, 2022. The certificates require that a reserve be maintained in an amount equal to the lesser of $10,745,500 or maximum annual debt service on the 2005A Certificates. At June 30, 2015, the reserve requirement was fully satisfied by a Reserve Surety Policy issued by FGIC. The 2005A Certificates are also insured by FGIC.

The principal balance of outstanding certificates at June 30, 2015 was $57,375,000, or $63,084,412 net of unamortized premium of $5,709,412. The principal balance of outstanding certificates at 2014 was $70,885,000, or $77,429,936 net of unamortized premium of $6,544,936.

**Water Revenue Certificates of Participation, Series 1998A.** To provide funds for the design and construction of the Water Authority’s Emergency Storage Project and other water system improvements in furtherance of the Water Authority’s Capital Improvement Program, the Water Authority issued 1998A Water Revenue Certificates of Participation on November 17, 1998, in the aggregate principal amount of $180,000,000. On March 9, 2005, the Water Authority issued Water Revenue Refunding Certificates of Participation, Series 2005A (the 2005A Certificates) to advance refund a portion of the 1998A Certificates in the amount of $117,310,000. At June 30, 2015, the amount of defeased debt outstanding of the 1998A Certificates was $0.

On February 4, 2010, the San Diego County Water Authority Financing Agency issued Water Revenue Bonds, Series 2010A (Non-AMT Tax-Exempt) to refund a portion of the 1998A Certificates in the amount of $51,005,000. The 1998A Certificates have stated interest rates ranging from 4.50 percent to 5.25 percent payable semi-annually on May 1 and November 1. Their maturities extend to May 1, 2028. The 1998A Certificates required that a reserve be maintained in an amount equal to the lesser of $15,391,555 or maximum annual debt service on the 1998A Certificates. After the refunding from the 2005A Certificates, the reserve requirement was reduced to $12,240,775. At June 30, 2015, the reserve was fully funded. The certificates are insured by Financial Guaranty Insurance Company (FGIC). The principal balance of outstanding certificates at June 30, 2015 and 2014 was $11,685,000.

9.1.3 Commercial Paper

The Water Authority has a Tax-Exempt Commercial Paper (TECP) program through which it can borrow funds on a tax exempt basis for periods up to 270 days to provide financing for the Water Authority’s Capital Improvement Program (CIP). The Water Authority has remarketing agreements with five separate broker-dealers: Bank of America Securities LLC/Merrill Lynch, Citi group Global Markets Inc., Goldman, Sachs and Co., JPMorgan Chase & Co., and Morgan Stanley and Co. LLC. The remarketing fees for the various dealer agreements range from 0.05 percent to 0.10 percent per annum on the par amount of TECP outstanding. No advances have been made under any of the revolving credit and term loan agreements during the fiscal years ended June 30, 2015 and 2014.
In Fiscal Year 2014, the Water Authority added an Extendable Commercial Paper (ECP) program to provide financing for the Water Authority’s CIP. ECP offers a lower cost of funds than TECP, but is only available to highly rated agencies like the Water Authority. The Water Authority has the ability to access the capital markets and redeem the notes before the end of the 150 day extension period. ECP maturities are limited to between 1 and 120 days to allow a 150 day extension period and maintain a maximum maturity of 270 days. There is no bank support associated with ECP; therefore, the dealers play a more central role. This moderately sized program provides the Water Authority significant cost savings and the opportunity to add a new debt instrument to enable the debt portfolio to be better optimized.

The TECP and ECP notes are secured and payable on a parity basis solely from net water revenues and are subordinate to the Water Revenue Certificates of Participation (COP), Water Revenue Bonds, and Water Revenue Refunding Bonds. At June 30, 2015 and 2014, the Water Authority had short-term debt outstanding of $360,000,000.

**Commercial Paper Notes, Series 5.** On June 29, 2011, the Commercial Paper Notes, Series 5 (the Series 5 Notes) were issued for a total maximum authorized amount of $100,000,000. The Series 5 Notes have liquidity support in the form of a revolving credit and term loan agreement with Wells Fargo Bank, N.A. and, unless otherwise extended, will terminate on June 27, 2016. Effective March 3, 2014, the Water Authority pays annual commitment fees of 0.33 percent based on the par amount of the commitment. At June 30, 2015 and 2014, the balance outstanding was $100,000,000.

**Commercial Paper Notes, Series 7.** On June 26, 2013, the Commercial Paper Notes, Series 7 (the Series 7 Notes) were issued for a total maximum authorized amount of $100,000,000. The Series 7 Notes have liquidity support in the form of a revolving credit and term loan agreement with JPMorgan Chase Bank, N.A. and, unless otherwise extended, will terminate on June 24, 2016. During the term of the agreement, the Water Authority pays annual commitment fees of 0.36 percent based on the par amount of the commitment. At June 30, 2015 and 2014, the balance outstanding was $100,000,000.

**Commercial Paper Notes, Series 8.** On April 2, 2014, the Commercial Paper Notes, Series 8 (the Series 8 Notes) were issued for a total maximum authorized amount of $110,000,000. The Series 8 Notes have liquidity support in the form of a revolving credit and term loan agreement with Bank of Tokyo-Mitsubishi UFJ, Ltd. and, unless otherwise extended, will terminate on June 27, 2017.

During the term of the agreement, the Water Authority pays annual commitment fees of 0.33 percent based on the par amount of the commitment. At June 30, 2015 and 2014, the balance outstanding was $110,000,000.

**Extendable Commercial Paper Notes, Series 1.** On June 19, 2014, the Extendable Commercial Paper Notes, Series 1 (the Series 1 ECP Notes) were issued for a total maximum authorized amount of $50,000,000. The Water Authority has appointed Merrill Lynch, Pierce, Fenner & Smith Incorporated and Morgan Stanley & Co. LLC as co-dealers for the Series 1 ECP Notes. ECP does not have bank liquidity support. At June 30, 2015 and 2014, the balance outstanding was $50,000,000.
9.1.4 Other Obligations

QSA Environmental

**Contributions Payable.** Contributions Payable concern the Water Authority’s payment obligations for environmental and socioeconomic impacts related to the Quantification Settlement and other connected Agreements. These payments include contributions to the QSA JPA for environmental mitigation pursuant to the QSA JPA Creation and Funding Agreement, and payments to the IID on behalf of the Imperial Valley Socioeconomic Improvement Committee, the Local Entity, to mitigate third-party socioeconomic impacts of the Conserved Water Transfer Agreement.

1. On April 25, 2007, the QSA JPA approved an agreement to modify the schedule of contributions payable pursuant to the QSA JPA Creation and Funding Agreement in order to more appropriately match environmental mitigation funding obligations. On May 20, 2015, the QSA JPA approved an agreement for a second modification of payment schedules pursuant to the QSA JPA Creation and Funding Agreement in order to conform to the long term financing plan. The outstanding balance of the payment obligation at June 30, 2015 and 2014 was $41,157,100 and $43,819,895, respectively. The total contributions payable are as follows:

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<th>Year</th>
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<tr>
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<td>2021-2025</td>
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<td>2026</td>
<td>988,391</td>
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</tbody>
</table>

2. On May 14, 2007, the Water Authority and the IID executed the Settlement Agreement Resolving Present and Future Disputes under Sections 14.5 and 18.1 of the Revised Fourth Amendment to the IID/Water Authority Conserved Water Transfer Agreement pursuant to which the Water Authority will pay $40,000,000 according to a payment schedule in the Agreement for third-party socioeconomic impacts as a result of the Conserved Water Transfer Agreement by and between the two agencies. The outstanding balance of the payment obligation at June 30, 2015 and 2014 was $5,880,000 and $8,820,000, respectively. This obligation is non-interest bearing. The total contributions payable are as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>Principal</th>
<th>Interest</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>$2,940,000</td>
<td>$ -</td>
<td>$2,940,000</td>
</tr>
<tr>
<td>2017</td>
<td>2,940,000</td>
<td>$ -</td>
<td>2,940,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$5,880,000</td>
<td>$ -</td>
<td>$5,880,000</td>
</tr>
</tbody>
</table>
Defined Benefit Pension Plans

California Public Employees’ Retirement System

Plan Description

All qualified full-time Water Authority employees are required to participate in the Water Authority’s Miscellaneous Plan with the California Public Employees’ Retirement System (CalPERS), an agent multiple-employer public employee defined benefit pension plan. CalPERS provides retirement, disability benefits, and death benefits to plan members and beneficiaries. CalPERS acts as a common investment and administrative agent for participating public entities within the State of California. A menu of benefit provisions as well as other requirements is established by state statutes within the Public Employees’ Retirement Law. The Water Authority selects optional benefit provisions from the benefit menu by contract with CalPERS and adopts those benefits through Board approval. Benefit provisions and all other requirements are established by state statute, Water Authority resolution, and contracts with employee bargaining groups.

Effective January 1, 2013, Water Authority new hires who meet the definition of “new employee” and “new member” accrue and receive defined benefit pension plan benefits in accordance with the California Public Employees’ Pension Reform Act (PEPRA) of 2013.

Benefits Provided. CalPERS provides service retirement and disability benefits, annual cost of living adjustments and death benefits to plan members, who must be public employees and beneficiaries. Benefits are based on years of credited service, equal to one year of full time employment. Members with five years of total service are eligible to retire at age 50 with statutorily reduced benefits. All members are eligible for non-duty disability benefits after ten years of service. The death benefit is the Optional Settlement 2W Death Benefit. The cost of living adjustments are applied as specified by the Public Employees’ Retirement Law.

Contributions. Current participants are required to contribute eight percent of their annual covered salary to fund the Plan. The Water Authority pays seven percent of the employees’ required contribution and the employee pays the remaining one percent required contribution. For the fiscal years ended June 30, 2015 and 2014, the amount contributed by the Water Authority on behalf of the employees (the seven percent contribution) was $1,732,011 and $1,802,194, respectively.

The Water Authority is required to contribute the remaining amounts, the required employer contribution rate multiplied by the covered salary, necessary to fund the benefits for its members, using the actuarial basis recommended by CalPERS actuaries and actuarial consultants, and adopted by the CalPERS Board of Administration.

Net Pension Liability. The Water Authority’s net pension liability for the Plan is measured as the total pension liability, less the pension plan’s fiduciary net position. The net pension liability of the Plan is measured as of June 30, 2014, using an annual actuarial valuation as of June 30, 2013, rolled forward to June 30, 2014, using standard update procedures. As of June 30, 2015, the Water Authority had a Net Pension Liability of $ 57.8 million. For additional information see Note 12 in the FY2015 Comprehensive Annual Financial Report.
**Plan Description.** The Water Authority established a Terminal Pay Plan (TPP), effective December 10, 2007,

**Other Post-Employment Benefits (OPEB)**

**Plan Description.** The Water Authority has established a Retiree Healthcare Plan (Plan), a single-employer defined benefit retiree healthcare plan. The Plan, administered by the Water Authority, provides employees who retire directly from the Water Authority, at a minimum age of 55, with a minimum of five years of service, a cash subsidy for monthly medical insurance premiums up to a cap of $200 per employee or $320 for employee plus spouse. Payments cease at age 65 when the retiree or spouse is eligible for Medicare. If applicable, a cash subsidy for the monthly medical premium continues up to a cap of $160 for a spouse until age 65 is attained. Surviving spouses are also eligible for this benefit. The Plan and its contribution requirements are established by Memoranda of Understanding with the applicable employee bargaining units and may be amended by agreements between the Water Authority and the bargaining units.

Employees who retire directly from the Water Authority at a minimum age of 55 with a minimum of five years of CalPERS service are eligible to continue medical coverage as a participant with active employees at a blended premium rate until eligible for Medicare at age 65 as an implied subsidy. A separate financial report is not prepared for the Plan.

**Funding Policy.** The annual contribution is based on projected pay-as-you-go financing requirements. For the fiscal years ended June 30, 2015 and 2014, the Water Authority’s cash contributions were $127,116 and $110,650 in current premiums, which covered 65 and 61 retirees and their spouses, respectively. The estimated implied subsidy for the fiscal years ended June 30, 2015 and 2014 was $167,648 and $145,350, resulting in total payments of $294,764 and $256,000, respectively. A payment of $4,300,000 was made by the Water Authority to fully fund California Employers’ Retiree Benefit Trust (CERBT), an OPEB trust administrator and affiliate program of CalPERS, for the purpose of prefunding obligations. The total contribution of $4,594,764 is the total fiscal year 2015 contribution for the liability of current and past services. As of June 30, 2015, the Water Authority had an OPEB actuarial surplus of $ 92,000. For additional information see Note 13 in the Fiscal Year 2015 Comprehensive Annual Financial Report.

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare cost trends. Amounts determined regarding the funded status of the Plan and the annual required contributions of the employer are subject to continual revisions as actual results are compared with past expectations and new estimates are made about the future.

The schedule of funding progress, presented as RSI, immediately following the Notes to the Financial Statements, presents multi-year trend information about whether the actuarial value of Plan assets is increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.
9.2 Investment Policy

SAN DIEGO COUNTY WATER AUTHORITY

Annual Statement of Investment Policy

Calendar Year 2015

INTRODUCTION

The purpose of this document is to identify various policies and procedures that enhance opportunities for a prudent and systematic investment policy and to organize and formalize investment related activities. The ultimate goal is to enhance the economic status of the Water Authority while protecting its funds.

The Board of Directors and, upon formal delegation, the Treasurer for the San Diego County Water Authority, duly authorized to invest Water Authority monies by California Government Code, are trustees of Water Authority funds and therefore fiduciaries subject to the prudent investor standard.

SCOPE

It is intended that this policy cover all funds and investment activities under the direct authority of the San Diego County Water Authority, except for the employee’s retirement and deferred compensation funds. For investment purposes, the Water Authority manages the Operating Fund, Rate Stabilization Fund, Pay-As-You-Go Fund, Equipment Replacement Fund and Stored Water Fund together as the Pooled Operating Fund. The funds under the direct authority of the San Diego County Water Authority are accounted for in the Comprehensive Annual Financial Report and include:

Operating Fund – Holds the Water Authority’s working capital and emergency operating reserve.

Rate Stabilization Fund – Established to mitigate future water rate increases.

Pay-As-You-Go Fund (PAYGO) – Funds are dedicated for construction outlays and debt service.

Equipment Replacement Fund – Used to purchase minor capital equipment such as computer systems, vehicles, etc.

Stored Water Fund – Used to purchase water to fill Water Authority reservoirs.

Construction (CIP) Fund – Holds the proceeds of long-term debt and commercial paper to be expended for construction.

Debt Service Reserve Fund – Holds the required legal reserve for Water Authority debt issues.
OBJECTIVES

The investment policies and practices of the Board of Directors and the Treasurer for the San Diego County Water Authority are based upon limitations placed on it by governing legislative bodies. These policies have three primary goals:

1. To assure compliance with all Federal, State and Local laws governing the investment of monies under the control of the Treasurer.

2. To protect the principal monies entrusted to this organization.

3. To generate the maximum amount of investment income within the parameters of this Annual Statement of Investment Policy.

These goals are enhanced by the following objectives in order of importance.

A. **Safety**: It is the primary duty and responsibility of the Treasurer to protect, preserve and maintain cash and investments placed in his/her trust. Each investment transaction shall seek to ensure that capital losses are avoided, whether from institution default, broker-dealer default, or erosion of market value of securities. The Treasurer shall evaluate or cause to have evaluated each potential investment, seeking both quality in issuer and in underlying security or collateral. Diversification of the portfolio will be used in order to reduce exposure to principal loss.

B. **Liquidity**: An adequate percentage of the portfolio will be maintained in liquid short-term securities which can be converted to cash if necessary to meet disbursement requirements. Since all cash requirements cannot be anticipated, investment in securities with active secondary markets will be utilized. These securities will have a low sensitivity to market risk.

C. **Yield**: Yield should become a consideration only after the basic requirements of safety and liquidity have been met.

D. **Public Trust**: All participants in the investment process shall act as custodians of the public trust. Investment officials shall recognize that the investment portfolio is subject to public review and evaluation. The overall program shall be designed and managed with a degree of professionalism that is worthy of the public trust. In a diversified portfolio it must be recognized that occasional measured losses are inevitable, and must be considered within the context of the overall portfolio’s investment return, provided that adequate diversification has been implemented.
PRUDENT INVESTOR STANDARD

The Board of Directors and Treasurer adhere to the guidance provided by the “prudent investor standard”, California Government Code (Section 53600.3), which obligates a fiduciary to insure that “When investing, reinvesting, purchasing, acquiring, exchanging, selling, or managing public funds, a trustee shall act with care, skill, prudence, and diligence under the circumstances then prevailing, including, but not limited to, the general economic conditions and the anticipated needs of the agency, that a prudent person acting in a like capacity and familiarity with those matters would use in the conduct of funds of a like character and with like aims, to safeguard the principal and maintain the liquidity needs of the agency. Within the limitations of this section and considering individual investments as part of an overall strategy, investments may be acquired as authorized by law.”

DELEGATION OF AUTHORITY

The investment, per this policy, of Water Authority idle monies is annually delegated to the Treasurer by the Board of Directors who shall thereafter assume full responsibility for those transactions until the delegation of authority is revoked or expires. The Treasurer may delegate the day-to-day operations of investing to his/her designee(s), but not the responsibility for the overall investment program. A memorandum will be forwarded to the General Manager indicating the individual who is acting on the behalf of the Treasurer which details the period of time the designee will be responsible for the investment function. All transactions will be reviewed by the Treasurer on a regular basis to assure compliance with this Annual Statement of Investment Policy.

ETHICS AND CONFLICT OF INTEREST

Officers and employees involved in the investment process shall refrain from personal business activity that could conflict with proper execution of the investment program, or which could impair their ability to make impartial investment decisions. Employees and investment officers shall disclose any material financial interest in financial institutions that conduct business with this jurisdiction, and they shall further disclose any large personal financial/investment positions that could be related to the performance of the Water Authority’s portfolio. Employees and officers shall subordinate their personal investment transactions to those of the Water Authority, particularly with regard to the timing of purchases and sales, and shall avoid transactions that might impair public confidence. All officers and employees involved in the investment of public funds are required to comply with the Water Authority’s Conflict of Interest Code.

AUTHORIZED INVESTMENT INSTRUMENTS - POOLED OPERATING FUND

The Water Authority is governed by the California Government Code, Sections 53600 et seq. Within the context of these limitations, the following investments are authorized:

Local Agency Investment Fund (LAIF): The Water Authority may invest in the Local Agency Investment Fund established by the State Treasurer for the benefit of local agencies (Government Code Section 16429.1(b)). In order to ensure that LAIF is purchasing securities that comply with the Government Code, the monthly LAIF report shall be reviewed by the Treasurer. The fund must have twenty-four hour liquidity. The maximum permitted investment will be governed by State Law (currently $50 million).
Bankers’ Acceptances: The Water Authority may invest in prime self-liquidating bankers’ acceptances (Government Code Section 53601(g)) limited to banks rated a minimum of “A” by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings. The maximum investment maturity will be restricted to 180 days. Maximum portfolio exposure will be limited to 20 percent and single-issuer holdings to no more than 5 percent per issuer.

Treasury Securities: The Water Authority may invest in United States Treasury notes, bonds, bills, or certificates of indebtedness, or those for which the faith and credit of the United States are pledged for the payment of principal and interest (Government Code Section 53601(b)). The purchase of zero-coupon, or strips, is not permitted. Because these investments are the safest possible, there is no maximum portfolio limit. Maximum investment maturities will be restricted to five years.

Repurchase Agreements: The Water Authority may invest (Government Code Section 53601(j)) in overnight and term repurchase agreements with primary dealers of the Federal Reserve Bank of New York rated “A” or better by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings with which the Water Authority has entered into a master repurchase agreement. This agreement will be modeled after the Public Securities Association’s master repurchase agreement.

All collateral used to secure this type of transaction is to be delivered to a third party prior to release of funds. The third party will have an account in the name of the San Diego County Water Authority. The market value of securities used as collateral for repurchase agreements shall be monitored on a daily basis by the Treasurer and will not be permitted to fall below 102 percent of the value of the repurchase agreement. Collateral shall not include strips, zero-coupon instruments or instruments with maturities in excess of five years. The right of substitution will be granted, provided that permissible collateral is maintained.

In order to conform with provisions of the Federal Bankruptcy Code which provides for the liquidation of securities held as collateral for repurchase agreements, the only securities acceptable as collateral shall be securities that are direct obligations of and guaranteed by the U.S. Government and Agency securities as permitted under this policy. The Water Authority will maintain a first perfected security interest in the securities subject to the repurchase agreement and shall have a contractual right to liquidation of purchased securities upon the bankruptcy, insolvency or other default of the counterparty. Maximum portfolio exposure will be limited to 20 percent and maturities that do not exceed one year.

Reverse Repurchase Agreements: The Water Authority may enter (Government Code Section 53601(j)) into reverse repurchase agreements only “with primary dealers of the Federal Reserve Bank of New York or with a nationally or state-chartered bank that has or has had a significant banking relationship with a local agency”, and when an unanticipated cash outflow can be met more advantageously by agreeing to a reverse repurchase agreement rather than selling securities outright. In this situation, the reverse shall not exceed 92 days, and shall be matched to a known cash inflow of sufficient size to repay the principal and interest of the reverse repurchase agreement.

The Water Authority may also enter into reverse repurchase agreements when proceeds obtained through the reverse can be reinvested at a higher rate. The spread and reverse must be reviewed by the Treasurer prior to the transaction taking place. Reverse repurchase agreements entered into may not exceed a maximum maturity of 92 days unless the minimum spread between the rate on the investment and cost of funds is guaranteed in writing, in which case the maximum maturity is limited to one year. In all cases, the transaction must be matched as to maturity and dollars invested with its corresponding reinvestment.
In both situations a master repurchase agreement modeled after the Public Securities Association is required prior to the transaction taking place. In all cases, the security being reversed must have been held in the portfolio for a minimum of 30 days. Restrictions placed on repurchase agreements also apply to reverse repurchase agreements. Maximum portfolio exposure will be limited to 20 percent of the total portfolio value excluding the proceeds of reverses. This transaction requires written approval of the Treasurer.

Securities lending is not considered a reverse repurchase transaction and is not authorized under this section.

Certificates of Deposit: The Water Authority may invest in certificates of deposits issued by a state or national bank, savings association or federal association, a state or federal credit union located in California (Government Code Section 53630 et seq). A written depository contract is required with all institutions that hold Water Authority deposits. The Treasurer may waive collateral requirements for the portion of any deposit insured pursuant to federal law. Securities placed in a collateral pool must provide coverage for at least 110 percent of all deposits that are placed in the institution. Acceptable pooled collateral is governed by California Government Code Section 53651. Real estate mortgages are not considered acceptable collateral by the Water Authority, even though they are permitted in Government Code Section 53651(m). As provided under Government Code Section 53660, the bank or agent of depository is required to provide the Water Authority with a regular statement of pooled collateral. This report will state that they are meeting the 110 percent collateral rule (Government Code Section 53652(a)), a listing of all collateral with location and market value, plus an accountability of the total amount of deposits secured by the pool.

No bank shall receive Water Authority funds that has a long-term debt rating by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings less than “A”; however, deposits of up to the federal deposit insurance limit are allowable in any institution that insures its deposits pursuant to federal law, regardless of the ratings by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings. The maximum deposited in any one institution without collateral shall not exceed the amount covered by federal deposit insurance.

All banks accepting Water Authority deposits are required to provide annual information regarding compliance to the Community Reinvestment Act. Banks are required to maintain a minimum rating of “satisfactory” as defined under the Community Reinvestment Act.

As per Section 53638 of the California Government Code, any deposit shall not exceed the total paid-up capital and surplus of any depository bank, nor shall the deposit exceed the total net worth of any institution.

Maximum portfolio exposure is limited to 15 percent. Maximum investment maturity will be restricted to five years.

Placement Service Deposits: The Water Authority may invest in deposits placed with a private sector entity that assists in the placement of deposits with eligible financial institutions located in the United States (Government Code Section 53601.8). The full amount of the principal and the interest that may be accrued during the maximum term of each deposit shall at all times be insured by federal deposit insurance. Excluding certificates of deposit invested pursuant to this section, a maximum of 10 percent may be placed with any one private sector entity that assists in placing deposits. The combined maximum portfolio exposure to deposits placed pursuant to this section and Negotiable Certificates of Deposit is limited to 15 percent. Maximum investment maturity will be restricted to five years.
**Negotiable Certificates of Deposit**: The Water Authority may invest in negotiable certificates of deposit issued by a nationally or state-chartered bank or a state or federal association or by a state- or federally-licensed branch of a foreign bank (Government Code Section 53601(i)). Securities must have a minimum rating of “AA” by at least one of the three credit rating agencies (Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings), and not rated lower than “A” by the other two.

As per Section 53638 of the California Government Code, any deposit shall not exceed the total paid-up capital and surplus of any depository bank, nor shall the deposit exceed the total net worth of any institution.

The combined maximum portfolio exposure to Negotiable Certificates of Deposit and deposits invested pursuant to a Placement Service Deposit entity is limited to 15 percent and single-issuer holdings to no more than 5 percent per issuer. Maximum investment maturity is restricted to five years.

**Commercial Paper**: The Water Authority may invest in the highest grade of commercial paper (Government Code Section 53601(h)) as rated by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings (“A1/P1/F1”), issued only by general corporations that are organized and operating within the United States and having total assets in excess of $500 million. The general corporation must also have an “A” rating or higher for the issuers debentures, other than commercial paper, if any, as provided by Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings. Purchases shall not exceed ten percent of the outstanding paper of the issuing general corporation. Maximum investment maturity will be restricted to 270 days. Maximum portfolio exposure is limited to 25 percent and single-issuer holdings to no more than 5 percent per issuer.

**Medium-Term Notes**: The Water Authority may invest in corporate and depository institution debt securities issued by corporations organized and operating within the United States or by depository institutions licensed by the United States or any state and operating within the United States (Government Code Section 53601(k)). Securities must have a minimum rating of “AA” by at least one of the three credit rating agencies (Moody’s Investors Service, Standard & Poor’s, or Fitch Ratings) and not rated lower than “A” by the other two. Permissible types of notes include fixed rate and variable rate. Maximum investment maturity is restricted to five years. Maximum portfolio exposure is limited to 30 percent and single-issuer holdings to no more than 5 percent per issuer.

**Municipal Securities**: The Water Authority may invest in: (i) Registered treasury notes or bonds issued by any of the 50 United States, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by a state or by a department, board, agency, or authority of any state (Government Code Section 53601(c)(d)); and (ii) Bonds, notes, warrants, or other evidence of debt issued by a local agency or municipality located within California, including bonds payable solely out of the revenues from a revenue-producing property owned, controlled, or operated by the local agency, or by a department, board, agency, or authority of the local agency (Government Code Section 53601(a)(e)). Securities must have a minimum rating of “A” as rated by Moody’s Investors Service, Standard and Poor’s, or Fitch Ratings. Maximum maturity is limited to 5 years. Maximum portfolio exposure is limited to 20 percent and single-issuer holdings to no more than 5 percent per issuer.

**Agencies**: The Water Authority may invest in federal agency or United States government-sponsored enterprise obligations, participations, or other instruments, including those issued by or fully guaranteed as to principal and interest by federal agencies or United States government-sponsored enterprises (Government Code Section 53601(f)). Permissible types of securities include discount, coupon and variable rate security issues. Callable securities are limited to a minimum of one-time call only, with a maximum allocation of 20 percent of the portfolio. Maximum maturity is limited to 5 years. Maximum portfolio exposure is limited to 85 percent.
**Supranationals:** The Water Authority may invest in United States dollar denominated senior unsecured unsubordinated obligations issued or unconditionally guaranteed by the International Bank for Reconstruction and Development, International Finance Corporation, or Inter-American Development Bank. Securities must be eligible for purchase and sale within the United States and have a minimum rating of “AA” as rated by Moody’s Investors Service, Standard and Poor’s, or Fitch Ratings. Maximum maturity is limited to 5 years. Maximum portfolio exposure is limited to 10 percent and single-issuer holdings to no more than 5 percent per issuer.

**Money Market Funds:** The Water Authority may invest in funds authorized under Government Code Section 53601(l) (2) that have a minimum asset size of $500 million. Composition of the fund is limited to investments that are authorized by this Annual Statement of Investment Policy. Funds must have the highest rating by two of the three largest nationally recognized statistical rating organizations, or have an investment adviser registered with the Securities and Exchange Commission with not less than five years’ experience investing in the securities and obligations authorized by this investment policy. Any fund shares purchased will not include any type of commission. Maximum portfolio exposure is limited to 15 percent.

**Local Government Investment Pools:** The Water Authority may invest in local government investment pools created by a joint powers authority authorized under Government Code Section 53601(p). Pools must have the highest rating by at least one of the three largest nationally recognized statistical rating organizations. The pool must have twenty-four hour liquidity. Maximum portfolio exposure is limited to 25 percent.

**AUTHORIZED INVESTMENT INSTRUMENTS - BOND PROCEEDS AND DEBT SERVICE RESERVE FUNDS**

All investment types listed above are authorized investments for bond proceeds and debt service reserve funds with the addition of the following:

**Collateralized Guaranteed Investment Contracts (GICs)/Full Flex Repurchase Agreements:** Investment of funds in GICs is permitted, as per Section 5922 of the Government Code, when collateralized by U.S. Government guaranteed and direct obligation securities. Collateral must be held by a third party institution, and must be marked to market on a weekly basis to a minimum of the value of the outstanding balance of the contract. The maximum maturity date on a GIC is limited to the final maturity date of the bonds being issued.

**Initially Uncollateralized Guaranteed Investment Contracts (GICs):** Investment of funds in GICs which are not initially collateralized is permitted, as per Section 5922 of the Government Code, only if (a) the term of the GIC does not exceed three (3) years, (b) the counterparty to the GIC is rated in the highest long-term rating category by both Moody’s Investors Service and Standard & Poor’s (or whose payment obligations under such GIC are insured or guaranteed by an entity the unsecured obligations of which are so rated), and (c) the GIC requires that it be collateralized as described above in the event the counterparty’s rating is downgraded below the highest long-term rating category by either Moody’s Investors Service or Standard & Poor’s.

**Local Agency Investment Fund (LAIF):** The Water Authority may also invest bond proceeds in the Local Agency Investment Fund (Government Code Section 16429.1(d)). There is a $175M limit on the amount of bond proceeds that may be deposited into the fund. Liquidity for bond proceeds, per fund regulations, is thirty calendar day increments from
the date of the initial deposit. Bond proceeds deposited in LAIF should be managed to include a 90-day review by the Treasurer to insure safety, as well as probable income.

In the event that a conflict arises between the bond covenants and this Annual Statement of Investment Policy, the following will guide the (re)investment of bond proceeds: when the Annual Statement of Investment Policy is more conservative than the bond covenants, the Annual Statement of Investment Policy will prevail; if the bond covenants are more conservative than the Annual Statement of Investment Policy, the bond covenants will prevail. All future debt transaction reinvestment guidelines will incorporate the current Annual Statement of Investment Policy into the bond covenants.

The Board of Directors has granted the Treasurer the authority to invest debt service reserve funds in U.S. Treasury, federal agency, and municipal securities with maturities exceeding 5 years if it is considered to be in the best interest of the Water Authority and if the maturity of such investments does not exceed the expected use of funds.

**PORTFOLIO LIMITATIONS**

It is the Water Authority’s goal to maintain a minimum of 50 percent of the Water Authority portfolio in Treasury Bills or Notes; however, based on market conditions a combination of 50 percent Agencies and Treasury Bills or Notes will satisfy this requirement. At no time will less than 15 percent of the portfolio be in Treasury Bills or Notes. The balance of the portfolio may be invested in any of the other permissible investments within the guidelines previously established.

The total dollar amount of bond proceeds and debt service reserve funds invested are to be excluded from the total used to calculate percentages for investment types.

The weighted average days to maturity of the total portfolio shall not exceed 730 days (two years) to maturity.

Percentage limitations, where listed, are applicable at the date of purchase. In the event that the percentage limits attributable to a security type is exceeded due to a temporary imbalance in the portfolio, the Treasurer will make a determination as to the appropriate course of action. The appropriate course of action may be to liquidate securities to rebalance the portfolio or to hold the securities to maturity in order to avoid a market loss. Portfolio percentages are in place to ensure diversification of the investment portfolio and, as such, a small temporary imbalance would not violate this basic tenet. When a portfolio percentage is exceeded, the Treasurer will report the occurrence in the Treasurer’s Report at the next regularly scheduled Administrative and Finance Committee meeting of the Board, with detail of the strategy determined to address the imbalance, for Board ratification.

Credit requirements listed in this policy indicate the minimum credit rating (or its equivalent) required at the time of purchase without regard to modifiers (e.g., +/- or 1, 2, 3). In the event that an investment originally purchased within policy guidelines is downgraded by any one of the credit rating agencies, the Treasurer shall report it at the next regularly scheduled Administrative and Finance Committee meeting of the Board. The course of action to be followed will then be decided on a case-by-case basis, considering such factors as the reason for the downgrade, prognosis for recovery or further rating downgrades, and the market price of the security.
SECTION 9.0          Long-Range Financing Plan

INELIGIBLE INVESTMENTS

Investments not described herein, including, but not limited to common stocks, futures and the writing of options are prohibited from use in this portfolio. The use of short positions is also prohibited.

DERIVATIVES

A derivative is defined as a financial instrument that derives its cash flows, and therefore its value, by reference to an underlying instrument, index or reference rate. The purchase of yield curve notes, interest only, principal only, range notes, and inverse floaters are prohibited (this list is not intended to cover all types of securities and is presented as an example of the types of securities that should be avoided). Callable bonds, step-up bonds, and floating rate securities (with a positive spread) are permitted investments. No security will be purchased that could result in a zero interest accrual if held to maturity.

SWAPS

A swap is a shift of assets from one instrument to another and may be done for a variety of reasons, such as to increase yield, lengthen or shorten maturities, or to increase investment quality. In no instance shall a swap be used for speculative purposes. Any such swap shall be simultaneous (same day execution of sale and purchase), and requires the written approval of the Treasurer.

INTERNAL CONTROLS

A system of internal controls has been established and documented in writing in the Water Authority’s Financial Services Policies and Procedures Manual. The controls shall be designed to prevent losses of public funds arising from fraud, employee error, and misrepresentation of third parties, unanticipated changes in financial markets or imprudent action by employees and officers of the Water Authority. Controls deemed most important include: control of collusion, separation of duties and administrative controls, separating transaction authority from accounting and record keeping, custodial safekeeping, clear delegation of authority, management review and approval of investment transactions, specific limitations regarding securities losses and remedial action, written confirmation of telephone transactions, minimizing the number of authorized Investment Officials, documentation of transactions and strategies, and code of ethic standards. The Treasurer has established an annual process of independent review by an external audit firm. This review provides assurance of strong internal controls by reviewing compliance with previously established policies and procedures.

REPORTING

The Treasurer will submit a monthly investment report to the Board of Directors, the General Manager’s office, and the internal auditor (if applicable). This report will include: a list of portfolio transactions, type of investment, issuer, date of maturity, amount of deposit/par amount, current market value of all securities (with the source of the market valuation), rate of interest, statement that there are or are not sufficient funds to meet the next 6 month’s obligations and a statement indicating compliance or noncompliance with this Annual Statement of Investment Policy. Additional items listed will also include average weighted yield, average days to maturity, accrued interest earned during the period and fiscal year to date, percent distribution to each type of investment and any funds under management by contracted parties, including lending programs.
QUALIFIED BANKS AND SECURITIES DEALERS

A competitive bid process, when practical, will be used to place all investment purchases and sales transactions. For any investment transaction not conducted directly with the issuer, the Water Authority shall conduct business only with banks, savings and loans, and registered investment securities dealers. The Water Authority’s staff will investigate all institutions that wish to conduct business with the Water Authority. All institutions must sign the appropriate Information Request Form, and agree to abide by the conditions set forth in the Water Authority’s Annual Statement of Investment Policy. A list will be maintained by the cash management staff of approved institutions and securities broker/dealers. This will be done annually by having the financial institutions complete and return the Broker Dealer Information Request Form and an audited financial statement within 90 days of the institution’s fiscal year-end. Previous Board approved substitute certification language may be offered to primary dealers of the Federal Reserve at the discretion of the Treasurer. In the event the substitute language is not accepted by the primary dealer, the Treasurer may return to the Water Authority’s Board for approval of alternative language proposed by the primary dealer.

RISK TOLERANCE

The Water Authority recognizes that investment risks can result from issuer defaults, market price changes or various technical complications leading to temporary illiquidity. Portfolio diversification is employed as a way to control risk. The Treasurer is expected to display prudence in the selection of securities, as a way to minimize default risk. No individual investment transaction shall be undertaken which jeopardizes the total capital position of the overall portfolio. The Treasurer shall periodically establish guidelines and strategies to control risks of default, market price changes and illiquidity.

Risk will also be managed by subscribing to a portfolio management philosophy that helps to control market and interest rate risk by investing to a shorter term. This philosophy also prohibits trading losses (for speculative purposes) unless there is a sudden need for liquidity and the need cannot be satisfied on a more cost effective basis.

PERFORMANCE BENCHMARK

Controlling and managing risk is the foremost portfolio management objective. The Water Authority strives to maintain an efficient portfolio by providing for the lowest level of risk for a given level of return. An appropriate benchmark consistent with the Water Authority’s investment objectives and liquidity requirements has been established against which the portfolio’s performance is compared on a regular basis. The selected benchmark is the 2-Year U.S. Treasury constant maturity. Any significant deviation of the portfolio’s performance to the benchmark should be reviewed in order to ensure that such investments meet the criteria previously specified.

SAFEKEEPING AND CUSTODY

To protect against potential losses caused by the collapse of security dealer(s), all book-entry securities owned by the Water Authority, including repurchase agreement collateral, shall be kept in safekeeping with “perfected interest” by a third party bank trust department, acting as agent for the Water Authority under the terms of a custody agreement executed by the bank and by the Water Authority. All securities will be received and delivered using standard delivery-versus-payment procedures. The only exception to the foregoing shall be certificates of deposit and investments in: (i) LAIF; (ii) local government investment pools; and (iii) money market funds, since the purchased securities are not deliverable. A record of these investments shall be held by the Treasurer.
DIVERSIFICATION

The investment portfolio will be diversified by security type, institution and maturity date to avoid incurring unreasonable and avoidable risks regarding specific security types or individual financial institutions.

STATEMENT OF INVESTMENT POLICY

This Annual Statement of Investment Policy shall be reviewed and submitted annually to the Board of Directors in order to incorporate any changes necessary to ensure consistency and its relevance to current law, and financial and economic trends. This Annual Statement of Investment Policy shall be reviewed at a public meeting and voted on prior to the start of each calendar year.
9.3 Debt Management Policy

SAN DIEGO COUNTY WATER AUTHORITY

Statement of Debt Management Policy

Section I. Introduction

PURPOSE AND OVERVIEW

In its publication entitled Best Practice Debt Management Policy, the Government Finance Officers Association (GFOA) states that “Debt management policies are written guidelines, allowances, and restrictions that guide the debt issuance practices of state or local governments, including the issuance process, management of a debt portfolio, and adherence to various laws and regulations. A debt management policy should improve the quality of decisions, and articulate policy goals, provide guidelines for the structure of debt issuance, and demonstrate a commitment to long-term capital financial planning.” GFOA recommends as a best management practice that state and local governments adopt comprehensive written debt management policies. The San Diego County Water Authority Debt Management Policy as set forth here provides a set of comprehensive guidelines for the issuance and management of Water Authority’s debt portfolio. Adherence to the policy is essential to ensure the Water Authority maintains a diversified debt portfolio that supports the Water Authority’s financing needs and minimizes the Water Authority’s cost of funds.

ROLES AND RESPONSIBILITIES

Director of Finance – The primary responsibility for debt management rests with the Director of Finance. The Director of Finance shall:

• Provide for the issuance of Water Authority debt at the lowest possible cost and risk;

• Determine the available debt capacity of the Water Authority;

• Provide for the issuance of Water Authority debt at appropriate intervals and in reasonable amounts as required to fund approved capital expenditures;

• Recommend to the Water Authority’s Board of Directors (Board) the method and manner of sale of Water Authority debt;

• Monitor opportunities to refund debt and recommend such refunding as appropriate to reduce costs or to achieve other policy objectives;

• Comply with all Internal Revenue Service (IRS), Municipal Securities Rulemaking Board (MSRB), and Securities and Exchange Commission (SEC) rules and regulations governing the issuance of debt;

• Maintain a current database with all outstanding Water Authority debt;

• Provide for the timely payment of principal and interest on all Water Authority debt;
• Comply with all terms and conditions, and disclosure required by the legal documents governing the debt issued;

• Submit to the Board all recommendations to issue debt in accordance with the County Water Authority Act and Resolution No. 89-21;

• Distribute to appropriate repositories information regarding the Water Authority’s financial condition and affairs at such times and in the form required by law, regulation and general practice;

• Provide for the frequent distribution of pertinent information to the rating agencies;

• Provide for the ongoing management of an Investor Relations Program; and

• Apply and promote prudent fiscal practices.

Section II. Legal Governing Principles

In the issuance and management of debt, the Water Authority shall comply with all legal constraints and conditions imposed by federal, state and local law. The following section highlights the key governing documents and certain debt limitations.

GOVERNING LAW

County Water Authority Act – The Water Authority is a public agency created in 1944 under the County Water Authority Act (The Act), California Statutes 1943, Chapter 45, as amended. The Act establishes the Water Authority’s legal authority to issue debt and the limitations therein. A copy of the Act can be found in Appendix A. The Water Authority shall comply with all constraints of the Act.

Federal Tax Law – The Water Authority shall issue and manage debt in accordance with the limitations and constraints imposed by federal tax law, to maximize its ability to sell tax-exempt debt. Such constraints include, but are not limited to, private activity tests, review of eligible projects, spend-down tests, and arbitrage rebate limitations.

Securities Law – The Water Authority shall comply with the requirements of federal and state securities laws in offering Water Authority debt and the Water Authority shall comply with securities law requirements in providing ongoing disclosure to the securities markets.

GOVERNING LEGAL DOCUMENTS

General Resolution – The Water Authority’s debt issuance is further governed by Resolution No. 89-21, adopted May 11, 1989, Resolution No. 97-52, adopted December 11, 1997, and Resolution No. 09-23, adopted on December 17, 2009, all of which together constitute the “General Resolution.” The General Resolution establishes the basic security structure of debt issued by the Water Authority that is secured by Net Water Revenues. Key terms and conditions include, but are not limited to, the definition of pledged revenues, the rate covenant and the additional bonds test. A copy of the General Resolution can be found in Appendix B. The Water Authority shall comply with all limitations imposed under the General Resolution.
PERMITTED DEBT BY TYPE

The Water Authority may legally issue both short-term and long-term debt, using the debt instruments described below. The Director of Finance, in consultation with the Water Authority’s General Counsel and Bond Counsel, shall determine the most appropriate instrument for a proposed bond sale.

**General Obligation Bonds** – The Water Authority is empowered, under its Act, to levy taxes on all taxable property within its boundaries for the purpose of paying its voter-approved general obligation bonds and, subject to certain limitations in the Act, the California Revenue and Taxation Code and the California Constitution, for other Water Authority purposes. The Water Authority is authorized to sell general obligation bonds under Section 7 of the Act, subject to the approval of a two-thirds majority of those voting in a local election.

**Certificates of Participation** – Certificates of Participation (COP) provide debt financing through a lease, installment sale agreement or contract of indebtedness and typically do not require voter approval. Board action is sufficient to legally authorize a COP issue. The Water Authority is permitted to use the installment sale form of COPs, based upon its ability to execute installment sale agreements (Section 5 of the Act) and contracts of indebtedness (Section 8 of the Act). The Water Authority’s issuance of COPs is facilitated by the San Diego County Water Authority Financing Corporation, a California nonprofit benefit corporation that was created by the Water Authority specifically to serve as party to the installment sale agreements and contracts of indebtedness securing Water Authority COPs. The Water Authority shall pledge net revenues to the repayment of its COPs, under the terms and conditions specified in the General Resolution.

**JPA Revenue Bonds** – As an alternative to COPs, the Water Authority may obtain financing through the issuance bonds by a joint exercise of powers agency with such bonds payable from amounts paid by the Water Authority under a lease, installment sale agreement, or contract of indebtedness. The San Diego County Water Authority Financing Agency is a joint exercise of powers agency formed for the purpose of facilitating Water Authority financing through the issuance of such revenue bonds.

**Commercial Paper** – Per Section 8.2 of the Act, the Water Authority may issue short-term revenue certificates, including commercial paper and extendable commercial paper. Board action is sufficient to legally authorize a commercial paper issue. The Water Authority’s commercial paper is secured by net revenues, but on a subordinate lien basis to the Water Authority’s long–term debt (i.e. COPs). Voter approval is not required to issue commercial paper.

**Variable Rate Debt** – The Water Authority is authorized to issue variable rate debt including, but not limited to, public market indexed notes, indexed notes or loans placed directly with financial institutions and other alternative variable rate and market access products as well as traditional variable rate demand obligations backed by bank liquidity facilities. Prior to the issuance of variable rate debt, the savings and other possible advantages compared to a fixed rate borrowing will be evaluated and a comparative analysis presented to the Board of Directors as part of the approval process.

**Revenue Bonds** – The Water Authority is authorized to issue revenue bonds (Section 7.5 of the Act), as further described in the Revenue Bond law of 1941 (Chapter 6, commencing with Section 54300, or Part 1 of Division 2 of Title 5 of the Government Cost). Revenue bonds require majority voter approval to authorize the size and purpose of the bond issue. The Water Authority shall pledge net revenues to the repayment of any revenue bonds under the terms and conditions specified in the General Resolution.

**Refunding Revenue Bonds** – The Water Authority is authorized to issue refunding revenue bonds to refund outstanding Water Authority indebtedness pursuant to the State of California local agency refunding revenue bond law (Articles 10 and 11 of Chapter 3 of Part 1 of Division 2 of Title 5 of the Government Code of the State of California).
Assessment Bonds – The Water Authority is authorized to issue assessment bonds pursuant to the Improvement Bond Act of 1915, subject to requirements imposed by Proposition 218. Such bonds are typically repaid from assessments collected within an assessment district formed pursuant to the Municipal Improvement Act of 1913. Assessments are levies of charges on real property to pay for projects or services that specifically benefit that parcel of property.

LIMITATIONS ON DEBT ISSUANCE

Subordinate Lien Short-Term Debt – The Water Authority’s subordinate short-term debt shall not exceed 30 percent of its total debt at the time of issuance. The calculation of short-term debt shall include variable rate demand obligations, the authorized amount of commercial paper, any notes/bonds with a maturity equal to or less than five years, and any variable rate debt. The Water Authority’s subordinate lien debt, for which net revenues are pledged, shall be limited to that amount for which current and projected revenues generate overall debt service coverage of at least 100 percent if no subordinate bonds are outstanding, and 105 percent if subordinate bonds are outstanding.

Senior Lien Long-Term Debt – The Water Authority’s senior lien long-term debt, for which net revenues are pledged, shall be limited to that amount for which current and projected revenues generate a senior lien debt service coverage of at least 120 percent. The calculation of debt service shall not include general obligation bonds or assessment bonds, to which revenue sources other than pledged revenues, as defined in the General Resolution, are pledged. It should be noted that the Board has adopted a policy that sets the senior lien debt service coverage target of 150 percent in keeping with its prudent financial management.

PURPOSE FOR BORROWING

The Water Authority shall issue debt solely for the purpose of financing the cost of design, acquisition, and/or construction of water system improvements in furtherance of the Water Authority’s Capital Improvement Program (CIP).

ETHICAL STANDARDS GOVERNING CONDUCT

Members of the Water Authority, the Board and its consultants, service providers, and underwriters shall adhere to standards of conduct as stipulated by the San Diego County Water Authority Local Conflict of Interest Code or the California Political Reform Act, as applicable. All debt financing participants shall maintain the highest standards of professional conduct at all times, in accordance with:

• MSRB Rules, including Rule G-37, shall be followed at all times;
• Debt financing participants will assist the Water Authority staff in achieving its goals and objectives as defined in this Debt Management Policy; and
• All debt financing participants shall make cooperation with the Water Authority staff their highest priority.
Section III. Integration of Capital Planning and Debt Activities

EVALUATING CAPITAL IMPROVEMENT PROGRAM SPENDING

The Water Authority shall develop and maintain a capital finance model to evaluate the impact of capital program spending, operations and maintenance costs, and debt service on its financial condition. To that end, the Director of Finance shall oversee the ongoing maintenance of quantitative modeling that includes, but is not limited to, the following:

- Historic and projected cash flows;
- Historic and projected capital expenditures;
- Historic and projected operating costs;
- Historic and projected fund balances, including the Operating Fund, the Rate Stabilization Fund, Pay-As-You-Go Fund, Debt Proceeds Fund, Stored Water Fund and Debt Service Reserve Fund;
- Historic and projected debt service coverage;
- The most efficient mix of funding sources (long-term debt; short-term debt, and cash);
- Projected revenue requirements; and
- Projected rates and charges.

Section IV. Procurement and Evaluation of Professional Services

The Water Authority shall procure professional services as required to execute financing transactions and to advise on non-transaction related work. Professional services include Consultants (Financial Advisor, Legal Counsel-Bond, Disclosure and Tax); Service Providers (Trustee, Paying Agent, Dissemination Agent, Arbitrage Consultant, Escrow Verification Agent, Bidding Agent for escrow investments, Printer, Letter of Credit, Verification Agent); and an Underwriting Team (Senior Manager, Co-Manager, Selling Group).

Selection Process – The selection of financial and legal professionals to assist the Water Authority in carrying out financing programs shall be made through a selection process consistent with the Water Authority’s procurement policies and procedures. All consultants, service providers and underwriting team members shall provide the Water Authority with objective advice and analysis, shall maintain the confidentiality of Water Authority financial plans, and shall be free from any conflict of interest pursuant to applicable law. The Water Authority’s Local Conflict of Interest Code, and procurement policies and procedures, can be found in the Water Authority’s Administrative Code (chapters 1.04 and 4.04, respectively), and within the Water Authority’s standard Professional Service Contract.

Appointment of Financial Advisor – The Water Authority will select a financial advisor or advisors to assist in the issuance and administration of debt through the Request for Proposals (RFP) process. Assistance to be provided by a financial advisor will include, but not be limited to:
A. Ongoing Services/Long-Term Forecasting

1. Review and update as needed existing model and Long-Range Financing Plan (LRFP); provide analysis of funding methods and options including analysis of the structure of the Plan; discussion of issues or difficulties which may be encountered in implementing the Plan and the strategies to address such issues; prepare and deliver presentations regarding various financial issues to Water Authority staff and the Board as requested.

2. Assist the Water Authority in interfacing with rating agencies with the objective of developing a strategy and plan to maintain the Water Authority’s senior lien and subordinate lien ratings at “AA+/AA” and “AA/AA-“, respectively.

3. Provide timely information, judgments, and forecasts regarding general economic and capital market conditions.

4. Assist the Water Authority in updating its financial strategies and policies when requested. This includes analyzing short, intermediate and long-term financing options.

5. Advise the Water Authority on the timing, method and structure of its security sales.

6. Update, modify, evaluate, and improve as necessary the revenue program and rate model which is used to help determine the Water Authority’s ability to meet funding requirements for the CIP.

7. Be available at reasonable times for consultation to render advice regarding the financial aspects of the Water Authority’s program as may be requested by the Board, the General Manager, or the Director of Finance.

8. Be available to attend meetings related to Metropolitan Water District’s (MWD) Long-Range Financing Plan and other related rate issues.

B. Debt Issuance

1. Prepare financing schedule, monitor progress of financing team participants, facilitate and coordinate completion of tasks and responsibilities in accordance with schedule and revise schedule as necessary.

2. Assist in and coordinate the preparation of legal and disclosure documents related to debt issuance.

3. Develop a rating agency strategy, prepare rating agency presentation material, schedule meetings with rating agencies, organize and coordinate Board and staff rehearsals and presentations, and coordinate itinerary for rating agency visits as required.

4. Prepare and distribute RFP’s for underwriters, printers, and other team participants as directed by the Water Authority. Assist in evaluation of proposals, assist in conducting interviews as necessary, and provide recommendation as to firms selected.
5. Develop and take a primary responsibility for quantitative analysis of structuring alternatives for debt issues including sizing, structure, and term of issue; provide computer modeling and comparison of alternatives analysis; make recommendations and provide rationale for preferred alternatives’ and ensure that selected alternative provides the best solution as part of the long-range financing plan.

6. Assist and coordinate discussions and prepare presentation materials for identified key institutional investors. Coordinate itinerary as necessary for visits to institutional investors or meeting sites.

7. Analyze and participate in decision as to timing of sale and consult as to advisability or necessity for rescheduling sale depending on market conditions.

8. Prepare analytical discussion of market conditions and projected pricing results prior to sale. Provide independent pre-pricing analysis to Water Authority prior to sale including market activity, projected results, market supply and demand characteristics, and comparable sale analysis.

9. Coordinate and monitor marketing programs initiated by underwriter to develop pre-sale market interest. Prepare and coordinate placement of notices and advertisements in periodical publications (Bond Buyer, etc.) to stimulate market interest.

10. Assist in development of and recommendation with respect to pre-sale interest rate scale and structure for pre-marketing purposes. Provide recommendation with respect to underwriter retention and syndicate sales prior to sale.

11. Analyze market conditions with respect to underwriters’ compensation; provide comparable transaction comparisons and recommendation with respect to underwriting spread and components thereof. Negotiate with underwriters’ representatives with respect to underwriters’ compensation, including liquidity agreement terms and conditions.

12. Participate in pricing process, monitor order flow to all managers, analyze volume and type of orders, and provide recommendation as to acceptance of offer to underwrite at conclusion of pricing period.

13. Provide pricing analysis and comparisons following sale; document pricing results and provide written report to Water Authority with respect to final pricing and underwriter compensation level; and deliver quantitative schedules showing results of final pricing.


C. Miscellaneous

1. Upon request, assist in reviewing and analyzing legislation that may have a financial impact on the Water Authority.

2. Assist, when requested, by conducting surveys of the financial activities of other major operating utilities.
3. Attend Board meetings and make presentations to the Water Authority’s Board, its committees and staff when requested.

4. Prepare graphs, charts, etc. for staff presentations, as needed.

5. Upon request, assist in reviewing and analyzing MWD and State Water issues as they relate to the Water Authority and provide advice, as needed.

The criteria to be used in evaluating and selecting a financial advisor should include:

- Experience in providing formal financial advisory services to major utility issuers;
- Experience with diverse financial structuring requirements of major utility issuers;
- Experience and reputation of assigned personnel; and
- Fees and expenses.

A financial advisor under contract with the Water Authority shall not purchase or sell any Water Authority debt.

The Director of Finance shall submit to the Board a recommendation for the appointment of a Financial Advisor. The recommendation shall be accompanied by an evaluation of options and a justification for the recommended course of action. The Director of Finance shall monitor the services rendered by the Financial Advisor.

Appointment of Legal Counsel  – All debt issued by the Water Authority shall include a written opinion by legal counsel affirming that the Water Authority is authorized to issue the proposed debt, that the Water Authority has met all federal, state, and local legal requirements necessary for issuance and a determination of the proposed debt’s federal income tax status. This approving opinion and other documents relating to the issuance of debt shall be prepared by a nationally recognized legal firm with extensive experience in public finance and tax issues. The General Counsel of the Water Authority shall appoint the legal counsel.

For any negotiated sale of debt in which legal counsel is required to represent the underwriter, the lead underwriter shall make the appointment. Unless otherwise justified, the appointment shall be made from among nationally recognized law firms with significant ownership or operations in California.

Appointment of Trustee and Paying Agent  – The Director of Finance shall appoint a fiscal agent to provide for the payment of all debt issued by the Water Authority. The selection of a fiscal agent shall be based upon a competitive evaluation of proposals submitted in response to an RFP.

The Director of Finance shall submit to the Board a recommendation for the appointment of a fiscal agent. The recommendation shall be accompanied by an evaluation of options and a justification for the recommended course of action. The Director of Finance shall monitor the services rendered by the fiscal agent to ensure prompt and efficient service to bondholders.
**Appointment of Printer** – The Director of Finance shall select a printer as required in conjunction with a proposed sale of bonds, for the purpose of printing and mailing Preliminary Official Statements and Final Official Statements to potential investors and members of the finance team. The selection of a printer shall be based on a competitive evaluation of proposals.

**Appointment of Letter of Credit or Liquidity Facility Provider** – In order to comply with the requirements of the bond documents and to ensure the liquidity and marketability of the Water Authority’s variable rate debt (including, but not limited to, variable rate bonds and a tax-exempt commercial paper program), the Director of Finance shall take such actions as necessary to procure a letter of credit or line of credit in support of such variable rate debt. The selection of a letter of credit/liquidity bank shall be based on a competitive evaluation of proposals submitted in response to an RFP.

The Director of Finance shall submit to the Board a recommendation for the appointment of a Letter of Credit/Liquidity Facility provider. The recommendation shall be accompanied by an evaluation of options and a justification for the recommended course of action. The Director of Finance shall monitor the trading value and credit ratings of the provider to ensure that the Water Authority’s variable rate debt is remarketed at the lowest possible cost, given the legal and policy considerations governing the selection of the bank.

**Appointment of Remarketing Agents** – The Director of Finance shall, in conjunction with selecting a letter of credit provider, solicit proposals from commercial paper remarketers/dealers.

**Appointment of Verification Agent** – In conjunction with the sale of refunding bonds, the Director of Finance shall procure the services of a verification agent. The purpose of the verification agent is to confirm that sufficient proceeds are invested in permitted federal securities and to ensure the timely repayment of principal and interest on the bonds being refunded. The verification agent must be a nationally recognized provider of verification services. The selection of a verification agent shall be based upon a competitive evaluation of proposals submitted in response to an RFP.

**Appointment of Underwriters** – To provide for the negotiated issuance of Water Authority debt, the Director of Finance shall maintain an Underwriter Pool (Pool). The appointment to the Water Authority’s Pool shall be based upon a competitive evaluation of proposals submitted in response to a Request for Qualifications. The Director of Finance shall submit to the Board a recommendation for the appointment of underwriters to the Pool to serve a three-year term. The size and composition of the Pool shall be based upon the projected financing needs of the Water Authority. Criteria used in the appointment of qualified underwriters to the Pool shall include:

- Demonstrated ability serving on complex financial transactions;
- Demonstrated ability with major water issuer financings;
- Demonstrated ability to structure a debt issue efficiently and effectively;
- Demonstrated ability to sell Water Authority debt to institutional and retail investors;
- Demonstrated ability to put capital at risk;
- Quality and applicability of financing ideas;
- Experience and reputation of assigned personnel; and
• Indicative fees and expenses.

Prior to any negotiated transactions, an RFP will be issued to the Pool and a financing team recommend to the Board for selection. The composition of the team will be dependent on the size of the sale and the need to achieve a broad distribution of Water Authority debt among both retail and institutional investors. The recommendation shall be accompanied by an evaluation of options and a justification for the recommended course of action.

Following the approval of the underwriting team, the Board shall appoint a lead underwriter. The lead underwriter shall have demonstrated ability to manage a number of firms in a complex financial transaction.

Appointment of Other Service Providers – The Director of Finance will solicit proposals for the following services as needed:

• Continuing Disclosure Agent – Service provider that ensures disclosure documents are disseminated to regulators in compliance with regulations continuing disclosure agreements

• Arbitrage Consultant – Service provider that calculates the arbitrage accrued to transactions for the purpose of IRS filings.

• Open Market Securities Agent – Service provider that solicits prices for escrow fund investments and executes the purchase of selected investments.

Section V. Transaction-Specific Policies

METHOD OF SALE

Competitive Bid Method - Unless otherwise justified and deemed necessary to minimize the costs and risks of the Water Authority’s bond issue, the issuance and sale of all fixed rate Water Authority debt shall be achieved by competitive bid. Such bid may take the form of hand-delivered or electronically transmitted offers to purchase the bonds. Any competitive sale of Water Authority debt will require approval of the Board. Water Authority debt issued on a competitive bid basis will be sold to the bidder proposing the lowest true interest cost to the Water Authority provided the bid conforms to the official notice of sale.

Negotiated Bid Method – When necessary to minimize the costs and risks of Water Authority borrowing, the Director of Finance will submit to the Board a request to sell bonds on a negotiated basis. A negotiated bond issue will provide for the sale of debt by negotiating the terms and conditions of the sale, including price, interest rates, credit facilities, underwriter or remarketing fees, and commissions. Examples of such sales include:

• Variable rate demand obligations;

• An issue of debt so large that the number of potential bidders would be too limited to provide the Water Authority with truly competitive bids;
• An issue requiring the ability to react quickly to sudden changes in interest rates (e.g. refunding bonds);

• An issue requiring intensive marketing efforts to establish investor acceptance;

• An issue of debt with specialized distribution requirements; and

• An issue of debt sold during a period of extreme market disruption or volatility.

If bonds are sold on a negotiated basis, the negotiations of terms and conditions shall include, but not be limited to, prices, interest rates, underwriting or remarketing fees, and commissions. The Water Authority, with the assistance of its Financial Advisor, shall evaluate the terms offered by the underwriting team. Guidelines with respect to price, interest rates, fees, and commissions shall be based on prevailing terms and conditions in the marketplace for comparable issuers.

If more than one underwriter is included in the negotiated sale of debt, the Water Authority shall establish appropriate levels of liability, participation and priority of orders. Such levels shall be based upon Water Authority policy with regards to the underwriting responsibility among the team members, the desired allocation of total fees, and the desired distribution of bonds. Guidelines for establishing liability, participation, and priority of orders shall be based on prevailing terms and conditions in the marketplace for comparable issuers.

The Water Authority shall, with the assistance of its Financial Advisor, oversee the bond allocation process. The bond allocation process shall be managed by the lead underwriter, with the following requirements:

• The bonds are allocated fairly among members of the underwriting team, consistent with the previously negotiated terms and conditions;

• The allocation process complies with all MSRB regulations governing order priorities and allocations;

• The lead underwriter shall submit to the Director of Finance a complete and timely account of all orders, allocations, and underwriting activities with the investor names identified as appropriate.

The Director of Finance shall require a post-sale analysis and reporting for each negotiated bond sale. The Financial Advisor or the lead underwriter may perform such analysis. A post-sale analysis will include, but not be limited to:

• Summary of the pricing, including copies of the actual pricing wires;

• Results of comparable bond sales in the market at the time of the Water Authority’s pricing;

• Detailed information on orders and allocation of bonds, by underwriting firm;

• Detailed information on final designations earned by each underwriter; and

• Summary of total compensation received by each underwriter.
STRUCTURAL ELEMENTS

Pledge of Revenues – The Water Authority’s pledge of revenues shall be determined for each debt issue depending upon the debt instrument:

• General Obligation Bonds of the Water Authority shall be repaid from voter-approved property taxes on property within the jurisdiction of the Water Authority.

• Certificates of Participation of the Water Authority shall be repaid from net revenues, as defined in the General Resolution.

• Revenue Bonds of the Water Authority shall be repaid from net revenues, as defined in the General Resolution.

• Assessment Bonds of the Water Authority shall be repaid levies or charges collected within an assessment district formed by the Water Authority pursuant to the Municipal Improvement Act of 1913.

Maturity – The Water Authority shall issue debt with an average life less than or equal to the average life of the assets being financed. The final maturity of the debt should be no longer than 40 years. Factors to be considered when determining the final maturity of debt include: the average life of the assets being financed, relative level of interest rates, and the year-to-year differential in interest rates.

Maturity Structure – The Water Authority’s long-term debt may include serial and term bonds. Other maturity structures may also be considered if they are consistent with the objectives of the Water Authority’s Debt Management Policy.

Coupon Structure – Debt may include par, discount and premium. Discount and premium bonds must be demonstrated to be advantageous relative to par bond structures. For variable rate debt, the variable rate may be based on one of a number of commonly used interest rate indices and the index will be determined at the time of pricing.

Debt Service Structure – Debt service will be structured primarily on an approximate level (combined annual principal and interest) basis. Certain individual bond issues, such as refunding bonds, may have debt service that is not level. However, on an aggregate basis, debt service should be structured primarily on a level basis.

Redemption Features – In order to preserve flexibility and refinancing opportunities, Water Authority debt will generally be issued with call provisions. The Water Authority may consider calls that are shorter than traditional and/or non-call debt when warranted by market conditions and opportunities. For each transaction, the Water Authority will evaluate the efficiency of call provision alternatives.

Credit Enhancement – The Water Authority shall competitively procure credit enhancement for a sale of bonds if the Director of Finance, in consultation with the Financial Advisor and the underwriters, determines that it is cost effective to do so.
**Senior/Subordinate Lien** – The Water Authority shall utilize both a senior and a subordinate lien structure. The choice of lien will be determined based on such factors as overall cost of debt, impact on debt service, impact on water rates, and marketing considerations.

**Debt Service Reserve Funds** – The Water Authority shall provide for debt service reserve funds to secure Water Authority debt when necessary.

### Section VI. Communication and Disclosure

**RATING AGENCIES**

The Water Authority shall maintain its strong ratings through prudent fiscal management and consistent communications with the rating analysts. The Director of Finance shall manage relationships with the rating analysts assigned to the Water Authority’s credit, using both informal and formal methods to disseminate information. Communication with the rating agencies shall include:

- Full disclosure on an annual basis of the financial condition of the Water Authority;
- A formal presentation, at least biennially or as becomes necessary to the rating agencies, covering economic, financial, operational, and other issues that impact the Water Authority’s credit;
- Timely disclosure of major financial events that impact the Water Authority’s credit;
- Timely dissemination of the Comprehensive Annual Financial Report, following its acceptance by the Water Authority’s Board;
- Full and timely distribution of any documents pertaining to the sale of bonds; and
- Periodic tours of the water system operations, as appropriate.

**BOND INSURERS**

The Director of Finance shall manage relationships with the analysts and the bond insurers assigned to the Water Authority’s credit, using both informal and formal methods to disseminate information. Communication with the bond insurers shall be undertaken when the Director of Finance, with the assistance of the Water Authority’s Financial Advisor, determines that credit enhancement is cost effective for a proposed bond issue.

**CONTINUING DISCLOSURE**

The Water Authority shall comply with SEC 15c2-12 regulations, which require municipal debt issuers to provide specified financial and operating information for fiscal years beginning on January 1, 1996. The Director of Finance shall be the Compliance Officer for disclosure requirements.
INVESTOR RELATIONS PROGRAM

The Water Authority shall establish and maintain an Investor Relations Program. The objectives of the program will be to:

- Reduce borrowing costs by improving demand for future bond sales;
- Keep investors continually informed of the issues facing the Water Authority;
- Obtain investor feedback on debt management considerations; and
- Create access to market opportunities such as shorter call provisions or tender programs.

The Water Authority shall use disclosure as a tool for developing ongoing dialogue with investors. The Water Authority’s Investor Relations Program shall consist of the following elements:

**Investor Survey** – The Water Authority will periodically create and disseminate a survey for the purpose of assessing investors’ needs for specific information. Upon completing a survey, the Water Authority may then prepare a financial disclosure statement for investors.

**Disclosure Reports** – The Water Authority shall make disclosure reports readily available to institutional investors, rating agencies and credit enhancers who have specific analysts assigned to review the Water Authority’s credit.

**Web Site** – The Water Authority shall use its website as a tool for providing timely information to investors.

Section VII. Refunding Policies

The Water Authority shall strive to refinance debt to maximize savings and minimize the cost of funds as market opportunities arise. A present value analysis will be prepared that identifies the economic effects of any refunding to be proposed to the Board. Upon the advice of the Director of Finance, with the assistance of the Financial Advisor and Counsel, the Water Authority will consider undertaking refundings for other than economic purposes, such as to restructure debt, change the type of debt instruments being used, or to retire a bond issue and indenture in order to remove undesirable covenants.

**Savings Thresholds** – Minimum savings thresholds have been established to help guide the economic analysis of refunding bonds. The minimum savings guidelines are applicable on a maturity-by-maturity basis and are expressed as a percentage of refunded bond par calculated by dividing the expected net present value savings generated by the proposed refunding by the par amount of refunded bonds. Generally, the Water Authority shall only refund bonds to generate debt service savings if the specified minimum savings set forth in the following matrix can be achieved.

To determine if a potential refunding candidate meets the applicable minimum savings threshold specified in the matrix, the Water Authority shall:
### Step 1
Identify which specific savings threshold applies to the potential refunding candidate by determining (a) how many years there are between the expected refunding date and the first call date and (b) how many years there are from the first call date to the final maturity of the refunding candidate, as shown in the examples below:

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<th>Years from Call to Maturity</th>
<th>Years to Call</th>
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<th>2-7</th>
<th>8+</th>
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<td>0-2</td>
<td></td>
<td>1%</td>
<td>2%</td>
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<tr>
<td>3-7</td>
<td></td>
<td>3%</td>
<td>3%</td>
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<tr>
<td>8-15</td>
<td></td>
<td>4%</td>
<td>4%</td>
<td>4%</td>
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<tr>
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<td>4%</td>
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<th>Expected Refunding Date</th>
<th>Refunding Candidate First Call Date</th>
<th>Refunding Candidate Final Maturity Date</th>
<th>Minimum Threshold Savings</th>
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<tbody>
<tr>
<td>12-1-2013</td>
<td>12-1-2016 (3 years to call date)</td>
<td>12-1-2027 (11 years call to maturity)</td>
<td>4%</td>
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<tr>
<td>12-1-2013</td>
<td>12-1-2015 (2 years to call date)</td>
<td>12-1-2022 (7 years call to maturity)</td>
<td>3%</td>
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</table>

### Step 2
Determine the expected net present value savings for the potential refunding candidates on a maturity-specific basis. Net present value savings are the expected net present value savings resulting from the potential refunding of the specific-maturity refunded bond. Net present value debt service savings are calculated by discounting the relevant cash flows to the expected refunding bond closing date at a rate equal to the True Interest Cost of the associated, maturity-specific refunding bond, and taking into account all costs of issuance, including underwriters’ discount.

### Step 3
Divide the net present value savings for the specified maturity calculated as described above by the par amount of the refunded bonds. If the percentage savings calculated is equal to or greater than the specified minimum savings threshold, the potential refunding candidate is deemed to meet the minimum savings threshold. If the percentage savings is less than the specified minimum savings threshold the refunding candidate does not meet the threshold.

As noted previously, the Director of Finance shall have discretion in making the final determination to include individual refunding candidates that are above or below the target in order to optimize policy and/or financial objectives. Factors that may be considered by the Director of Finance include, but are not limited to:

**Escrow Investment Yields (Negative Arbitrage)** – For advance refundings, the Director of Finance may take into consideration the available escrow yields relative to the refunding bond yields. If the available escrow yields are lower than the refunding bond yields (negative arbitrage), it will reduce the net present value savings otherwise available from the refunding. The Director of Finance may take negative arbitrage into account in assessing the appropriateness of a potential refunding, especially if the present value cost of such negative arbitrage is significant relative to the overall net present values savings expected to be achieved by the refunding.

**Coupon on Refunded Bond** – The Director of Finance may take into consideration whether the coupon on the refunded bond is significantly higher or lower than the most common outstanding bond coupons of approximately five percent.
General Interest Rate Environment – The Director of Finance may take into consideration whether the available refunding bond interest rates are generally high or generally low relative to long-term averages of historical rates.

General Interest Rate Outlook – The Director of Finance may take into consideration the general outlook for future interest rates, as derived from economic forecasts, market forecasts, implied forward rates, or other sources.

Debt Management Considerations – The Director of Finance may take into consideration debt management issues such as cost and staff efficiencies associated with combining multiple refunding bond issues or combining refunding and new money bond issues.

Section VIII. Reinvestment of Proceeds

COMPLIANCE WITH LAWS AND OTHER LEGAL DOCUMENTS

General – The Water Authority shall comply with all applicable Federal, State, and contractual restrictions regarding the use and investment of bond proceeds. This includes compliance with restrictions on the types of investment securities allowed, restrictions on the allowable yield of some invested funds, as well as restrictions on the time period during over which some bond proceeds may be invested. To the extent that a bond issue is credit enhanced, the Water Authority shall adhere to the investment guidelines of the credit enhancement provider.

Requirements of Resolution – The Water Authority will comply with all terms and conditions of the Resolution No. 89-21. Such limitations shall include, but not be limited to Section 5.06 of the resolution.

Investment Policies – The investment of bond proceeds shall be made in accordance with the Water Authority’s Annual Statement of Investment Policy.

Section IX. Creation and Maintenance of Funds

The Water Authority maintains a number of different funds integral to the long-range financial planning process. Each of these funds is held for a specific purpose and can generally be categorized as either an operating, capital or debt reserve fund. Operating funds provide the Water Authority with monies for emergencies, working capital and water rate management and consist of the Operating Fund and the Rate Stabilization Fund (RSF). Capital funds, currently the largest component of Water Authority funds, are held strictly for capital expenditures and consist of the Pay-As-You-Go (PAYGO) Fund and Debt Proceeds Fund (which includes both long-term and short-term debt proceeds). Debt reserve funds are held in trust for the benefit of investors in the Water Authority’s long-term debt.

OPERATING FUND

The Operating Fund holds the Water Authority’s working capital, emergency operating reserve and Equipment Replacement Fund. As previously indicated, the Water Authority’s Administrative Code sets the target ending balance of the Operating Fund at 45 days of average annual operating expenditures provided that $5 million of such calculated amount to be designated and held available for emergency repairs to the Water Authority’s system due to unforeseen events. Working capital ensures that even with a cash receipts and disbursements mismatch, the Water Authority will
have at least 30 days of Operating Funds on hand at all times. Given the short-term nature of this fund, liquidity of investments is critical and is ensured by investing the Operating Fund on a monthly basis to cover water purchases and ongoing cash disbursements. The Operating Fund, together with water sales revenue and other revenue sources, provide ample liquidity for working capital.

**EQUIPMENT REPLACEMENT FUND**

This fund is used to purchase minor capital equipment such as computer systems, vehicles and parts of the Supervisory Control and Data Acquisition (SCADA) system. It is funded by transfers from the Operating Fund per depreciation schedule.

**RATE STABILIZATION FUND**

The RSF was created in Fiscal Year 1989-1990 for the purpose of collecting amounts of water revenues greater than expenditures in years of strong water sales. Funds can then be used to mitigate “rate shock” in years of weak water sales, to manage debt service coverage, or to smooth out water rate increases. The RSF is a critical short-term water rate management tool that provides the necessary funds to maintain a smooth water rate pattern over a long period of time. With the new melded supply rate, and the expansion of the Water Authority’s functional areas with treatment and desalination, the RSF will have an increasingly important role in managing hydrology risk and stabilizing annual revenue needs.

Board policy sets a target funding level for the RSF equal to the financial loss resulting from 2.5 years of above average rainfall, calculated at a 95% exceedence level. Additionally, it establishes a maximum funding level equal to the financial loss resulting from 3.5 years of above average rainfall. Defining the target and maximum funding levels of the RSF in terms of the financial impact of above average rainfall matches the size of the fund to the primary risk it is designed to mitigate and provides additional capacity for rate smoothing.

As a general rule, the Water Authority will transfer portions of its net water revenues not required to meet either its debt service coverage ratio requirement or operating fund requirement into the RSF. The Board may choose to budget for RSF deposits resulting in balances in excess of the target level but not in excess of the maximum level for the purposes of rate smoothing. Balances below the target level are to be replenished within three years. As necessary, the Water Authority will transfer amounts from its RSF into net water revenues to meet its debt service coverage requirements, Operating Fund requirements or to smooth rate increases. Interest earnings accrue to the RSF unless the maximum balance is achieved, at which point they will be deposited into the Operating Fund. The RSF is managed so that any funds above the maximum balance will be transferred to the Operating Fund—Operating Fund balances above the existing 45-day policy are subject to discretionary use by the Board.

**PAY-AS-YOU-GO FUND**

The PAYGO Fund was established in fiscal year ended 1990 to serve as a mechanism to collect Capacity Charges and Standby Charges to be used to pay for the cash portion of the CIP. The PAYGO Fund is a “capital fund”, as opposed to a “reserve fund,” meaning that the monies in the fund will be spent directly on capital expenditures, not held in reserve for some other purpose. The PAYGO Fund is projected to be spent over the next eleven years in conjunction with cash generated by operations to fund the pay-as-you-go portion of the CIP. Typically, the annual expenditure of PAYGO funds corresponds to a percentage of the annual CIP expenditure for a particular year, as dictated by the optimal funding mix derived through the long-range computer modeling process.
DEBT PROCEEDS FUND

Similar to the PAYGO Fund, the Debt Proceeds Fund also holds capital funds for eventual expenditure towards the Water Authority’s CIP. Monies deposited into the Debt Proceeds Fund are produced by the Water Authority’s sale of tax-exempt securities in the form of long-term and short-term debt. Upon the sale of any single issue of tax-exempt debt, federal tax law currently dictates that the Water Authority must reasonably expect to spend the proceeds of the issue within three years. As a result, the Debt Proceeds Fund will typically fluctuate over two-to-three year periods as funds are raised through debt issuance every two-to-three years and then largely spent prior to the next issuance.

DEBT SERVICE RESERVE FUND

Debt Service Reserve Funds maybe be required under legal documents governing the issuance of the Water Authority’s long-term debt. They are funded as either a percentage of the par amount of long-term debt issued or as one year of debt service on the issue and are held in trust for the benefit of investors in the debt issued. The funds may be used for debt service on an issue, if for any reason the Water Authority is unable to make a scheduled payment. In lieu of holding a cash-funded reserve fund, the Water Authority may substitute a surety bond or other credit facility in its place. The decision to cash-fund a reserve fund versus using a credit facility is dependent upon the cost of the credit facility and the investment opportunities and restrictions on a cash-funded reserve fund.

Section X. Compliance

ARBITRAGE LIABILITY MANAGEMENT

The Water Authority shall minimize the cost of arbitrage rebate and yield restrictions while strictly complying with tax law. Because of the complexity of arbitrage rebate regulations and the severity of non-compliance penalties, the Water Authority shall solicit the advice of bond counsel and other qualified experts about arbitrage rebate calculations. The Water Authority shall contract with a qualified third-party for preparation of the arbitrage rebate calculation.

The Water Authority shall maintain an internal system for tracking expenditure of bond proceeds and investment earnings. The expenditure of bond proceeds shall be tracked in the financial accounting system by issue. Investment may be pooled for financial accounting purposes and for investment purposes. When investment of bond proceeds are co-mingled with other investments, the Water Authority shall adhere to IRS rules on accounting allocations.
POST-ISSUANCE TAX COMPLIANCE

The Water Authority has adopted Written Procedures to Ensure Compliance with Requirements for Tax-Exempt Bonds Found in Appendix C and Written Procedures for Issuance of Direct Pay Build America Bonds found in Appendix D. The Water Authority shall comply with such procedures to maintain the tax-exempt status of Water Authority debt obligations or to maintain eligibility for direct pay subsidy payments, as applicable.

CONTINUING DISCLOSURE

The Water Authority shall comply with the requirements of each Continuing Disclosure Certificate entered into at the time of a sale of bonds. Annual information provided by the Water Authority shall mirror the information in any Water Authority Official Statement at the time of a primary offering. Annual financial information will be sent by the Water Authority, within six months of fiscal year end, to all Nationally Recognized Municipal Information Depositories (NRMIRs) designated by the SEC and to the State Information Depository (SID), if one exists. This shall include:

• Comprehensive Annual Financial Report of the Water Authority; and

• Updated tables from the Official Statement, as detailed in the Continuing Disclosure Certificate.

In addition to annual disclosure, the Water Authority shall provide ongoing information about certain enumerated events, as defined by regulation, to the MSRB and to the SID. Such notification shall be made by certified mail, with copies to the Water Authority Board.

The Water Authority shall engage a firm to assist it in ensuring timely completion and filing of annual reports and in identifying, and making timely filings with respect to, the occurrence of reportable enumerated events.

LEGAL COVENANTS

The Water Authority shall comply with all covenants and conditions contained in governing law and any legal documents entered into at the time of a bond offering.
Section XI. Debt Database Management

The Water Authority shall maintain complete information on its outstanding debt portfolio, in a spreadsheet or database program format. The information in the database shall include, but not be limited to, the following:

- Issue Name
- Initial Issue Par Amount
- Dated Date of the Issue
- Principal Maturity Amounts
- Coupon Rate by Maturity
- Amount Outstanding
- Call Provisions
- Purpose of the Issue
- Credit Enhancer, if any
- Competitive or Negotiated Sale
- Names of Underwriting Team Members
- Other?

The Water Authority shall use the debt database for the following purposes:

- Generate reports
- Gross annual debt service
- Net annual debt service
- Refunding Analyses
- Output to Fund Accounting System
9.4 Glossary of Financial Terms

ACCRUE - Accumulate or increase.

ADJUSTABLE RATE MORTGAGE (ARM) - A type of mortgage in which the interest rate paid on the outstanding balance varies according to a specific benchmark.

AD VALOREM - In proportion to the value.

AGGREGATE - Total, sum.

AMORTIZE - To liquidate a debt (such as a mortgage) by installment or payments, or payment into a sinking fund. To write off an expenditure for by prorating over a certain period.

ARBITRAGE REBATE - The ability to obtain tax-exempt bond proceeds and invest the funds in higher yielding taxable securities resulting in a profit. Generally, tax-exempt bond issues which were issued on or after September 1, 1986 are subject to the arbitrage rebate requirements.

ASSESSED VALUE - The estimated value of real estate that is used for tax purposes. This process is used for determining the value of the residence for taxation purposes.

BOND COVENANT - A contractual provision in a bond indenture. A positive covenant requires certain actions, and a negative covenant limits certain actions.

CALLABLE BOND - A Bond that can be redeemed by the issuer prior to its maturity.

CERTIFICATE OF PARTICIPATION (COPS) - A type of financing where an investor purchases a share of some form of installment payment rather than the bond being secured by a “pledge” of those revenues. This tool is commonly used when bond statutes are archaic, or no such authorizing legislation exists.

COMMERCIAL PAPER (CP) - A short-term debt instrument maturing in 270 days used by corporations and governments as a form of borrowing. When issued by the Water Authority to fund capital investments, it serves effectively as a form of variable-rate debt.

COVENANT - A binding agreement or promise as contained in a contract. The Water Authority’s borrowing documents contain many covenants. For example, its rate covenant commits the Water Authority to set rates sufficient to generate a certain amount of revenue.

CREDIT RATING - An assessment of whether an entity will be able to meet its obligations to bond holders and other investors when debt is due.

DEBT FINANCING - When a firm raises money for working capital or capital expenditures by selling bonds, bills, notes or similar instruments to individuals and/or investors. In return for lending the money, the individual or investor becomes creditors and receive a promise to repay principal and interest on the debt.

GENERAL OBLIGATION BOND - A municipal bond backed by the credit and taxing power of the issuing jurisdiction, rather than the revenue from a given project.

HEDGE - A means of protection or defense, especially against a financial loss.
ITERATIVE - Characterized by or involving repetition, recurrence or reiteration.

LIABILITIES - An obligation that legally binds an individual or company to settle a debt.

LIQUIDITY - The degree to which an asset or security can be bought or sold in the market without affecting the asset’s price. Liquidity is characterized by a high-level of trading activity. The ability to convert an asset to cash quickly. In the context of variable-rate debt, liquidity often refers to a facility by which a bank guarantees to purchase the security from an investor if another investor is not available.

MATURITY - The length of time until the principal amount of a bond must be repaid. The end of the life of a security. The date the borrower has to pay back the amount borrowed through the issue of a bond.

PAR - The nominal dollar amount assigned to a security by the issuer for a debt security. Par is the amount repaid to the investor when the bond matures.

RATINGS - SEE “CREDIT RATING”

REVENUE BOND - A municipal bond supported by the revenue from a specific project or from an enterprise such as a utility.

SECURITIES LENDING - A loan of a security from one entity who must eventually return the same security as repayment. The loan is often collateralized. Securities lending allows a broker-dealer, or corporation or a public agency in possession of a particular security to earn enhanced return on the security through finance charges.

SEQUESTRATION - A fiscal policy process that automatically reduces the federal budget across most departments and agencies; a procedure by which “across the board” spending cuts go into effect if Congress fails to agree on a deficit-reducing budget before a specific date.

STAKEHOLDER - A person, group or organization that has interest or concern in an organization.

SURETY - When used in connection with municipal debt, a policy of a bond insurer used to meet the requirement of funding a debt service reserve fund, therefore reducing the size of a bond issue.

YIELD - The rate of return on an investment, paid in dividends or interest and expressed as a percent. Yield is usually calculated by dividing the amount you receive annually in dividends or interest by the amount you spent to buy the investment.
9.5 Acronyms

AB32 - California Global Warming Solution Act of 2006

ACT - County Water Authority Act

AFO - Acoustic Fiber Optic

AGREEMENT - The Water Conservation and Transfer Agreement

AF - Acre-feet

BABs - Build America Bonds Program

BMA - Bond Market Association

CAGR - Compound Annual Growth Rate

CalPERs - California Public Employees’ Retirement System

CEQA - California Environmental Quality Act

CERBT - California Employers’ Retiree Benefit Trust

CIAC - Contributions in Aid of Construction

CIP - Capital Improvement Plan

COP - Certificate of Participation

CP - Commercial Paper

CPC - Climate Prediction Center

CSP - Carryover Storage Project

DSCR - Debt Service Coverage Ratio

DWR - Department of Water Resources

ECP - Extendable Commercial Paper

EIR - Environmental Impact Report

ESA - Endangered Species Act

ESP - Emergency Storage Project
FGIC - Financial Guaranty Insurance Company
FSTF - Fiscal Sustainability Task Force
GFOA - Government Finance Officers Association
GIC - Guaranteed Investment Contract
G.O. Bonds - General Obligation Bonds
IAC - Infrastructure Access Charge
IID - Imperial Irrigation District
JPA - Joint Powers Authority
LAIF - Local Agency Investment Fund
LRFP - Long-Range Financing Plan
LIBOR - London Interbank Offered Rate
MAF - Million Acre-Feet
M&I - Municipal and Industrial
MSRB - Municipal Securities Rulemaking Board
MWD - Metropolitan Water District of Southern California
NRMID - Nationally Recognized Municipal Information Depositories
OPEB - Other Post-Employment Benefits
PAYGO - Pay-as-you-go
PCCP - Prestressed Concrete Cylinder Pipe
QSA - Quantification Settlement Agreement
R&R - Renewal and Rehabilitation
RFP - Request for Proposal
RMWG - Rate Model Working Group
RSF - Rate Stabilization Fund

RTS - Readiness-to-Serve

SANDAG - San Diego Association of Governments

SCADA - Supervisory Control and Data Acquisition

SID - State Information Depository

SIFMA - Securities Industry and Financial Markets Association

SPEIR - Supplemental Program Environmental Impact Report

SRC - Supply Reliability Charge

SWP - State Water Project

SWRCB - State Water Resources Control Board

TECP - Tax-Exempt Commercial Paper

TSAWR - Transitional Special Agricultural Water Rate

USFWS - United States Fish and Wildlife Service

UWMP - Urban Water Management Plan

WATER FIX - Bay-Delta Conservation Plan/California Water Fix

WPA - Water Purchase Agreement

WSDRP - Water Shortage and Drought Response Plan
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WA Director: Ronald Watkins
January 20, 2016

Attention: Administrative and Finance Committee

Owner Controlled Insurance Program for the Emergency and Carryover Storage Projects. (Presentation)

Purpose
The presentation that will be made will provide information about the Owner Controlled Insurance Program that was utilized for the Emergency and Carryover Storage Projects.

Background
Previous Board Actions: On April 22, 1999, the Board approved establishing the Owner Controlled Insurance Program for the Emergency Storage Project. On September 25, 2008, the Board authorized the extension of the OCIP to cover the San Vicente Dam Raise and Carryover project.

Discussion
An Owner Controlled Insurance Program allows a project owner to obtain all or most of the required insurance coverage for a specific project, rather than have individual consultants and contractors obtain the insurance independently. For very large projects, an OCIP can be viable due to the economies of scale. This method of obtaining coverage provides the owner with significant benefits that include enhanced project safety, reduced claims experience, and reduced insurance costs. Additionally, an OCIP provides higher dedicated insurance limits for the projects and consistent coverage for all covered parties.

Insurance provided under the OCIP for the Emergency and Carryover Storage Projects included general, excess and professional liability, workers compensation, builders’ risk, and pollution liability.

With the completion of the San Vicente Marina project, the last project covered under the OCIP, closeout procedures with the various insurance carriers have been implemented. Additionally, a review of the OCIP was performed to determine if the Water Authority had achieved the benefits and goals established at its inception. All goals were successfully met. The utilization of the OCIP achieved enhanced project safety, reduced claims experience, and reduced insurance costs. Specific performance information on each of the goals will be included in the presentation.

Prepared by: Matthew S. Brown, Director of Administrative Services
Approved by: Sandra L. Kerl, Deputy General Manager
January 20, 2016

Attention: Administrative and Finance Committee

Board of Directors’ fourth quarter 2015 expenses and attendance. (Information)

Purpose
To provide a list of Board of Directors per diem and expenses claimed, and the number of formal/special Board Meetings attended during the quarter.

Discussion
The fourth quarter 2015 expenses report includes payments made during each month of the quarter, but not necessarily for all expenses incurred that quarter. Some Board members batch their claims and submit them all at once, while others submit them on a regular basis. As a result, some reimbursements include expenses incurred outside the reporting period. Board members are allowed up to ninety days to submit reimbursement for meetings attended, however no Board members have been paid per diem in excess of ten per month.

The Special Assignment column indicates Board officers and Board members who represented the Water Authority at outside boards during the fourth quarter 2015 such as: Brian Brady at Colorado River Board; Christy Guerin, Jim Madaffer and Mark Muir at SANDAG; Kenneth Olson and Elsa Saxod at SANDAG Borders Committee and SANDAG Regional Planning Committee; Doug Wilson at Colorado River Board and San Diego Area Wastewater Management District; Frank Hilliker, Keith Lewinger and John Linden at Water Conservation Garden JPA; Yen Tu and De Ana Verbeke at Conservation Action Committee.

The attendance report shows the number of formal and special Board meetings held during the fourth quarter 2015 and the attendance record of each Board member.

Prepared by: Delecia Odavar, Accounting Assistant II
Reviewed by: Melinda Cogle, Clerk of the Board
Approved by: Rod Greek, Controller

Attachments: Board of Directors’ 4th Quarter 2015 Expenses
Board of Directors’ 4th Quarter 2015 Attendance
<table>
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<tr>
<th>Director</th>
<th>Per Diem Payments</th>
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**TOTALS:** $52,650.00 $6,457.38 $12,795.98 $71,903.36

This report includes expenses paid directly to or on behalf of each Director during the months of October, November and December.
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January 20, 2016

Attention: Administrative and Finance Committee

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

Purpose
The purpose of the Controller’s Report is to provide monthly financial information to the Board of Directors.

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

1. Water Sales Volumes, in acre-feet
2. Water Sales Revenues, in millions
3. Water Purchases and Treatment Costs, in millions
4. Budget Status Report
5. Operating Departments Expenditures, in millions
6. Schedule of Cash and Investments

The Budget Status Report (Attachment 4) compares actual revenues and expenditures, on a budgetary basis, for the five month period of July 1, 2015 through November 30, 2015, to the period-to-date adopted budget. Budgeted amounts for the five 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. Period-to-date budgeted revenue categories were all adjusted to reflect the expected timing of receipt. In addition, certain period-to-date budgeted expenditure categories were adjusted for periodic items and include the following: 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 revenue and is the difference between the sale of water and the cost of that water. Sales include revenues from variable commodity charges for supply, treatment and transportation, as well as from fixed charges for customer service, storage, and supply reliability (beginning calendar year 2016). Cost of water includes payments to water suppliers such as Metropolitan Water District (MWD) and Imperial Irrigation District (IID).

1 All information regarding water sales volumes, revenues and costs are based on the adopted Fiscal Years 2016 and 2017 Multi-Year Budget.
Net Water Sales Revenue for the five months ended November 30, 2015 was $84.7 million, trending $22.9 million or 37 percent higher than the period-to-date budgeted amount of $61.8 million. Conservation efforts reduced purchases of imported water supplies and continued to reduce regional water use, despite above average temperatures that made it more challenging. Detailed information relating to Net Water Sales Revenue is described below and shown on Attachments 1, 2, and 3.

Total acre-feet (AF) of water sold were budgeted to be 214,658 AF for the five months ended November 30, 2015. The actual water sales volume was 188,620 AF, trending 26,038 AF or 12 percent lower than budgeted (Attachment 1). Total Water Sales Revenue for the five months ended November 30, 2015 was $230.4 million, trending $31.6 million or 12 percent lower than the period-to-date budgeted amount of $262.0 million (Attachment 2). Through the five-month period of Fiscal Year 2016, the actual sales volume represents a 25 percent decrease when compared to the prior five-month period in Fiscal Year 2015. The decrease was due to mandatory water-use restrictions, continued water conservation efforts across the region, and the reduced need for outdoor irrigation in response to the state-mandated conservation targets.

Total Water Purchases and Treatment costs were budgeted at $200.2 million for the five months ended November 30, 2015. Actual costs were $145.7 million, trending $54.5 million or 27 percent lower than budgeted (Attachment 3). This cost category included $26.0 million for the 41,666 AF of water purchased from IID, and $31.4 million for MWD’s conveyance charges related to IID, Coachella Canal and All-American Canal water.

**Revenues and Other Income**  
As shown in Attachment 4, total Revenues and Other Income were budgeted at $29.6 million for the five month period ended November 30, 2015. Actual revenues were $28.9 million, trending $0.7 million lower than budgeted. The variance is explained in detail below.

Categories of revenues in which actual revenues trended lower than the five month period-to-date budget included Capacity Charges, Contributions in Aid of Capital Improvement Program (CIAC), Hydroelectric Revenue, Investment Income, and Water Standby Availability Charges. Actual Capacity Charges were trending $2.1 million less than the period-to-date budget due to a lower number of meter permits issued by the member agencies than anticipated. Actual CIAC revenue for the Second Aqueduct Pipeline – Caltrans Highway 76 Realignment Project was $0.8 million in fiscal year 2016, in addition to $2.9 million in fiscal year 2015 for a total amount of $3.7 million billed to the State for their contribution share of actual project costs. Hydroelectric Revenue was budgeted for the Lake Hodges Pumped Storage Facility (Hodges Hydro) and the Rancho Penasquitos Pressure Control and Hydroelectric Facility (Rancho Hydro). Actual hydroelectric revenues were trending lower than the period-to-date budget by $0.4 million because the sale of hydroelectric power generated by Rancho Hydro has not occurred this fiscal year. Rancho Hydro will continue to be impacted by reduced water demand and the resulting low flows due to the state-mandated conservation targets for regional water use. In addition, the Rancho Hydro facility was recently down for mechanical issues. Actual Investment Income and Water Standby Availability Charges were trending lower than budgeted by $0.3 million and $0.2 million, respectively, for the five months ended November 30, 2015.
Revenues and Other Income (continued)
Categories of revenues in which actual revenues trended higher than the five month period-to-date budget included Grant Reimbursements and Other Income. Grant Reimbursements revenue for Integrated Regional Water Management Program Grants (IRWMP) was trending $2.3 million higher than budgeted as a result of the timing of reimbursement receipt. Other Income was trending $0.6 million higher than budgeted due to miscellaneous and intergovernmental revenue reimbursements.

Expenditures
As shown in Attachment 4, total Expenditures were budgeted at $85.7 million for the five month period ended November 30, 2015. Actual expenditures were $72.5 million, trending $13.2 million lower than budgeted. The variance is explained in detail as follows.

Overall Operating Department expenditures shown in Attachment 5 were trending less than budgeted by $3.7 million for the five month period ended November 30, 2015 due to the timing of expenditures.

Debt Service expenditures totaled $38.4 million for the five month period ended November 30, 2015, trending $6.0 million lower than budgeted. The variance was attributed to fees on short-term debt and commercial paper interest expense trending less than budgeted. Actual Grant Expenditures were trending $2.6 million lower than the budgeted. The variance resulted from the lower-than-projected activity levels and the timing delay in expenditure recognition of pass-through IRWMP grants. Actual Equipment Replacement, Other Expenditures, and Hodges Pumped Storage were trending lower than budgeted by $0.5 million, $0.3 million, and $0.1 million, respectively.

Fiscal Year 2016 Stored Water Purchases were budgeted at $11.3 million for the purchase of 19,000 AF for the San Vicente Reservoir. Actual expenditures for the five month period ended November 30, 2015 were $10.5 million. Total year-to-date water purchases placed into storage for the San Vicente Reservoir were 18,088.3 AF.

QSA Mitigation actual expenditures for the five month period ended November 30, 2015 were $2.0 million for the advance payment made on July 1 pursuant to the QSA JPA Creation and Funding Agreement.

CIP Expenditures
Attachment 4 shows that CIP Expenditures were budgeted at $30.5 million for the five month period ended November 30, 2015. Actual expenditures were $18.8 million, trending $11.7 million lower than the period-to-date budgeted amount.

Actual CIP expenditures were funded 22 percent by Pay As You Go Fund and 78 percent by CIP/Bond Construction Fund for the five month period ended November 30, 2015.
Cash and Investments
As of November 30, 2015 and October 31, 2015, the overall balance in the Water Authority’s cash and investments was $466.3 million and $489.1 million, respectively (Attachment 6). The balance reflects the $40.4 million in debt service payments on November 1, 2015 from the Operating Fund. Of the November 30, 2015 overall cash and investments balance, approximately 51 percent of funds were unrestricted with the remaining 49 percent 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 November 30, 2015, the Rate Stabilization Fund was funded at $115.8 million, approximately 97 percent of the maximum approved level of $119.1 million.

Prepared by: Jocelyn Matsuo, Senior Accountant
Reviewed by: Joy Kleber, Accounting Supervisor
Approved by: Rod Greek, Controller

Attachments:

Attachment 1 – Water Sales Volumes
Attachment 2 – Water Sales Revenues
Attachment 3 – Water Purchases and Treatment Costs
Attachment 4 – Budget Status Report
Attachment 5 – Operating Departments Expenditures
Attachment 6 – Schedule of Cash and Investments
*Budgeted amounts are based on the adopted two year budget.

Fiscal Year 2016 Cumulative Water Sales (AF)

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<td>(13,514)</td>
<td>(21,727)</td>
<td>(28,035)</td>
<td>(28,742)</td>
<td>(26,038)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cum. Actual AF</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>% Difference (b/a)</td>
<td>-27%</td>
<td>-22%</td>
<td>-19%</td>
<td>-16%</td>
<td>-12%</td>
<td></td>
<td></td>
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</tbody>
</table>

*Budgeted amounts are based on the adopted two year budget.
*Budgeted amounts are based on the adopted two year budget.

**Fiscal Year 2016 Cumulative Water Sales (in Millions $)**

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Budget (a)</em></td>
<td>59.0</td>
<td>117.5</td>
<td>172.3</td>
<td>220.7</td>
<td>262.0</td>
<td>300.2</td>
<td>336.7</td>
<td>371.0</td>
<td>410.6</td>
<td>455.9</td>
<td>507.2</td>
<td>565.8</td>
</tr>
<tr>
<td>Actual</td>
<td>44.5</td>
<td>94.3</td>
<td>141.4</td>
<td>187.7</td>
<td>230.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Difference (b)</td>
<td>-14.5</td>
<td>-23.2</td>
<td>-30.9</td>
<td>-33.0</td>
<td>-31.6</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Cum. Actual</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>% Difference (b/a)</td>
<td>-25%</td>
<td>-20%</td>
<td>-18%</td>
<td>-15%</td>
<td>-12%</td>
<td></td>
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</tr>
</tbody>
</table>

*Budgeted amounts are based on the adopted two year budget.*
Budgeted amounts are based on the adopted two year budget.

### Fiscal Year 2016 Cumulative Cost of Water Purchases and Treatment (in Millions $)

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td><em>Budget (a)</em></td>
<td>40.9</td>
<td>82.8</td>
<td>127.6</td>
<td>166.8</td>
<td>200.2</td>
<td>231.3</td>
<td>258.8</td>
<td>284.1</td>
<td>313.6</td>
<td>348.2</td>
<td>387.9</td>
<td>433.8</td>
</tr>
<tr>
<td>Actual</td>
<td>40.3</td>
<td>54.0</td>
<td>86.2</td>
<td>116.7</td>
<td>145.7</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Difference (b)</td>
<td>(0.6)</td>
<td>(28.8)</td>
<td>(41.4)</td>
<td>(50.1)</td>
<td>(54.5)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
<tr>
<td>Cum. Actual</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>% Difference (b/a)</td>
<td>-1%</td>
<td>-35%</td>
<td>-32%</td>
<td>-30%</td>
<td>-27%</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
</tr>
</tbody>
</table>

*Budgeted amounts are based on the adopted two year budget.*
### San Diego County Water Authority

#### Fiscal Year 2016 Budget Status Report

For the 5 Months Ended November 30, 2015

<table>
<thead>
<tr>
<th>[A]</th>
<th>[B] = [A * 42%]</th>
<th>[C]</th>
<th>Revenues = [B + C]</th>
<th>Expenditures = [B - C]</th>
<th>[C / A]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal Year 2016</td>
<td>Fiscal Year 2016</td>
<td>Fiscal Year 2016</td>
<td>Variance with</td>
<td>Actual/</td>
<td></td>
</tr>
<tr>
<td>Adopted</td>
<td>5 Months (42%)</td>
<td>Adopted</td>
<td>Period-to-Date</td>
<td>Adopted Budget</td>
<td></td>
</tr>
<tr>
<td>Budget</td>
<td></td>
<td>Budget</td>
<td>Period-to-Date</td>
<td>Budget</td>
<td></td>
</tr>
<tr>
<td>Net Water Sales Revenue</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Sales</td>
<td>$565,765,789</td>
<td>$261,991,214</td>
<td>(b)</td>
<td>$230,365,006</td>
<td>$31,626,208</td>
</tr>
<tr>
<td>Water Purchases &amp; Treatment</td>
<td>$433,785,145</td>
<td>$200,198,039</td>
<td>(b)</td>
<td>$145,714,776</td>
<td>$54,483,263</td>
</tr>
<tr>
<td>Total Net Water Sales Revenue</td>
<td>$131,980,644</td>
<td>$61,793,175</td>
<td></td>
<td>$84,650,230</td>
<td></td>
</tr>
</tbody>
</table>

### Revenues and Other Income

| | | | |
| Net Water Sales Revenue and Other Income | | | |
| Infrastructure Access Charges | $30,434,000 | $12,663,290 (m) | $12,663,290 | - | 42% |
| Property Taxes and In-Lieu Charges | $11,700,000 (c) | $1,636,000 (m) | $1,600,855 | (35,145) | 14% |
| Investment Income | $3,938,000 (d) | $1,869,214 (m) | $1,711,819 | (257,396) | 43% |
| Hydroelectric Revenue | $3,500,000 (e) | $1,505,000 (m) | $1,132,381 | (372,619) | 32% |
| Grant Reimbursements | $13,508,000 | | $2,266,023 | $2,266,023 | 17% |
| Build America Bonds Subsidy | $10,489,000 | $4,398,734 (o) | | $28,334 | 42% |
| Other Income | $174,000 | | | $634,924 | 365% |
| Capital Contributions: | | | | | |
| Capacity Charges | $15,500,000 (f) | $5,425,000 (m) | $3,329,462 | (2,095,538) | 21% |
| Water Standby Availability Charges | $11,250,000 (g) | $562,500 (m) | $399,184 | (163,316) | 4% |
| Contributions in Aid of Capital Improvement Program (CIAC) | $3,555,000 (h) | | $1,481,145 (m) | $791,486 | (689,659) | 22% |
| Total Revenues and Other Income | $104,048,000 | $29,612,549 | | $28,928,158 | | 28% |

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

| | | | |
| Net Water Sales Revenue and Revenues and Other Income, net | | | |
| | $236,028,644 | | | $22,172,664 | 48% |

### Expenditures

| | | | |
| Stored Water Purchases | $11,286,000 (i) | $10,527,391 (m) | $10,527,391 | - | 93% |
| Debt Service | $132,470,000 (i) | $44,846,400 (m) | $38,444,009 | $6,042,391 | 29% |
| QSA Mitigation | $11,016,000 (j) | $2,000,000 (m) | $2,000,000 | - | 18% |
| Hodges Pumped Storage | $2,058,000 | $864,360 | $721,442 | $142,918 | 35% |
| Equipment Replacement | $2,852,000 | $1,197,840 | $740,771 | $457,069 | 26% |
| Grant Expenditures | $14,208,000 | $5,967,360 | $3,372,426 | $2,594,934 | 24% |
| Other Expenditures | $500,000 | | $210,000 | $306,301 | -19% |
| Operating Departments (see detail below) | $47,329,845 | $20,479,987 | $16,767,080 | $3,712,907 | 35% |
| Total Expenditures | $221,719,845 | $85,733,338 | | $72,476,588 | | 33% |

### Net Revenues Before CIP

| | | | |
| Net Revenues Before CIP | | | |
| | $14,308,799 | $5,672,386 | | $41,101,800 | | 287% |

### CIP Expenditures

| | | | |
| CIP Expenditures | | | |
| | $72,641,000 | $30,509,220 | | $18,786,930 | | 11,722,290 | 26% |

### CIP Expenditures by Funding Source

| | | | |
| CIP Expenditures by Funding Source | | | |
| Pay As You Go Fund | | | |
| | $4,205,490 | | | | 22% |
| CIP/Bond Construction Fund | | | |
| | $14,581,440 | | | | 78% |
| Total CIP Expenditures by Funding Source | | | |
| | $18,786,930 | | | | | |

### Operating Departments Detail (see Attachment E)

| | | | | |
| Administrative Services | $7,176,550 | $3,460,748 (m) | $3,046,019 | $414,729 | 42% |
| Colorado River Program | $1,585,436 | $820,738 (m) | $666,390 | $154,348 | 42% |
| Engineering | $3,521,066 | $1,478,848 | $1,236,608 | $242,240 | 35% |
| Finance | $2,324,918 | $976,466 | $918,604 | $57,862 | 40% |
| General Counsel | $3,732,627 | $1,567,703 | $1,048,962 | $518,741 | 28% |
| General Manager & Board of Directors | $2,895,116 | $1,215,949 | $972,568 | $243,381 | 34% |
| MWD Program | $2,034,211 | $854,369 | $606,338 | $248,031 | 36% |
| Operations & Maintenance | $15,710,094 | $6,598,239 | $5,578,065 | $1,020,174 | 36% |
| Public Outreach and Conservation | $3,493,863 | $1,826,564 | $1,478,945 (n) | $347,619 | 34% |
| Water Resources | $4,000,864 | $1,680,363 | $1,214,581 | $465,782 | 30% |
| Total Operating Departments | $47,329,845 (k) | $20,479,987 | | $16,767,080 | | 3,712,907 | 35% |
Notes to the Budget Status Report:

a) Period-to-date budgeted amounts are 5/12ths (42%) of Fiscal Year 2016 adopted 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 $499,986 for fiscal year 2016 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 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.
j) The QSA mitigation payments includes: QSA JPA Fiscal Year 2016 contributions of $2,000,000 due July 2015 and $6,076,346 due December 2015; QSA JPA Fiscal Year 2017 contributions of $1,800,000 due July 2016 and $8,254,386 due December 2016; IID Socioeconomic Mitigation Settlement payments of $2,940,000 due June 2016 and June 2017.
k) Amounts include capital equipment purchases.
l) Stored water purchases budgeted to purchase 19,000 AF and 38,000 AF in Fiscal Years 2016 and 2017, respectively, to fill San Vicente Reservoir upon completion of the dam certification by the State of California.
m) Period-to-date budgeted amounts adjusted based on items occurring on a periodic basis.
n) Fiscal Year 2016 actual amounts for Public Outreach and Conservation excludes expenses of $535,539 funded by the approved prior year carryover of funds.
o) 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 by $384,301 for Fiscal Year 2016.
San Diego County Water Authority
Comparison of Adopted Budget and Period-to-Date Adopted Budget (42% Overall)
to Actual Operating Expenditures by Departments
For the 5 Months Ended November 30, 2015

Actual Operating Expenditures to Adopted Budget in Percentages (%)

Adopted Budget FY 2016 $47.3 Million
Period-To-Date Adopted Budget $20.5 Million
Period-to-Date Actual Operating Expenditures $16.8 Million
San Diego County Water Authority  
Schedule of Cash and Investments  
As of November 30, and October 31, 2015

<table>
<thead>
<tr>
<th>Fund</th>
<th>November</th>
<th>October</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Fund</td>
<td>$42,561,756</td>
<td>$64,952,155</td>
<td>$73,700,000</td>
</tr>
<tr>
<td>Stored Water Fund</td>
<td>73,635,973</td>
<td>73,596,055</td>
<td></td>
</tr>
<tr>
<td>Equipment Replacement Fund</td>
<td>4,215,753</td>
<td>4,541,746</td>
<td></td>
</tr>
<tr>
<td>Rate Stabilization Fund</td>
<td>115,751,941</td>
<td>115,689,192</td>
<td>79,100,000</td>
</tr>
<tr>
<td><strong>Total Unrestricted Funds</strong></td>
<td><strong>51%</strong></td>
<td><strong>236,165,423</strong></td>
<td><strong>258,779,148</strong></td>
</tr>
<tr>
<td>Pay As You Go Fund</td>
<td>150,122,130</td>
<td>146,548,901</td>
<td></td>
</tr>
<tr>
<td>CIP/Bond Construction Funds</td>
<td>67,744,047</td>
<td>71,563,634</td>
<td></td>
</tr>
<tr>
<td>Debt Service Reserve Funds</td>
<td>12,240,775</td>
<td>12,240,775</td>
<td></td>
</tr>
<tr>
<td><strong>Total Restricted Funds</strong></td>
<td><strong>49%</strong></td>
<td><strong>230,106,952</strong></td>
<td><strong>230,353,310</strong></td>
</tr>
<tr>
<td>Total Cash and Investments</td>
<td><strong>$466,272,375</strong></td>
<td><strong>$489,132,458</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 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 146% of the targeted value of $79,100,000 and 97% of the maximum balance of $119,100,000.
FEBRUARY 2016

• 03 MWD Delegates Meeting at 11:00 a.m.
• 11 Special Board Meeting – General Counsel Recruitment at 1:30 p.m.
• 25 Committees begin at 9:00 a.m.
  Formal Board meeting begins at 3:00 p.m.

MARCH 2016

• 02 MWD Delegates Meeting at 11:00 a.m.
• 10 Tentative Special Board Meeting at 1:30 p.m.
• 24 Committees begin at 9:00 a.m.
  Formal Board meeting begins at 3:00 p.m.

APRIL 2016

• 06 MWD Delegates Meeting at 11:00 a.m.
• 14 Tentative Special Board Meeting at 1:30 p.m.
• 28 Committees begin at 9:00 a.m.
  Formal Board meeting begins at 3:00 p.m.
LEGISLATION, CONSERVATION AND OUTREACH COMMITTEE

AGENDA FOR

JANUARY 28, 2016

Gary Croucher – Chair    Jim Madaffer
Christy Guerin – Vice Chair    Ron Morrison
Fern Steiner – Vice Chair    Mark Muir
David Barnum    Jose Preciado
Ed Gallo    Dave Roberts
Matt Hall    Elsa Saxod
Frank Hilliker    Yen Tu

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. Professional Services Contract with Hoch Consulting for Grant Administration Services. Kelly Mooney
   Staff recommendation: Award a four-year professional services contract with an option for two additional years to Hoch Consulting for grant administration services in the amount of $768,000. (Action)

II. ACTION/DISCUSSION/PRESENTATION

1. Legislative issues.
   1-A Washington report by Ken Carpi. (written report only: supplemental materials) Glenn Farrel
   1-B Sacramento report by V. John White – V. John White Associates
2. Water Authority Sponsorship of Legislation in the 2016 State Legislative Session.
   **Staff recommendations:**
   a. Sponsor legislation during 2016 to ensure that drought-sustainable local water supplies are afforded appropriate crediting or adjustment against any mandatory water use reductions imposed by the state.
   b. Sponsor legislation during 2016 to improve the State Water Resources Control Board’s drought emergency regulation implementation process. (Action)

3. Federal Legislative Priorities for 2016. (Discussion)  
   Glenn Farrel

III. INFORMATION

1. Drought Response Communications and Outreach Update.  
   Jason Foster
2. Government Relations Update.  
   Glenn Farrel

IV. CLOSED SESSION

V. ADJOURNMENT  
   Melinda Cogle  
   Clerk of the Board

**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.
January 20, 2016

Attention: Legislation, Conservation and Outreach Committee

Progress Report on the Legislation, Conservation and Outreach Committee Work Plan for calendar years 2015 and 2016. (Information)

Purpose
This information item provides a progress report on the Legislation, Conservation and Outreach Committee Work Plan for calendar years 2015 and 2016.

Background
Previous Board action: On March 26, 2015, the Board adopted the Legislation, Conservation and Outreach Committee Work Plan for calendar years 2015 and 2016.

Discussion
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.

The attached report lists the Legislation, Conservation and Outreach Committee Work Plan for calendar years 2015 and 2016 and provides an update on the activities taken toward achieving the work plan. The work plan was prepared under the direction of the Legislation, Conservation and Outreach Committee Chair and Vice Chairs. A final report on the work plan will be provided to the Board in December 2016.

Prepared by: Jason Foster, Director of Public Outreach and Conservation
Reviewed by: Gary Croucher, Chair, Legislation, Conservation and Outreach Committee

Attachment:
1. Progress Report on the Committee Work Plan
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)

**Activities:**
Regional per-capita water use was calculated at 143 gallons per day for the fiscal year ending in June 2015, and continued to decline as the region increased water conservation efforts to comply with state-mandated emergency water-use reductions that took effect in June.

In January 2015, the Committee reviewed the status and provided input to staff on the WaterSmart Turf Replacement Rebate Program and the Pilot Artificial Turf Discount Program.

In April 2015, the Committee approved and recommended to the full Board executing a two-year professional services agreement in an amount not-to-exceed $468,412 with Mission Resource Conservation District to implement the WaterSmart Field Services Program through June 30, 2017, with an option for a two-year extension.

In May 2015, the Committee approved and recommended to the full Board an amendment to professional services contract with DeLorenzo International (DLI) to increase the contract value by $455,000 to a not-to-exceed amount of $744,000 and extend the term for two years from July 1, 2015 through June 30, 2017 for implementation services for the WaterSmart Landscape Makeover Program.

In May 2015, the Committee approved and recommended to the full Board executing a three-year professional services agreement with Mission Resource Conservation District in an amount not-to-exceed $470,000 to administer the Agricultural Water Management Program.

In July 2015, the Committee reviewed and provided input to staff on water conservation measures at Water Authority facilities.

In August 2015, the Committee hosted a special meeting to review and provide feedback to staff on water conservation opportunities for disadvantaged communities in the Water Authority’s service area.

In October 2015, the Committee reviewed the development of the Sustainable Landscapes Program, a grant-funded partnership program highlighting the emerging direction of water-efficient landscape education and upgrade incentives.
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)

**Activities:**
In January 2015, the Committee approved and recommended to the full Board executing an amendment to a partnership agreement with San Diego Gas & Electric to increase the agreement amount by $339,640, and extend the agreement by one year. The amendment allowed an additional distribution system audit to be performed as part of the Leak Loss Detection Program, and it provided additional time to complete post-installation data reporting and verification for the WaterSmart Landscape Efficiency Program.

In February 2015, the Committee approved and recommended to the full Board adoption of a resolution directing staff to apply for a 2015 WaterSMART grant from the U.S. Bureau of Reclamation seeking $300,000 in federal funds to continue the WaterSmart Turf Replacement Rebate Program. The Water Authority’s grant application was not selected for funding.

In April 2015, the Committee reviewed Water Authority drought response outreach and conservation activities, including a pending application for approximately $7 million in Integrated Regional Water Management Proposition 84 Final Round grant funding to support a variety of water conservation and outreach programs. The Department of Water Resources announced preliminary approval in fall 2015 for the Water Authority to receive approximately $3.8 million to support sustainable landscaping incentives, water-use audits and surveys, a correctional facility water efficiency retrofit project, an agricultural soil mapping and moisture-sensing project to improve irrigation efficiency, and water conservation outreach and education activities. DWR’s final award announcement is expected in early 2016.

In September 2015, the Committee approved and recommended to the full Board executing an agreement with the County of San Diego to allow the pass-through of $160,000 from a Department of Water Resources Integrated Regional Water Management Proposition 84 grant for the installation of water-efficient devices at the County of San Diego’s Kearny Mesa Juvenile Detention Facility.

3. **Partnerships** – Review and encourage partnerships with private or nonprofit organizations that generate value-added to regional conservation initiatives. (December 2016 – Goal #3)

**Activities**
In January 2015, the Committee reviewed the status and provided input to staff on the Pilot Artificial Turf Discount Program. The pilot program launched in February 2015 and featured a 10 percent discount on turf materials and installation from participating artificial turf retailers.
In February 2015, the Committee reviewed the status of several landscape education-related programs, including the seasonal San Diego County Garden-Friendly Plant Fairs hosted by the Water Authority and member agencies in partnership with The Home Depot.

The Committee also received monthly Drought Response Outreach Update reports throughout 2015, reviewing and providing input to staff on a variety of drought response activities, including community partnerships to support the When in Drought campaign.

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)

**Activities**

In March, June, September and December 2015, the Committee received quarterly reports of Public Outreach and Conservation Department activities, including updates on regional participation in MWD-administered conservation programs.

In response to drought, MWD increased its fiscal years 2015-2016 budget for conservation programs from the original $60 million at the start of July 2014 eventually to a total of $450 million in May 2015. The Water Authority’s financial contribution to support MWD’s FY 2015-2016 conservation program is approximately $107 million. Overall, the region has received approximately $38.1 million in MWD-administered incentives and rebates from the start of this budget cycle through December 2015.

**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)

**Activities**

The Committee received monthly Drought Response Outreach Update reports throughout 2015, reviewing and providing input to staff on a variety of activities including advertising and other tactics for the “When in Drought: Save Every Day, Every Way” outreach campaign, content and navigation improvements for the When in Drought web portal and WaterSmartSD.org regional water conservation website, community partnerships and enhancements to water-efficient landscape education classes and programs.

In May 2015, Committee members participated in special Board meeting focused on drought response at which the Board approved $1 million to support additional resources, programs and actions to help the Water Authority and its 24 member agencies achieve new state-mandated reductions in water use that took effect June 1, 2015. The funding supported enhanced advertising, the development of a water waste reporting smartphone application, expanding the availability of home water-use
surveys, creating an online version of the Water Authority’s award-winning WaterSmart Landscape Makeover Series classes, and developing a water efficiency training and certification program for landscape professionals.

In June 2015, the Committee reviewed and provided input to staff on turf replacement rebate programs and alternative approaches for drought response and ensuring water supply reliability.

**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)

   **Activities**
   The Committee reviewed and sought input on proposed federal legislative priorities for 2015 in January 2015. In February 2015, the Committee approved and recommended to the full Board a final set of federal legislative priorities for 2015.

   In October 2015, the Committee reviewed and sought input on proposed Legislative Policy Guidelines for 2016. In December 2015, the Committee leadership participated in a detailed briefing and discussion of the proposed Legislative Policy Guidelines through the LCO pre-brief meeting. At the December 2015 Board meeting, the Committee approved and recommended to the full Board a final set of Legislative Policy Guidelines for 2016, which was approved.

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)

   **Activities**
   In February 2015, Water Authority Board members, including members of the Committee, adopted a 2015-2016 Bay-Delta Workplan.

   In April 2015, Water Authority Board members, including members of the Committee, reviewed the state treasurer's assessment of the affordability and financing considerations of the Bay Delta Conveyance Facility.

   In July 2015, Water Authority Board members, including members of the Committee, received an overview of the history and current direction of water reliability activities in the Bay-Delta.

   In August 2015, Water Authority Board members, including members of the Committee, participated in a briefing on the California WaterFix proposal conducted by California Natural Resources Secretary John Laird and Deputy Secretary for Water Policy Karla Nemeth.

   In September 2015, Water Authority Board members, including members of the Committee, reviewed the Bay Delta Conservation Plan/California WaterFix Partially Recirculated Draft Environmental Impact Report/Supplemental Draft Environmental
Impact Statement and provided input on issues to include in the Water Authority’s comment letter to the Department of Water Resources on the PRDEIR/SDEIS.

In October 2015, Water Authority Board members, including members of the Committee, reviewed the Water Authority’s comment letter to the Department of Water Resources on the PRDEIR/SDEIS.

In December 2015, Water Authority Board members, including members of the Committee, reviewed and provided input to staff on the potential cost impacts to the Water Authority from the Bay Delta Conservation Plan/California WaterFix.

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)

**Activities**

In May 2015 and during November/December 2015, Committee members participated in a legislative advocacy visit to Sacramento and in a series of legislative briefings in the district offices of the San Diego legislative delegation. During those legislative briefings, Committee members discussed the importance of developing new local and regional water supplies to create greater regional self-sufficiency, and the extent to which Proposition 1 bond funds could be instrumental in moving some of those projects forward.

The Committee also participated in two legislative roundtables:

- May 29, 2015: Senator Marty Block and Assemblymember Brian Jones
- October 16, 2015: Assembly Speaker Toni Atkins

Discussions during the legislative roundtables emphasized the importance of developing new local and regional water supplies, and the extent to which water bond funding could be available to continue making regional progress.

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)

**Activities**

In May 2015 and during November and December 2015, Committee members participated in a legislative advocacy visit to Sacramento and in a series of briefings in the district offices of the San Diego legislative delegation. During those legislative briefings, Committee members discussed the importance of developing new local and regional water supplies to create greater regional self-sufficiency, and the extent to which state funding assistance, such as through Proposition 1 bond funds, could be instrumental in moving some of those projects forward.
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)

**Activities**
In September 2015, representatives of the LCO Committee participated in a legislative advocacy trip to Washington, D.C., sponsored by the San Diego Regional Chamber of Commerce. During meetings and briefings sessions, Committee members encouraged federal funding for regional water projects.

In October 2015, the Committee reviewed and sought input on proposed Legislative Policy Guidelines for 2016. In December 2015, the Committee leadership participated in a detailed briefing and discussion of the proposed Legislative Policy Guidelines through the LCO pre-brief meeting. At December 2015 Board meeting, the Committee approved and recommended to the full Board a final set of Legislative Policy Guidelines for 2016. Within the updated guidelines, the Committee approved modifications to reflect Board policy direction to encourage federal legislation that would revitalize the Title XVI federal funding authorization program.

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)

**Activities**
In May 2015 and during November and December 2015, Committee members participated in a legislative advocacy visit to Sacramento and in a series of legislative briefings in the district offices of the San Diego legislative delegation.

In September 2015, representatives of the LCO Committee participated in a legislative advocacy trip to Washington, D.C., sponsored by the San Diego Regional Chamber of Commerce.

The Committee also participated in two legislative roundtables:

- May 29, 2015: Senator Marty Block and Assemblymember Brian Jones
- October 16, 2015: Assembly Speaker Toni Atkins

**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)

Activities
The Water Authority conducted a public opinion poll in March 2015 that found three of the four targets related to items 1a through 1d were being achieved, and support for the fourth was increasing. The poll found:

1a. 67 percent of residents felt the water service they received was an “excellent” or “good” value;
1b. 84 percent of residents supported the Water Authority’s long-term overall water supply diversification strategy;
1c. 87 percent of residents agreed that it was their civic duty to use water efficiently (up from 82 percent in 2014); and
1d. 73 percent of residents supported the idea of using advanced treated recycled water as an addition to the existing supply of drinking water.

In March, June, September and December 2015, the Committee received quarterly reports of Public Outreach and Conservation Department activities, including activities designed to raise awareness and support for the Water Authority’s diversification strategy and related issues.

In July 2015, the Committee reviewed the status and provided input to staff on Citizens Water Academy program activities.

In August 2015, the Committee reviewed and provided input to staff on the updated standard community presentation on the Water Authority, which focuses on the region’s supply diversification strategy, drought response, and MWD rate litigation.

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)

Activities
In March, June and December 2015, the Committee received and reviewed Small Contractor Outreach and Opportunity Program (SCOOP) quarterly reports.

In August 2015, the Committee reviewed the history and provided input to staff on the current direction of SCOOP.
In September 2015, the Committee reviewed the SCOOP annual report. SCOOP exceeded the Board’s established target for fiscal year 2015, achieving 63 percent small-business participation.

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)

**Activities**

Over calendar year 2015, the Water Authority’s education program reached 59,261 students and 2,342 teachers, surpassing the annual target.

In April 2015 the Committee approved and recommended to the full Board an amendment to the professional services contract with Building Blocks Entertainment, Inc. to conduct elementary school assemblies. The amendment was to increase the contract value by $80,000 to a not-to-exceed amount of $230,000 and to extend the contract for two years. The amended contract would terminate on June 30, 2017.

**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)

**Activities**

In August 2015 the Committee reviewed and provided input to staff on the updated standard community presentation on the Water Authority, which focuses on the region’s supply diversification strategy, drought response, and MWD rate litigation.

**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)

**Activities**

During 2015, the Committee actively engaged in shaping and directing staff activities relative to the successful sponsorship of three bills during the state legislative session. All three bills sponsored by the Water Authority were approved by the Legislature and signed into law by the Governor:

- AB 149 (Chavez)
- AB 349 (Gonzalez)
- SB 208 (Lara)

In February 2015, the Committee approved and recommended to the full Board the following positions on bills:

Oppose on SB 143 (Stone)
In March 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support if Amended on AB 88 (Gomez)
- Support on AB 401 (Dodd)
- Support if Amended on AB 585 (Melendez)
- Support on AB 603 (Salas)
- Support and Seek Amendments on AB 606 (Levine)
- Support on SB 385 (Hueso)
- Support and Seek Amendments on SB 553 (Wolk)

In April 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support if Amended on AB 645 (Williams)
- Support on AB 723 (Rendon)
- Support if Amended on AB 1095 (Garcia)
- Support if Amended on AB 1332 (Quirk)
- Support if Amended on AB 1333 (Quirk)
- Support and Seek Amendments on SB 317 (DeLeon)
- Support if Amended on SB 350 (DeLeon)
- Support and Seek Amendments on SB 555 (Wolk)

In May 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support on AB 1139 (Campos)
- Support and Seek Amendments on AB 1201 (Salas)
- Support on AB 1325 (Salas)
- Support on SB 286 (Hertzberg)
- Support if Amended on SB 551 (Wolk)

In June 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support if Amended on SB 664 (Hertzberg)
- Support on SB 758 (Block)

In July 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support on AB 392 (Atkins)
- Support on AB 1164 (Gatto)
- Support on SB 7 (Wolk)
- Oppose on SB 789 (Wieckowski)

In August 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support and Seek Amendments on S. 1894 (Feinstein)

In October 2015, the Committee approved and recommended to the full Board the following positions on bills:
- Support on AB 33 (Quirk)
In December 2015, the Committee approved and recommended to the full Board to co-sponsor Legislative Proposal #1 to help create an improved path forward for large-scale energy projects, including hydropower pumped storage. The Committee also approved and recommended to the full Board undertaking additionally recommended actions to make progress on the legislative proposals not recommended for bill sponsorship in 2016.

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)

   **Activities**
   In February 2015, the Committee reviewed and provided input to staff on recommended topic areas for the 2015 public opinion poll.

   In April 2015, the Committee received and discussed the findings of the 2015 public opinion poll.

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)

   **Activities**
   The Committee expects to discuss this issue in spring 2016.
January 20, 2016

Attention: Legislation, Conservation and Outreach Committee

Professional Services Contract with Hoch Consulting for Grant Administration Services. (Action)

Staff recommendation
Award a four-year professional services contract with an option for two additional years to Hoch Consulting for grant administration services in the amount of $768,000.

Alternative
Do not award a professional services contract to Hoch Consulting.

Fiscal Impact
There are sufficient funds in the Water Authority’s adopted fiscal years 2016 and 2017 operating budget. Funding for future fiscal years is contingent upon Board approval of the proposed operating budgets for subsequent years. A portion of the funds will be reimbursed by the grants. Customer Service is the related rate category.

Background
The Water Authority’s Board-approved Water Use Efficiency Policy Principles and 2014-2019 Business Plan direct staff to obtain grant funding from local, state, and federal sources to help support conservation programs. Currently, the Public Outreach and Conservation (POC) Department has existing and pending grant awards with a value of more than $9 million (see Table 1) and contract terms through 2019. Several of the grants listed in Table 1 also require an annual post-performance report for up to 10 years from the date of project implementation.

<table>
<thead>
<tr>
<th>Grantor</th>
<th>Program/Initiative</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>DWR IRWM Proposition 50</td>
<td>Landscape &amp; Agriculture Efficiency Programs</td>
<td>$2,035,843</td>
</tr>
<tr>
<td>DWR Proposition 50, Drought Response Outreach Program</td>
<td>Field Services, Landscape Makeover Classes, Landscape Technical Assistance, Communication and Outreach</td>
<td>$1,066,725</td>
</tr>
<tr>
<td>DWR IRWM Proposition 84, Round 1</td>
<td>Sustainable Landscapes Program</td>
<td>$1,050,000</td>
</tr>
</tbody>
</table>
In addition to the existing awards, it is anticipated that the San Diego Integrated Regional Water Management (IRWM) region will be eligible for approximately $38 million in new Proposition 1 grant funding. The Water Authority anticipates applying for a portion of the Proposition 1 grant funding, as well as other local, state, and federal grant funding, to continue to support water use efficiency programs and initiatives.

**Discussion**

Every grant has unique terms and reporting requirements that vary in complexity between local, state, and federal funding sources. Over the last three years, the Water Authority’s aggressive efforts to secure grant funding have resulted in an increase in the number of grant awards. The assistance of a professional firm to provide grant administration services allows Water Authority staff to focus their time on program implementation, customer service, and providing technical assistance to member agencies. The grant administration services would include, but would not be limited to the following:

- Analyze and make recommendations on future grant opportunities
- Prepare and submit grant applications in accordance with each grant application’s submittal guidelines and templates
- Coordinate meetings and solicit input from Water Authority staff, grantor, IRWM Grants Administrator, partnering Local Project Partners, and others as needed
- Process and prepare invoices for submittal
- Process and prepare progress reports, project completion reports, and post-project performance reports
- Review reporting packages for financial accuracy and consistency with financial agreements
- Prepare DWR grant-related documents for submittal
- Coordinate, prepare, and submit Project Monitoring Plans
- Track and monitor grant budgets for inclusion in progress reports
- Process and prepare project amendments
- Organize and maintain grant-related documents and records
• Compile support documents and process details requested during an audit
• Track, update, and maintain information in the Local Project Partner agreements

On November 10, 2015, the Water Authority issued a competitive Request for Proposals and distributed the RFP to 348 firms registered through the Network Bid System. A pre-proposal meeting was held on November 18, 2015. Two firms attended the pre-proposal meeting. One firm, Hoch Consulting, submitted a proposal. A five-member panel evaluated the proposal and conducted an oral interview with Hoch Consulting on January 8, 2016. Based on the results of the panel’s evaluation of Hoch Consulting’s written proposal, experience with similar projects, qualifications and oral interview, including their technical expertise and experience producing documents that adhere to state and federal grant requirements, the panel recommended Hoch Consulting to provide the grant administration services.

The proposed contract term is four years, with years three and four contingent upon approval of the Water Authority’s operating budget for fiscal years 2018 and 2019. At the sole discretion of the Water Authority, the contract may be extended for up to two additional years (fiscal years 2020 and 2021) which would extend the total contract term to six years. Actual expenditures under this contract will reflect the number and complexity of grants secured that require administrative support.

Due to the limited scope of this project, SCOOP outreach was not required. However, Hoch Consulting is a SCOOP-certified civil engineering firm.

Prepared by: Kelly Mooney, Water Resources Specialist
Reviewed by: Jeff Stephenson, Principal Water Resources Specialist
Reviewed by: Jason Foster, Director of Public Outreach and Conservation
Approved by: Dennis A. Cushman, Assistant General Manager
January 20, 2016

Attention: Legislation, Conservation and Outreach Committee

Water Authority Sponsorship of Legislation in the 2016 State Legislative Session. (Action)

Staff Recommendation

- Sponsor legislation during 2016 to ensure that drought-sustainable local water supplies are afforded appropriate crediting or adjustment against any mandatory water use reductions imposed by the state.

- Sponsor legislation during 2016 to improve the State Water Resource Control Board’s drought emergency regulation implementation process.

Alternatives

1. Do not sponsor one or more of the recommended legislative proposals.

2. Modify the focus or direction of one or more of the recommended legislative proposals.

Fiscal Impact

There is no direct fiscal impact.

Background

Previous Board action: On December 10, 2015, the Board authorized sponsorship of legislation in 2016 to help create an improved path forward for large-scale energy projects, including hydropower pumped storage.

Discussion

During the Board’s discussion at its December 10, 2015 meeting, there was agreement to defer consideration until January of bill sponsorship related to the ongoing drought regulatory framework imposed by the State Water Resources Control Board (SWRCB), to allow appropriate monitoring of development and consideration of the SWRCB’s next iteration of regulatory proposals. Since legislative language is due to the Legislative Counsel Bureau prior to the SWRCB hearing and decision on the proposed drought regulations and extension on February 2, staff has evaluated two legislative proposals for possible sponsorship of legislation during the 2016 state legislative session:

<table>
<thead>
<tr>
<th>LEGISLATIVE PROPOSAL</th>
<th>RECOMMENDED FOR BILL SPONSORSHIP IN 2016?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Create balanced achievement of mandated water use reductions through application of a drought-sustainable water supply offset.</td>
<td>YES – Sponsor legislation to ensure that drought-sustainable local water supplies are afforded appropriate crediting or adjustment against any mandatory water use reductions that may be imposed by the state.</td>
</tr>
</tbody>
</table>
PROPOSAL #1 – Create balanced achievement of mandated water use reductions through application of a drought-sustainable water supply offset

Background on Issue
On January 17, 2014, Governor Jerry Brown proclaimed a State of Emergency to exist throughout California due to severe drought conditions, and on April 25, 2014, the Governor proclaimed a continued State of Emergency to exist throughout California due to the ongoing drought. On April 1, 2015, the Governor issued Executive Order B-29-15 to:

- Direct the State Water Resources Control Board (SWRCB) to implement mandatory water reductions to reduce water usage by 25 percent.
- Increase local enforcement mechanisms to assist in realizing water reductions and discourage water waste.

In implementing the Executive Order, the SWRCB engaged in a process to develop mandatory water use reduction regulations to apply throughout the state that would seek to achieve the aggregated 25 percent reduction in water use. The Water Authority and its member agencies engaged actively in the rule-making process during April and May 2015, leading up to the SWRCB’s eventual adoption of mandatory water use reduction regulations in May 2015.

The Water Authority expressed serious concerns regarding the SWRCB’s regulatory framework to achieve conservation savings, and focused on the potential for the regulations to actually act as a deterrent to future local water supply development, unnecessarily threatening state and regional economies. The Water Authority prepared several comment letters over the course of the rule-making process to express concerns and present reasonable and viable alternative solutions. The concerns raised by the Water Authority included the following:

- The proposed regulatory framework is contrary to State policy to reduce dependence on the Bay-Delta by discouraging investment in local water supplies.
- The proposed regulatory framework fails to consider the economic impacts of targeting the commercial, industrial, and institutional sectors.
- The proposed regulatory framework will have a devastating impact on agricultural production in areas served by urban water suppliers, which have already suffered significant reductions.

In its final regulations, the SWRCB affirmatively addressed the issue related to agricultural production in areas served by urban water suppliers, but deferred action relating to local water
supply development and providing adjustments to ensure local water supplies can be appropriately used to protect the reliability of “process water” utilized by manufacturing, industrial, and commercial interests. Rather than address the issue directly in its May 2015 regulations, the order adopted by the SWRCB indicated its intent to create a working group process to address the local water supply development and other issues during the summer and fall.

The Water Authority and its member agencies actively engaged with the SWRCB staff over the past several months to advance the local water supply adjustment concept for drought-resilient supplies. On January 15, the SWRCB issued its Proposed Text of Emergency Regulation and a fact sheet summarizing the proposed modifications that will be considered at the SWRCB’s upcoming hearing on February 2.

The Water Authority’s preliminary review of the January 15 proposed emergency regulation identifies the following components:

- The proposed emergency regulation provides adjustments for climate, growth, and new local drought-resilient sources of potable supply
  - The proposed total adjustment cannot exceed 8 percent credit
  - The mandatory water conservation standard cannot drop below 8 percent
- The proposed emergency regulation provides a modified definition of commercial agriculture
  - A commercial agriculture venture must meet the definition provided in Government Code Section 51201 and produce at least $1,000 in revenue the previous year, or would normally generate at least $1,000 in revenue during year
- The proposed emergency regulation provides that the compliance period is from June 2015 to October 2016, with continued assessment of compliance on a cumulative basis since June 2015

The Water Authority staff and member agencies are continuing to analyze the January 15 proposed emergency regulation to determine whether it satisfies the previously expressed concerns. Preliminary indications are that the proposed SWRCB emergency regulation contains several elements of the proposal that the Water Authority and its member agencies, along with a coalition of water agencies, have advocated to address outstanding local water supply development issues. The Water Authority’s drought-resilient supplies proposal contains the following key elements:

- An urban water supplier may be allowed to achieve its water use reduction target through a combination of conservation and drought sustainable water supplies.
• Sustainable local water supplies can provide a maximum of 8 percent credit toward the mandatory reduction target.

• An urban water supplier’s conservation target may not drop below 8 percent to ensure a minimum level of emergency-related conservation.

• To utilize the drought sustainable supply balanced approach, an urban water supplier must provide written proof that the long-term drought-resilient supply meets the following criteria:
  
  o Written agreements, contracts, or other guarantees are in place that identifies the long-term availability of the supply to the urban water supplier
  
  o It is a drought sustainable supply, such as potable reuse, desalination, long-term transfer of conserved water, or other supply source not impacted by California’s current drought

Irrespective of the final analysis and evaluation of the January 15 proposed emergency regulation by the Water Authority staff and the member agencies, given the cyclical nature of California’s water supplies and the frequency and persistence of drought conditions, there remains an important objective to ensure that future SWRCB drought emergency actions are implemented within a reasonable established set of parameters that provide appropriate recognition and credit for communities’ investments in drought-resilient local water supplies.

Recommended Approach
Staff recommends the Water Authority sponsor legislation during the 2016 legislative session to ensure that agencies investing in and developing drought-sustainable local and regional water supplies are afforded appropriate crediting or adjustment against any mandatory water use reductions that may be imposed by the state.

**PROPOSAL #2 – Improve the process for implementation of actions resulting from declaration of a drought emergency**

**Background on Issue**
Under existing law, the Governor is authorized to proclaim a state of an emergency within any area of the state that is affected or likely to be affected by conditions of disaster or of extreme peril to the safety of persons and property.1

On January 17, 2014, Governor Jerry Brown proclaimed a State of Emergency to exist throughout California due to severe drought conditions, and on April 25, 2014, the Governor proclaimed a continued State of Emergency to exist throughout California due to the ongoing drought.

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1 Government Code Sections 8625 and 8558.
The emergency proclamation and the resulting implementation of the emergency proclamation by the SWRCB covered the entire state of California, and were not specific to certain regions or communities. The statute grants broad discretion relative to geographic area within which an emergency declaration may apply, and does not require any findings to be made regarding the geographic applicability of an emergency declaration.

To implement the emergency declaration, the Governor issued Executive Order B-29-15 on April 1, 2015 to:

- Direct the State Water Resources Control Board (SWRCB) to implement mandatory water reductions to reduce urban water usage by 25 percent.
- Increase local enforcement mechanisms to assist in realizing water reductions and discourage water waste.

In implementing the Executive Order, the SWRCB engaged in a process to develop mandatory water use reduction regulations to apply throughout the state that would seek to achieve the aggregated 25 percent reduction in urban water use. The Water Authority and its member agencies engaged actively in the rule-making process during April and May 2015, leading up to the SWRCB’s eventual adoption of mandatory water use reduction regulations in May 2015.

Many communities throughout the state also engaged in the SWRCB’s regulatory process and highlighted hydrological, climatological, and regional water supply variations unique to different communities and regions throughout the state in their arguments for alternative paths to compliance with the SWRCB’s mandatory water use reduction objectives. Within the San Diego region, investments in local water supply development over the past two decades have significantly improved regional self-reliance and drought resiliency. In 2015, the Water Authority could have met 99 percent of projected San Diego County water demands even with a 15 percent shortage allocation imposed by the Metropolitan Water District. In fact, water conserved by San Diego residents and businesses is being stored in the newly-expanded San Vicente Reservoir – approximately 71,000 acre-feet of carryover supplies stored since early May 2015.

A one-size-fits-all process for executing and implementing actions related to the drought emergency is not nimble and flexible enough to recognize meaningful distinctions in water supply conditions and effects of drought on a region-by-region basis. An enhanced process that examines regional conditions and balances required actions to implement a drought emergency with the true expected effects of the dry hydrology on any particular region, would provide a more meaningful and customized implementation of actions that reflect each region’s needs and realities.
Recommended Approach
Staff recommends the Water Authority sponsor legislation during the 2016 legislative session to improve the drought emergency implementation process by requiring the SWRCB to implement a drought emergency on a county-by-county basis, giving specific consideration to the facts and circumstances prevailing within the county.

Prepared by: Glenn A. Farrel, Government Relations Manager
Approved by: Dennis A. Cushman, Assistant General Manager
January 20, 2016

Attention: Legislation, Conservation and Outreach Committee

Federal Legislative Priorities for 2016. (Information/Discussion)

Background
The context of the current fiscal and policy environment in Congress will play a significant role in the Water Authority’s efforts to successfully advance its federal legislative priorities in 2016. The Bipartisan Budget Act of 2015 and the Consolidated Appropriations Act for FY2016 (Omnibus) establish a funding framework for the coming year that will help prevent the “fiscal cliff” showdowns of recent history. This should also mute the strong desire by Republican majorities in both chambers of Congress to make deeper cuts in discretionary spending, at least until after the November 8 general election. Republicans will also continue to follow up on their promised intent to reduce federal regulations and streamline bureaucratic processes, although they will lack the necessary votes to overcome vetoes by President Obama.

On the Administration front, it is likely the President will continue to make even greater use of executive authority and the regulatory powers at his disposal over the remainder of his term in office. The White House has been evaluating additional means to secure regulatory changes outside of the normal rulemaking process while also increasing the weight it will give to environmental considerations when evaluating rules and project proposals. These actions are most likely to occur in the context of climate change and energy policies, both of which are important to the Water Authority, but could be implemented through any number of federal departments or agencies.

During an election year, it is unclear if any high priority authorization legislation will move through Congress in the next year. However, the appropriations process offers opportunities to secure eligibility and flexibility for funding to serve the Water Authority’s needs. The Water Authority’s federal legislative team will closely monitor the possibility that budget reconciliation and/or broad tax reform efforts in 2016 may produce new funding for infrastructure programs.

Following is a series of proposed federal legislative priorities on which the federal legislative team will remain active during 2016.

<table>
<thead>
<tr>
<th>Federal Legislative Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Communicate the Water Authority’s interests in federal efforts to provide relief for drought conditions in California and other western states.</td>
</tr>
<tr>
<td>2. Pursue continued federal funding appropriations for important regional water projects, including desalination and other water infrastructure programs, and participate in opportunities to revitalize the Title XVI funding program.</td>
</tr>
<tr>
<td>3. Protect the Water Authority’s Colorado River water supplies and continue to regularly apprise members of the San Diego congressional delegation of developments regarding the Water Authority’s interests in the Colorado River and QSA implementation.</td>
</tr>
</tbody>
</table>
4. Closely monitor, and engage when appropriate, in issues relative to federal tax policy, including advancing tax-exempt public financing tools and pursuing income tax credits for water conservation rebates.

5. Continue to inform the regional congressional delegation regarding the Water Authority’s energy needs and contributions, including the study and analysis of the Water Authority’s and City of San Diego’s potential San Vicente pumped hydropower storage project, and explore options for federal funding support or regulatory relief to reduce energy costs and improve energy efficiency for the Water Authority.

6. Participate and engage closely to influence the direction of emerging regulatory issues by informing the regional congressional delegation, relevant committees, and federal agencies of their impact on the Water Authority and its member agencies, and explore options to achieve regulatory relief.

7. Communicate the interests of the Water Authority and its member agencies in promoting potable reuse as a major regional water supply initiative.

8. Communicate the Water Authority’s interests in the Bay-Delta Conservation Plan/California WaterFix with the San Diego congressional delegation and other key federal officials.

FEDERAL LEGISLATIVE PRIORITIES – 2016

1. DROUGHT RESPONSE
California and the western United States continue to suffer from the effects of an historic and prolonged drought. Many interests believe these natural hydrologic conditions are exacerbated by state and federal environmental laws, regulations, and guidance that divert water from agricultural, industrial, and public uses to support preservation of threatened or endangered species, habitat preservation, water quality controls, and limit sea water intrusion into sensitive aquatic regions and underground aquifers.

Balancing the competing demands for limited water has not yet been achieved to everyone’s satisfaction. Multiple legislative efforts to address the situation in California have failed to find a consensus path forward. As recently as December 2015, renewed attempts at federal legislation for drought response and relief were pursued, but those efforts again failed to achieve traction and consensus, and a final product has again been pushed back to 2016 for additional negotiations and discussions.

Action
- The federal legislative advocates will continue to keep the Water Authority appraised of drought response negotiations and recommend opportunities to address the Water Authority’s needs.
- The federal legislative advocates will closely monitor and engage in the process to develop and advance any federal drought legislation affecting California and the western United States to protect and advance the Water Authority’s interests.
• Staff and federal legislative advocates will continue to educate the regional congressional delegation members and staff regarding the Water Authority’s needs for secure, reliable water supplies and its efforts to diversify and conserve water resources.

2. FEDERAL FUNDING

The Consolidated Appropriations Act for FY2016 (Omnibus) includes $100 million provided to the U.S. Bureau of Reclamation to address drought conditions in the western United States. This discretionary funding, some of which is anticipated to supplement the Title XVI Water Reclamation and Reuse Program, offers the best opportunity to secure new funding for infrastructure, conservation, and other water-related projects and programs. Additionally, the Omnibus provides $23.4 million for the Title XVI program and $23.4 million for EPA-administered WaterSMART grants.

The Omnibus also includes $1.39 billion for the Clean Water State Revolving Fund, down slightly from $1.42 billion in FY2015. It also includes $863 million for the Drinking Water SRF, down from $907 million in FY2015. The Omnibus continues a requirement that states reserve 10 percent of clean water revolving loan funds for “green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities.” Additionally, 10 percent of a state’s clean water revolving loan funding and 20 percent of its drinking water revolving loan funds, must be reserved for low or negative interest loans or grants to eligible communities.

The congressional ban on earmarking appropriations for specific projects continues as it has for several years. This ban has prevented the Title XVI program from funding new projects and has led to a growing effort by some stakeholders to reform the program. Some paths that have been proposed for reform include deauthorizing current projects and converting the program into an entirely discretionary program, introducing new criteria to award funding, and other changes. The San Diego Area Water Reclamation Program continues to be funded at levels which exceed any other region in the country and Congress has provided $xxx million for the program in FY 2016.

Action

• Staff and federal legislative advocates will continue to pursue opportunities for funding for desalination, water reclamation and reuse, and other programs through appropriations and budget processes.

• Staff and federal legislative advocates will continue to brief Appropriations Committee members and staff on the benefits demonstrated by the Title XVI program, in particular to the Water Authority and the San Diego region, and advocate for continued appropriations for this program.

• Staff and federal legislative advocates will continue to work with member agencies and within a broader coalition to pursue revitalization of the Title XVI funding program in a manner that is protective of existing authorizations and ongoing appropriations, but that
also provides new funding authorizations for additional regional projects.

- The Water Authority will work closely with industry associations to build support for continued meaningful federal participation in the development and construction of local and regional desalination projects.

3. PROTECTION OF COLORADO RIVER WATER SUPPLIES

The Water Authority’s water supply portfolio includes a suite of water supplies from the Colorado River. These supplies include a water conservation and transfer agreement with the Imperial Irrigation District and water conserved by two projects, the All American Canal Lining Project and the Coachella Canal Lining Project. By 2020, these water supplies are expected to produce approximately 280,000 acre-feet of regional water supplies, and comprise more than 30 percent of the Water Authority’s total water supply.

The Water Authority continues to work with other Colorado River contractors and states to develop additional Colorado River supplies and water management strategies. The Water Authority is participating in a study by the U.S. Bureau of Reclamation of overall water demand and supply conditions in the entire seven-state Colorado River Basin, with an eye toward augmenting limited Colorado River supplies. The Water Authority is also active in binational discussions with Mexico to develop a number of mutually beneficial Colorado River programs, including water conservation, seawater desalination, water storage, and environmental projects.

As drought conditions continue to stress Colorado River supplies, states along the river have shown renewed interest in protecting access to their water allocations. The Water Authority will continue to work with other Colorado River contractors and states to ensure that allocations are honored to benefit all parties.

Action
- Staff and federal legislative advocates will continue to keep members of the regional congressional delegation and staff apprised of developments in the lower Colorado River Basin, including the Authority’s activities in support of the lower Colorado River, Basin-wide studies and projects, and any efforts to alter water deliveries to contractors along the River through administrative or legislative actions.

- Staff and federal legislative advocates will continue to provide educational information to members and staff of the San Diego region’s congressional delegation, relative to how Colorado River issues are different from, or contribute to, discussions on other state water initiatives, including the California WaterFix and drought response.

- Staff and federal legislative advocates will continue to keep members and staff of the San Diego region’s congressional delegation apprised of developments related to Salton Sea restoration, including efforts to evaluate renewable energy programs within the Salton Sea area that may help to facilitate financing of air quality and habitat improvements, and progress towards a viable restoration plan.
4. FEDERAL TAX POLICY

A number of fiscal issues, related to tax reform, unfunded federal mandates, and shifting federal costs to state and local governments. Over the past several years, the Water Authority has been among a number of San Diego regional entities opposing efforts to reduce or eliminate the tax-exempt status of municipal bonds. The Administration has previously proposed various attempts to cap the value of all tax exemptions, including municipal bond interest – even retroactively – at levels that would serve as a disincentive to utilize this important financing tool. Others have suggested eliminating tax exemptions altogether. These proposals would increase infrastructure costs for local communities, as investors would demand higher interest rates on municipal bonds to offset potential new taxes. Similar proposals, such as a recently emerging proposed new Federal Reserve rule that would exclude municipal bonds from the definition of High Quality Liquid Assets, and could thus constrain investment in municipal bonds, are examples of the public finance issues that are continuing to gain traction in Washington.

Additionally, significant efforts were pursued during 2015 to clarify that rebates for water conservation programs are not considered taxable under federal income tax rules. While the coalition efforts were not successful in pursuing this important clarification during the 2015 congressional session, it is likely that efforts will be renewed in early 2016. The Water Authority’s participation in coalition efforts – including those advanced by the Western Urban Water Coalition, ACWA, and others – will provide another importance voice to making progress on this issue during 2016.

In a separate development, Congress included a pilot Water Infrastructure Finance and Innovation Authority (WIFIA) program in the Water Resources Reform and Development Act of 2014 (WRRDA) and has continued to provide funding to develop this program. While modest, water infrastructure advocates have pursued enactment of a WIFIA program for many years and sound program development – combined with wise project selections in its early years – is critical to seeing WIFIA develop into a meaningful financing tool. WIFIA will provide low-interest loans for large water projects that are unlikely to receive State Revolving Loan Fund program funding. Under the WIFIA program enacted in WRRDA, both the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency would provide loans and loan guarantees for large water projects, such as water recycling projects, seawater desalination projects, groundwater cleanup, and infrastructure rehabilitation projects.

Action

- The federal legislative advocates will continue to keep the Water Authority apprised of issues and recommend opportunities to educate and advocate with the San Diego congressional delegation, Congress, the White House, and federal agencies in response to developments.

- Staff and federal legislative advocates will continue to educate the San Diego congressional delegation and key Members of Congress regarding the importance of
preserving the current tax-free municipal bond program.

- Staff and federal legislative advocates will work closely with coalition partners to pursue income tax credit relief for taxpayers receiving water conservation rebates.
- Staff and federal legislative advocates will work in tandem with other industry associations to support the implementation of a sound WIFIA program and funding for FY2017 awards from the program.

5. ENERGY ISSUES
Hydropower pumped storage projects present a strategy to generate power during peak energy demand periods on very short notice. These projects are being considered as a renewable energy source in the context of creating greater energy storage opportunities in California. As of September 2012, the Water Authority’s Lake Hodges Hydropower Pumped Storage Project became fully operational, delivering up to 40 megawatts of electricity to the San Diego region. The Water Authority has a long-term power purchase agreement with San Diego Gas & Electric that includes terms for buying power produced by the project and a reduced rate on energy required to operate the project. In addition, the Water Authority, in partnership with the City of San Diego, is assessing the potential for significant hydropower pumped storage capabilities at the San Vicente Reservoir.

Congress has also shown a growing interest in the energy-water nexus. Legislation to formalize federal intergovernmental consultation and leadership between the Office of Management & Budget, Council on Environmental Quality, Departments of Energy and of the Interior, and the National Academy of Science could continue to be advanced during 2016.

Electricity for moving water is a major cost to the Water Authority and its member agencies. While there is a natural nexus between water use efficiency and energy efficiency, particularly in the operations of water systems, staff and the federal legislative advocates will closely evaluate any energy-water nexus initiatives that would suggest the imposition of mandates requiring specific water resources be developed by water agencies that fail to take into account local factors, such as water reliability, hydrologic and geographic characteristics, and the economic, political, public acceptance, and social environment, which can influence selection of resources and/or fails to take into account or conflicts with existing local and regional planning policies and implementation priorities.

Action
- Staff and federal legislative advocates will continue to educate the regional congressional delegation members and staff regarding the Water Authority’s energy needs and contributions.
- Staff and federal legislative advocates will work with the San Diego congressional delegation and appropriate congressional committees to explore options for further regulatory relief to reduce costs for ongoing and planned projects and operations.
6. REGULATORY ISSUES
Federal agencies continue to focus significant attention on regulatory issues involving water quality, drinking water contaminants, Clean Water Act implementation, invasive species, and the resiliency of facilities and operations to climate change. These efforts are driven primarily by the U.S. Environmental Protection Agency, but also involve the formal or consultative role of other agencies that include the Council on Environmental Quality, the U.S. Army Corps of Engineers, and the U.S. Fish and Wildlife Service, among others. These efforts have long been the subject of congressional interest, but Republican control of Congress will increase the use of congressional oversight and appropriations to affect changes in regulatory actions.

The Water Authority has worked closely with water industry associations to present a united front on regulatory issues directly affecting the Water Authority’s interests on a number of water quality and drinking water regulatory issues in the past and this will continue to be the most effective means to get the Water Authority’s issues and concerns heard. This broader effort will be combined with engaging the San Diego-area’s House delegation and both Senators regarding the specific impact of existing or proposed regulations on the Water Authority’s operations and goals.

Action
• Staff and federal legislative advocates will continue to participate and engage closely with industry association partners to ensure appropriate opportunities are taken to influence the direction of emerging regulations.
• Staff and federal legislative advocates will closely monitor regulatory proceedings and communicate Water Authority interests to the local congressional delegation and relevant committees and federal agencies.

7. POTABLE REUSE
Beginning in the early and mid-1990s, the City of San Diego began planning for a potable reuse project, and in 2012, the California Department of Public Health and the San Diego Regional Water Quality Control Board conceptually approved the City’s proposed indirect potable reuse project for surface water augmentation through San Vicente Reservoir. In addition, several Water Authority member agencies have expressed interest in potable reuse and are in the beginning stages of development projects:
• The City of San Diego is partnering with the WaterReuse Research Foundation to monitor, evaluate, and demonstrate a test plan for direct potable reuse at the City’s
advanced water treatment demonstration facility.

- In 2014, the City of Oceanside initiated an indirect potable reuse and pathogen removal study to evaluate indirect potable reuse in the Mission Basin.

- Padre Dam recently initiated a pilot testing program at its water reclamation facility and is proposing to develop potable reuse through groundwater recharge in the Santee Basin and is working with Helix Water District to evaluate potable reuse through reservoir augmentation.

- The City of Escondido recently completed a feasibility study for a reservoir augmentation project using advanced treated water from the Hale Avenue Resource Recovery Facility.

- Olivenhain MWD is evaluating conjunctive use in the San Elijo and San Dieguito groundwater basins for brackish water extraction and recharge with recycled water.

Other member agencies are also proceeding with important studies and planning, including projects involving indirect potable reuse, groundwater recharge, or reservoir augmentation.

**Action**

- The federal legislative advocates will continue to keep the Water Authority Board apprised of any developments at the federal level relating to potable reuse, and recommend actions related to any emerging opportunities to address the needs of the Water Authority and its member agencies.

- Staff and federal legislative advocates will continue to educate the regional congressional delegation members and staff regarding the needs of the Water Authority and its member agencies for secure, reliable water supplies and its efforts to diversify the region’s water supply portfolio through the advancement of potable reuse projects.

8. BAY-DELTA CONSERVATION PLAN/CALIFORNIA WATERFIX

The efforts to resolve water supply and ecosystem conflicts in the Delta have a long history in California water policy. Over the past nine years, state and federal agencies jointly worked on a potential Delta solution called the Bay-Delta Conservation Plan (BDCP). The BDCP was a federal habitat conservation plan (HCP) and state Natural Community Conservation Plan (NCCP) intended to result in long-term permits from regulatory agencies authorizing take of covered species so the export facilities may be operated in a more stable and reliable manner over a 50-year permit period. A central component of the BDCP strategy for water exporters was the construction and operation of twin tunnels to convey water from a north Delta facility on the Sacramento River and deliver it to the existing Tracy pumping plants for export south of the Delta. The state placed the estimate for the BDCP at approximately $25 billion, with at least $17 billion envisioned being paid by the water contractors, including the Water Authority through its water supply purchases from the Metropolitan Water District.
In July 2015, the Lead Agencies (the U.S. Bureau of Reclamation and the Department of Water Resources) abandoned the long-term permitting approach and released partially revised environmental documents to the BDCP, which separated the water conveyance facility from habitat restoration. The water conveyance component – now called California WaterFix – remains largely similar to the previous project envisioned under the BDCP. However – and critically – the revised project abandons the HCP/NCCP approach and the 50-year operating permits.

The Water Authority continues to seek a greater role in providing input to the BDCP/California WaterFix environmental review process, cost analysis, and technical assessments on various proposals sufficient enough to assist the Water Authority Board in making a policy decision regarding the support for a proposal(s).

**Action**

- Staff and federal legislative advocates will continue to regularly brief members of the San Diego congressional delegation to ensure there is a thorough understanding regarding the Water Authority’s interests in, and issues with, the BDCP/California WaterFix.

- Staff and federal legislative advocates will pursue opportunities for the Water Authority General Manager and Board officers to provide direct briefings on BDCP/California WaterFix-related issues during future visits to Washington.

- Staff and federal legislative advocates will continue to monitor federal advocacy efforts by the various BDCP/California WaterFix stakeholders and interested parties, and provide briefings to the Water Authority on developments within Congress and the relevant federal agencies.

Prepared by:  Glenn A. Farrel, Government Relations Manager  
Approved by:  Dennis A. Cushman, Assistant General Manager
January 20, 2016

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 activated its Water Shortage and Drought Response Plan due to worsening water supply conditions. The Water Shortage and Drought Response Plan calls for 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 have reduced the region’s vulnerability to shortages from drought conditions. That strategy, in the form of the “When in Drought: Save Every Day Every Way” outreach campaign, has been in place since April 2014 and has adapted to meet changing drought response conditions.

Discussion
This reporting period covers mid-November 2015 through mid-January 2016. 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 for this period include activities to raise awareness among stakeholders and the public of the Water Authority’s proposal to modify current statewide drought regulations by allowing water agencies to use drought-resilient supplies to help meet state-mandated savings targets, explaining the potential impacts of El Niño weather conditions on water supplies and drought regulations through community presentations and media interviews, and training landscape professionals to serve as instructors for the Qualified Water Efficient Landscaper program that will launch later this winter.

State Regulations Outreach
In late November and early December, staff conducted a variety of outreach activities related to the State Water Resource Control Board’s Emergency Regulation that sets mandatory water-use reductions for urban water agencies statewide. As part of its process for evaluating potential updates to the Emergency Regulation, the State Board asked for comments on proposed modifications to be submitted in writing by December 2. Water Authority staff engaged in a variety of activities to raise public and stakeholder awareness of and support for the Water Authority’s proposed modifications, which would allow regional and local water agencies to meet reduction targets through a combination of conservation and sustainable drinking water supplies, such as desalination, potable reuse and long-term transfers of conserved water. These activities included posting information about the proposal online, on social media and in e-newsletters, contacting business and civic associations, Citizens Water Academy alumni and members of the Business Alliance for Water, responding to media inquiries and posting a form
on the Water Authority’s website that allowed members of the public to quickly and easily send written comments via email to the State Board. Out of the 248 written comments received by the State Board statewide, 169 were from San Diego County residents, businesses and civic organizations supporting the Water Authority’s proposed changes or similar modifications.

**Community Events and Presentations:**
Water Authority management and staff delivered drought-related presentations to nine groups to provide updates and share information related to water supplies, water-use restrictions and conservation rebates. A listing of these presentations is provided in Exhibit 1.

Staff also handed out drought-related educational materials to customers throughout the month. Examples include providing magnets with conservation tips and towel rack hangers to a timeshare complex in San Diego with 25 hotel rooms and 50 timeshare units and informational materials were distributed at the Mesa College “Drought Tolerant Songs” Vocal Ensemble performances.

**Media Relations:**
The Water Authority issued two drought-related news releases during this period (See Exhibit 1) and responded to a variety of media requests related to state water-use mandates and regional water savings. Staff also responded to several print and broadcast media requests related to the potential water supply impacts of El Niño storms that hit the region in January.

**Advertising:**
Staff completed the final round of advertising to support the “When in Drought” campaign. Facebook and YouTube ads featuring real residents providing water conservation tips ran through the week of December 7. Staff is planning potential advertising strategies and schedules for 2016 to respond to updated drought conditions.

**Coordination with Member Agencies:**
The Water Authority continues to coordinate with member agencies on drought response campaign issues. Staff hosted its monthly Joint Public Information Council/Conservation Coordinators meeting with member agency representatives on December 6 and January 11.

**Conservation Programs:**
The Water Authority hosted a Qualified Water Efficient Landscaper (QWEL) “train the trainer” event for instructor certification January 13-14 at the SDG&E Energy Innovation Center and January 15 at the San Diego Girl Scouts Leadership Center near Balboa Park. The QWEL program is recognized as a USEPA WaterSense-labeled Professional Certification Program. Attendees learn how to reduce landscape water demand by becoming more water efficient in landscape design, maintenance and operation. Following the completion of the instructor certification session, the Water Authority anticipates launching full QWEL classes for landscape professionals in February.

Staff continued to work with contractors on production of the online video learning series based on the Water Authority’s award-winning WaterSmart Landscape Makeover Program. A majority of
video production has been completed and the online portal for the series is in development. Post-
production work is expected to begin in late January, with program launch in spring 2016.

Social Media and Online Resources:
Staff promoted the availability of the regional “When in Drought: Report Waste” smartphone
app at community events. As of January 6, the app had more than 1,299 downloads and had been
used to report 546 water-waste issues.

Staff continues to actively post to social media channels, including making more than 117 posts to
Facebook and more than 137 messages on Twitter. Members of the public tweeted and re-tweeted
more than 247 messages related to drought management actions, water conservation-related events
and promotions, and other topics related to conservation or drought. Since May 15, the Water
Authority’s Facebook page “likes” has increased from 1,621 to 7,539, a 365 percent increase. Over
the same period, the Water Authority’s Twitter account “followers” has risen from 1,386 to 2,003, a
45 percent increase.

As of January 6, the drought campaign web portal, www.whenindrought.org, and its subpages have
received 150,254 page views since the portal was reorganized and launched with new content on
May 21. Meanwhile, the www.WaterSmartSD.org site had more than 8,160 visits during November
and December.

Staff continues to maintain the “eGuide to a WaterSmart Lifestyle” as a living document, most
recently adding two videos: Turf Identification and Removal Tips and Garden Show Inspiration.
During November and December, the eGuide generated 16,292 page views.

Prepared by: Denise Vedder, Senior Public Affairs Manager
Reviewed by: Jason Foster, Director, Public Outreach and Conservation
Approved by: Dennis A. Cushman, Assistant General Manager

Attachment:
Exhibit 1 – Drought Outreach Activities Listing
**EXHIBIT 1**

**Drought Outreach Activities**

Mid-November 2015 to Mid-January 2016

<table>
<thead>
<tr>
<th>GROUPS RECEIVING PRESENTATIONS</th>
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<tbody>
<tr>
<td>UCSD’s PowerSave Campus Green Career Panel</td>
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<tr>
<td>SDG&amp;E Sustainability Circle</td>
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<tr>
<td>International Water &amp; Climate Forum</td>
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<tr>
<td>Carlsbad Sustainability Coalition</td>
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<td>Jewish National Fund Water Summit (x2)</td>
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<tr>
<td>Sustainability Circle - REV*Sustainability</td>
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<tr>
<td>Big Data and the Future of Open Government</td>
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<td>The California Regional Water Quality Control Board</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>NEWS RELEASES/ADVISORIES ISSUED</th>
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</thead>
<tbody>
<tr>
<td>San Diego Region Achieves 15 Percent Water Savings in November</td>
</tr>
<tr>
<td>San Diego Region Achieves 18 Percent Water Savings in December</td>
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</tbody>
</table>
January 20, 2016

Attention: Legislation, Conservation and Outreach Committee

Government Relations Update. (Information)

Purpose
This report is an update of the Water Authority’s government relations program.

Discussion

The Legislature
The Legislature returned to its regular legislative session on January 4, 2016, and immediately began work toward a January 31 deadline to consider all two-year bills that did not advance during 2015 and that presently remain in their house of origin. Those bills must pass completely through their house of origin by January 31 to remain active for the 2016 legislative session. Additionally, the deadline for submitting 2016 bill requests to the Legislative Counsel is January 22, and the bill introduction deadline is February 19.

On January 11, the California State Assembly unanimously elected Assemblymember Anthony Rendon as the next Assembly Speaker. The transition from outgoing Speaker Toni Atkins to incoming Speaker-elect Anthony Rendon is expected to occur in early March.

Proposed State Budget
On Thursday, January 7, the Governor released his proposed FY 2016-17 State Budget. The proposed State Budget provides for $122.6 billion in General Fund budget expenditures, representing an increase in expenditures of approximately 5 percent from $116.1 billion in the current budget year (several press reports use the $170 billion figure as the proposed State Budget – this higher figure also includes proposed spending from special and bond funds). The following represent several of the major budget initiatives outlined in the Governor’s spending plan:

- The proposed State Budget contains a supplemental deposit of $2 billion into the Rainy Day Fund (in addition to the statutorily-obligated amount of $1.5 billion that will be placed into the Fund). To protect against the next revenue downturn, the Governor has proposed to increase one-time funding into the Rainy Day Fund during a period of better-than-expected state revenues.

- The Governor proposes to significantly increase investments in education by increasing the per-pupil spending for K-12 students to $10,591 per pupil, which represents an increase of approximately $3,600 per student from today’s levels.

- The Governor’s proposed State Budget continues to aggressively focus on addressing climate change. The Governor proposes expenditure of $3.1 billion of cap-and-trade
revenues on a number of programs to help reduce greenhouse gas emissions. Some of the water-related funding programs within this proposed expenditure includes:

- $30 million to the California Energy Commission to implement a consumer rebate program for the replacement of energy-inefficient water-consuming appliances, such as dishwashers and washing machines.

- $20 million to the California Department of Food and Agriculture’s existing State Water Efficiency and Enhancement Program, which provides incentives to agricultural operations to invest in energy-efficient irrigation technologies that reduce greenhouse gas emissions and water use.

- $10 million to the Department of Water Resources existing Water Energy Grant Program, which reduces energy demand and greenhouse gas emissions through local projects that also support water use efficiency and conservation.

The Governor’s proposed State Budget also includes continued spending to respond to California’s prolonged drought. The proposed State Budget includes $323.1 million in one-time spending to continue immediate response to the drought. Some of the highlighted spending categories within the Governor’s proposed emergency drought response initiative include:

- $42 million to DWR for installation and removal of a temporary rock barrier in the Bay-Delta to deter salinity encroachment.

- $12 million to DWR to implement statewide actions, including operation of the drought management operations center, water transfer support, and water supply modeling.

- $5 million to DWR to continue the Save Our Water public education campaign.

- $21 million to the SWRCB for continued enforcement of drought-related water rights and water curtailment actions and grants for emergency drinking water projects.

A number of additional proposed resources-related expenditures within the Governor’s proposed State Budget are also noteworthy:

- $80 million from Proposition 1 for DWR to design and implement projects that expand habitat and suppress dust at the Salton Sea.

- $385 million from Proposition 1 for multiple state agencies to support projects consistent with the state’s ongoing obligations, including Klamath River agreement ($250 million), the Central Valley Project Improvement Act ($90 million), and the San Joaquin River settlement ($45 million).

- $3.6 million from the General Fund to the Delta Stewardship Council to implement the Delta Science Plan and incorporate the California WaterFix Delta conveyance project into the Delta Plan.
• $3 million from the General Fund to DWR to identify water delivery operational improvements in extreme conditions and evaluate long-term change impacts on statewide water supplies.

• $60 million for the Department of Fish and Wildlife to implement wetland restoration projects that provide carbon sequestration benefits, including habitat restoration projects within the California EcoRestore program to support the long-term health of the Delta’s native fish and wildlife species.

Assembly and Senate budget subcommittees will begin their deliberative processes on the Governor’s proposed State Budget in March and April. By mid-May, the Governor will propose a May Revision to the proposed State Budget, reflecting most up-to-date revenue and expenditure figures. The constitutional deadline for passage of the State Budget is June 15.

Proposed Ballot Initiative – Tiered Water Rates
On December 14, a local government coalition including the Association of California Water Agencies, the League of California Cities, and the California State Association of Counties filed a constitutional amendment with the Attorney General’s Office. The proposed constitutional amendment would create an alternative, optional funding method that local agencies could use at their discretion to finance stormwater, flood control and other water and sewer-related projects, implement lifeline rates for low-income households, and pursue conservation-based tiered water rates.

The proposed ballot initiative would amend Article X of the California Constitution to create the alternative funding mechanism, separate from the Proposition 218 requirements within Article XIII of the Constitution. Article X deals specifically with management of the state’s water supplies.

Once the Attorney General has provided the official title and summary of the proposed ballot initiative, the local government coalition has indicated that it intends to conduct polling to determine whether the proposal is viable as a ballot measure. Additionally, the coalition has indicated its intent to sponsor legislation during 2016, and has stated that the preferred path is to pursue a measure legislatively rather than through the ballot initiative process.

The local government coalition’s proposed Constitutional amendment is attached.

Drinking Water Fees
When the State Water Resources Control Board (SWRCB) inherited California’s drinking water program from the Department of Public Health in 2014, it also inherited a structural funding challenge that makes program implementation very difficult. For months, the SWRCB has been working on trying to restructure the drinking water funding program, which has traditionally been implemented through a fee-for-service structure, to create a more reliable and sustainable funding system for the program.

The SWRCB has indicated that “collecting revenue to fund the Drinking Water Program using a fee-for-service model for water systems is problematic for several reasons. The fee-for-service
model requires staff to spend disproportionately more time working on large water systems; however, most of the public water systems that are not in compliance with drinking water standards are small water systems.

Through a public workshop process, the SWRCB has proposed a flat fee model for the drinking water program with the following characteristics:

- Water systems will be charged the same per service connection fee, with minimum and maximum thresholds.
- Wholesale water systems will have a separate fee schedule based on flow usage, with minimum and maximum thresholds.
- Transient noncommunity systems will be billed a flat fee charge per system.

The range of potential drinking water fee program increases is substantial. As an example, for the City of San Diego alone, the SWRCB projects the following range of potential drinking water program fees:

<table>
<thead>
<tr>
<th>Name</th>
<th># of Service Connections</th>
<th>Status Quo</th>
<th>Option 1</th>
<th>Option 2</th>
<th>Option 3</th>
<th>Option 4</th>
</tr>
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<tbody>
<tr>
<td>City of San Diego</td>
<td>276,525</td>
<td>$64,262</td>
<td>$174,110</td>
<td>$358,156</td>
<td>$481,254</td>
<td>$500,000</td>
</tr>
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</table>

Based on the SWRCB’s data, the City of San Diego could face an increase in its drinking water program fee by nearly 700 percent. Each of the Water Authority’s member agencies faces similar large proposed drinking water program fee increases.

It is expected that the SWRCB will submit draft fee regulations by the end of January and will undertake a series of workshops around the state during February, with the objective of submitting its regulation package to the Office of Administrative Law by March 1.

Water Authority and member agency staff have been engaged within the SWRCB regulatory process on this issue, including becoming involved in a coalition effort led by the Association of California Water Agencies and the California Municipal Utilities Association, and will continue to advocate for the most reasonable drinking water program fee structure.

**Lobbist 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.

• 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.

• Conferrered 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.

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
Approved by:  Dennis A. Cushman, Assistant General Manager

November 20, 2015

VIA PERSONAL DELIVERY

Ashley Johansson, Initiative Coordinator
Office of the Attorney General
1300 I Street, 17th Floor, P.O. Box 9442 5 5
Sacramento, CA 95 814

Re: Request for Title and Summary for Proposed Initiative

Dear Ms. Johansson:

Pursuant to Article II, Section 10(d) of the California Constitution, we submit the attached proposed Initiative, entitled the "The California Water Conservation, Flood Control and Stormwater Management Act of 2016", to your office and request that your office prepare a title and summary. Included with this submission is the required proponent affidavit pursuant to sections 9001 and 9608 of the California Elections Code, along with a check for $200.00.

All inquiries or correspondence relative to this initiative should be directed to Lance H. Olson and Richard Miadich at Olson, Hagel & Fishburn, LLP, 555 Capitol Mall, Suite 1415, Sacramento, CA 95 814, (916) 442-2952.

Thank you for your assistance.

Sincerely,

Matthew Cate
Executive Director, California State Association of Counties
November 20, 2015

VIA PERSONAL DELIVERY

Ashley Johansson, Initiative Coordinator
Office of the Attorney General
1300 I Street, 17th Floor, P.O. Box 944255
Sacramento, CA 95814

Re: Request for Title and Summary for Proposed Initiative

Dear Ms. Johansson:

Pursuant to Article II, Section 10(d) of the California Constitution, we submit the attached proposed Initiative, entitled the "The California Water Conservation, Flood Control and Stormwater Management Act of 2016", to your office and request that your office prepare a title and summary. Included with this submission is the required proponent affidavit pursuant to sections 9001 and 9608 of the California Elections Code, along with a check for $200.00.

All inquiries or correspondence relative to this initiative should be directed to Lance H. Olson and Richard Miadich at Olson, Hagel & Fishburn, LLP, 555 Capitol Mall, Suite 1415, Sacramento, CA 95814, (916) 442-2952.

Thank you for your assistance.

Sincerely

Timothy Quinn
Executive Director, Association of California Water Agencies
November 20, 2015

VIA PERSONAL DELIVERY

Ashley Johansson, Initiative Coordinator
Office of the Attorney General
1300 I Street, 17th Floor, P.O. Box 944255
Sacramento, CA 95814

Re: Request for Title and Summary for Proposed Initiative

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All inquiries or correspondence relative to this initiative should be directed to Lance H. Olson and Richard Miadich at Olson, Hagel & Fishburn, LLP, 555 Capitol Mall, Suite 1415, Sacramento, CA 95814, (916) 442-2952.

Thank you for your assistance.

Sincerely,

Christopher McKenzie
Executive Director, League of California Cities
SECTION 1. Title

This measure shall be known as the California Water Conservation, Flood Control and Stormwater Management Act 2016

SECTION 2. Findings, Declarations and Purposes

A. California's historic drought and the likelihood that climate change will increase the severity of droughts and heavy floods mean California must provide local communities with the tools to further encourage conservation and discourage excessive use of water; to effectively manage and increase water supplies; to capture, clean and eliminate pollution from local water sources; and to better protect people and property from the dangers of floods.

B. Effective local management of water supplies includes authorizing local agencies to design rates to encourage water conservation and discourage excessive use of water.

C. Local agencies should also invest in infrastructure to capture and clean water polluted by toxic chemicals and trash; recycle and reuse rainwater and stormwater runoff; and to prevent toxic stormwater and urban runoff from contaminating sources of drinking water, including rivers, lakes, streams, and groundwater, and polluting beaches, coastal waters, and wetlands.

D. California must also improve local flood control by better capturing and managing storm and flood waters and upgrading storm drains, sewer and drainage systems to protect properties from floods and increase local supplies of water available for public use.

E. Existing state laws governing the funding of local water supplies, clean water, water conservation and resource management, and floodwater protection were not developed with California's current water realities in mind.

F. An alternative method for funding critical local water supplies, water quality, water conservation and resource management, and flood protection projects is needed.

G. This measure establishes an alternative funding method that authorizes local agencies to:
i. Set rates for customers to encourage water conservation, prevent waste, and discourage excessive use of water.

ii. Levy fees and charges, subject to ratepayer protest, for flood control and for management of stormwater to protect coastal waters, rivers, lakes, streams, groundwater and other sources of drinking water from contamination.

iii. Use fees and charges to reduce water, and sewer fees and charges for low-income customers.

H. Any local agency that utilizes this alternative funding method for water service and sewer service should be required to adhere to strict accountability, transparency and ratepayer protections. This includes:

i. Providing local ratepayers with a description of the need for the proposed fee or charge and the projects and purposes projected to be funded by any proposed fee or charge in advance of any public hearing or consideration of the fee or charge;

ii. Posting the description of the proposal on the agency’s Internet website with all applicable exhibits;

iii. Providing local ratepayers a notice of the date and time of the public hearing the local agency will hold on the proposed fee and charges;

iv. If written protests against the fee or charge are presented by a majority of persons to whom the local agency sent the notice about the proposal then the local agency shall not impose, increase or extend the fee or charge;

v. All money must be spent for the local purpose for which the fee or charge was imposed and cannot be taken by state government;

vi. Revenues derived from the fee or charge shall not exceed the reasonable cost to the local agency of providing the water or sewer service or be used for any purpose other than that for which it was imposed;

vii. The manner in which the costs are allocated to a fee payor shall bear a fair or reasonable relationship to the fee payor’s burden on or benefits received from the water service or sewer service;

viii. The initiative power of voters may be used to repeal or reduce the fee or charge in the future with the filing of a petition calling for an election on the question;

ix. Independent annual audits shall be made available to the public showing how all funds are spent.

I. This new funding method will allow local agencies to invest in the water supplies, water quality, flood protection and water management and conservation programs we need, while guaranteeing a high level of accountability and ratepayer protections.
SECTION 3. Section 8 is hereby added to Article X of the California Constitution to read as follows:

SEC. 8 Water and Sewer Service

(a). Alternative funding method. This section provides alternative procedures and requirements for funding water service and sewer service independent of any other procedures and requirements in this Constitution for funding these services.

(1) A local agency that adheres to the procedures and requirements of this section, including the strict accountability requirements to protect local ratepayers, may use at its discretion, the provisions of this section instead of any other procedures or requirements in this Constitution for funding the cost of providing water service and sewer service only if undertaken voluntarily and at the sole discretion of the local agency.

(2) The revenues derived from the fees or charges imposed in accordance with this section may only be used by the local agency that imposed, increased or extended the fee or charge, and like other fees or charges imposed, increased or extended by local agencies, the Legislature is prohibited from reallocating, transferring, borrowing, appropriating, restricting the use of, or otherwise using the proceeds of such fees or charges.

(b) Definitions. As used in this section:

(1) "Fee" or "charge" means any levy other than an ad valorem tax, a special tax, or an assessment, imposed by an agency upon a parcel or upon a person as an incident of property ownership, including a user fee or charge for water service or sewer service having a direct relationship to property ownership.

(2) "Local agency" means any city, county, city and county, including a charter city or county, special district, or any other local or regional governmental entity.

(3) "Property ownership" shall be deemed to include tenancies of real property where tenants are directly liable to pay the fee or charge.

(4) "Sewer service" means any system of public improvements, facilities, projects, or services for the collection, conveyance, conservation, drainage, disposal, recycling or treatment of stormwater, flood water, dry weather runoff, sewage or waste to: (A) conserve and protect sources of drinking water, such as rivers, lakes, streams and groundwater, or the environment, such as beaches, coastal waters, and wetlands, from toxic chemicals, biological contaminants, and other pollutants; (B) protect public health and safety; (C) reduce the risk of flooding of public or private property; or (D) comply with federal or state laws, rules, and regulations.
(5) "Water service" means any system of public improvements, facilities, projects or services intended to provide for the production, management, storage, supply, treatment, recycling, conservation or distribution of water from any source.

(c) Requirements for new, increased or extended fees or charges. A fee or charge for water service or sewer service shall not be imposed, increased, or extended by a local agency pursuant to this section unless it meets all of the following requirements:

1. Revenues derived from the fee or charge shall not exceed the reasonable cost to the local agency of providing the water service or sewer service.

2. Revenues derived from the fee or charge shall not be used for any purpose other than that for which the fee or charge was imposed.

3. The manner in which the costs of the water service or sewer service are allocated to a fee payor shall bear a fair or reasonable relationship to the fee payor's burden on or benefits received from the water service or sewer service.

(d) Conservation fee or charges; low-income households. A local agency that imposes, extends, or increases a fee or charge pursuant to this section may do either or both of the following:

1. Allocate the cost of water service or sewer service through a rate structure reasonably designed to encourage water conservation and resource management in furtherance of the policy established in section 2;

2. Increase the amount of a fee or charge to derive revenues that do not exceed the reasonable cost of reducing such fee or charge for lower-income households.

(e) Notice, public hearing and majority protest. A local agency shall comply with the procedures of this subdivision in imposing, increasing, or extending a fee or charge for water service or sewer service pursuant to this section:

1. The local agency shall provide written notice by mail of the new fee or charge or the proposed increase in or extension of an existing fee or charge to the fee payor listed in the local agency's billing, or customer service records or other appropriate records. If the fee or charge is or will be imposed on a parcel, the local agency shall provide written notice to the record owner as provided in paragraph (4). The local agency may include the notice in the agency's regular billing statement for the fee or charge to the person at the address to which the agency customarily mails the billing statement for water service or sewer service. If the customer is billed only electronically, the agency shall provide notice by mail.
(2) The notice required by paragraph (1) shall include the amount of the fee or charge proposed to be imposed on the recipient of the notice or the basis upon which the amount of the fee or charge will be calculated, together with the date, time and location of the public hearing on the fee or charge. The notice also shall state that if written protests against the fee or charge are presented by a majority of persons to whom the local agency sent the notice required by paragraph (1), then the local agency shall not impose, increase or extend the fee or charge.

(3) The notice required by paragraph (1) shall include a general description of the services, facilities and improvements projected to be funded with the proceeds derived from the new fee or charge or proposed increase in, or extension of the fee or charge. A more complete description of the projected services, facilities and improvements, including any applicable exhibits, shall be made available at an accessible location and on the local agency's Internet website.

(4) If the local agency desires to preserve any authority it may have to record or enforce a lien on the parcel to which service is provided, the local agency shall also mail notice to the record owner's address shown on the last equalized assessment roll if that address is different than the billing address.

(5) The local agency shall conduct a public hearing upon the proposed fee or charge not less than 45 days after mailing the notice required by paragraph (1). At the public hearing, the local agency shall consider all oral and written protests against the fee or charge. If written protests against the fee or charge are presented by a majority of persons to whom the local agency sent the notice required by paragraph (1), then the local agency shall not impose, increase or extend the fee or charge. One written protest per service address shall be counted in calculating a majority protest pursuant to this paragraph.

(f) Burden of proof. The local agency bears the burden of proving by a preponderance of the evidence that the amount of a fee or charge for water service or sewer service is no more than necessary to cover the reasonable costs of the water service or sewer service, and that the manner in which those costs are allocated to a payor bear a fair or reasonable relationship to the payor's burden on, or benefits received from, the water service or sewer service. A fee or charge levied pursuant to and in compliance with this section is not a tax.

(g) Initiative power for fees or charges. Notwithstanding any other provision of this Constitution, including, but not limited to Sections 8 and 9 of Article II, the initiative power shall not be prohibited or otherwise limited in matters of reducing or repealing any fee or charge for water service or sewer service adopted, increased or extended pursuant to this section. The power of the initiative to affect such fees or charges shall be applicable to all local agencies and neither the Legislature nor any local government charter shall impose a signature requirement higher than that applicable to statewide statutory initiatives.
(h) Mandatory audit. Any local agency that approves a fee or charge for water service or sewer service in accordance with this section shall cause to be prepared an independent financial audit of the receipt and expenditure of the revenues derived from the fee or charge. Such an audit may be part of a comprehensive audit of the agency's finances, but the audit shall identify the revenues received and expended in accordance with this section with sufficient clarity to help ratepayers compare the use of the funds to the description provided in paragraph (3) of subdivision (e).

SECTION 4. Severability

If the provisions of this act, or any part thereof, are for any reason held to be invalid or unconstitutional, the remaining provisions shall not be affected, but shall remain in full force and effect and to this end the provisions of this act are severable.

SECTION 5. Conflicting Measures

It is the intent of the people that in the event that this measure and another measure relating to the establishment of an alternative method of imposing, increasing, or extending fees or charges to fund water service or sewer service appear on the same statewide election ballot, the provisions of the other measure or measures shall be deemed to be in conflict with this measure, and if approved by the voters, this measure shall take effect notwithstanding.

SECTION 6. Liberal Construction

The provisions of this act shall be liberally construed in order to effectuate its purposes and the intent of the voters to provide local agencies alternative procedural and substantive requirements for imposing fees and charges for water service and sewer service from those otherwise found in the Constitution.
FORMAL BOARD OF DIRECTORS’ MEETING

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.

JANUARY 28, 2016

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 Formal Board of Directors’ meeting of December 10, 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


8. REPORTS BY CHAIRS

   8-A Chair’s Report: Chair Weston

   8-B Report by Committee Chairs
   Import Water Committee
   Director Watton
   Water Planning Committee
   Director Tu
   Engineering and Operations Committee
   Director Williams
   Administrative and Finance Committee
   Director Arant
   Legislation, Conservation and Outreach Committee
   Director Croucher
9. **CONSENT CALENDAR**

9-1. Professional services contract to AECOM to provide As-needed Environmental Consulting Services for a four-year period in an amount not to exceed $4,000,000. Authorize execution of a professional services agreement with AECOM Technical Services, Inc. to provide As-needed Environmental Consulting Services for four years in an amount not to exceed $4,000,000.

9-2. Resolution for the Hauck Mesa Storage Reservoir Project. Adopt Resolution No. 2016-01 that: finds that the project will not have a significant effect on the environment; adopts the Final Mitigated Negative Declaration; adopts a Mitigation Monitoring and Reporting Program; approves the Hauck Mesa Storage Reservoir Project; and authorizes filing of a Notice of Determination.

9-3. Contract for purchase and installation of electric continuous duty valve actuators at various Water Authority facilities. Authorize the General Manager to award a three (3) year contract in the amount of $1,907,590 to provide, retrofit, and install approximately 100 electric continuous duty valve actuators at various Water Authority facilities.

9-4. Contract amendment with Braun Blaising McLaughlin & Smith PC for legal and consulting services. Authorize the General Counsel to execute a contract amendment with Braun Blaising McLaughlin & Smith PC (Braun) for legal and consulting services to increase the contract amount by $290,000 for a new contract amount of $340,000.


9-6. Approve the selection of Wells Fargo Bank as the commercial banking services provider. Authorize the General Manager to award a commercial banking service contract to Wells Fargo Bank for a five-year period with two one-year renewal options.

9-7. Adopt the Water Authority’s 2015 Long-Range Financing Plan. Adopt, as final, the Water Authority’s 2015 Long-Range Financing Plan.

9-8. Professional Services Contract with Hoch Consulting for Grant Administration Services. Award a four-year professional services contract with an option for two additional years to Hoch Consulting for grant administration services in the amount of $768,000.

   a. Sponsor legislation during 2016 to ensure that drought-sustainable local water supplies are afforded appropriate crediting or adjustment against any mandatory water use reductions imposed by the state.
b. Sponsor legislation during 2016 to improve the State Water Resource Control Board’s drought emergency regulation implementation process.

10. **ACTION / DISCUSSION**

11. **SPECIAL REPORTS**
   11-A GENERAL MANAGER’S REPORT – Ms. Stapleton
   11-B GENERAL COUNSEL’S REPORT – Mr. Taylor
   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 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-B 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-C Conference with Legal Counsel – Anticipated Litigation
      Government Code §54956.9(d)(4)
      Potential Initiation of Litigation / One Case / MWD Forced Water Deliveries

   12-D Conference with Legal Counsel – Existing Litigation
      Government Code §54956.9(d)(1)
      Name of Case: QSA Judicial Council Coordination Proceeding No. 4353

   12-E Conference with Legal Counsel – Anticipated Litigation
      Government Code §54956.9(d)(4)
      Potential Initiation of Litigation / One Case / State Water Resources Control Board Emergency Regulations

   12-F Conference with Legal Counsel – Existing Litigation
      Government Code §54956.9(d)(1)
      SDCWA; San Diego Superior Court Case No. 37-2015-00041627-CU-WM-CTL

13. **ACTION FOLLOWING CLOSED SESSION**

14. **OTHER COMMUNICATIONS**
15. **ADJOURNMENT**

Melinda Cogle  
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.
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 were Chair Arant, Vice Chairs Wilson and Razak, Directors Cherashore, Fong-Sakai, Gallo, Kennedy, Lewinger, Muir, Verbeke, Watkins, Watton*, Weston, and Williams. Director Hilliker was absent. Also present were Directors Ayala, Croucher, Guerin, Hall, Heinrichs, Hogan, Linden, Olson, Saxod, Steiner and 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, Deputy General Counsel Gallien, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Finance Harris, Director of Administrative Services Brown, Controller Greek, Financial Planning Manager Shank, Financial Resources Manager Celaya, and Interim General Counsel Taylor. Also present were Doug Montague of Montague and Associates; Phoebe Selden and Noreen White of Acacia Financial Group; and Richard Babbe of PFM Consulting.

ADDITIONS TO AGENDA

There were no additions to the agenda.

PUBLIC COMMENT

There were no members of the public who wished to speak.

CHAIR’S REPORT

Chair Arant announced the Fiscal Year ended June 30, 2015 Comprehensive Annual Financial Report would be distributed at the Formal Board meeting later that afternoon.

DIRECTORS’ COMMENTS

There were no Directors’ comments.

I. CONSENT CALENDAR

   Staff recommendation: Note and file the monthly Treasurer’s report.

2. Adopt the Vote Entitlements Resolution for Calendar Year 2016.
   Staff recommendation: Adopt Resolution No. 2015-24 establishing the vote and representative entitlements of each member agency effective January 1, 2016.

3. Adopt Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2016.
Staff recommendation: Adopt the Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2016.

4. Approve the selection of Montague DeRose and Associates, LLC and Acacia Financial Group, Inc. to provide financial advisory services.

Staff recommendation: Authorize the General Manager to award a multi-year professional services contract to Montague DeRose and Associates, LLC and Acacia Financial Group, Inc. for a total base amount not-to-exceed $324,000 for the three-year period from December 10, 2015 to January 1, 2018. The contract has two one-year renewal options.

Director Muir moved, Director Lewinger seconded, and the motion to approve staffs’ recommendations passed unanimously.

Chair Arant had Ms. Harris introduce the new financial advisors: Doug Montague from Montague DeRose and Associates and Phoebe Selden and Noreen White of Acacia Financial Group.

II. ACTION/DISCUSSION
1. SANDAG’s Keep San Diego Moving Forward Initiative by Kim Kawada, Chief Deputy Executive Director.

Director Muir introduced Kim Kawada of SANDAG. Ms. Kawada was present to speak on a possible initiative for the 2016 ballot that SANDAG was discussing to raise funds for transit and transportation, as well as other infrastructure such as fire and water. She explained the background, context, SANDAG’s board direction on the initiative, timeframe and next steps.

The board made comments, asked questions, and thanked Ms. Kawada for speaking.

* Director Watton arrived at 9:50 a.m.


Ms. Harris reviewed how the 2015 Long-Range Financing Plan (LRFP) would provide key financial information, provided a review of high/low key assumptions driving rates, and an explanation of the long-range financing plan table of contents, pointing out key information in chapters 2-6.

Mr. Shank reviewed the financial forecast including prior high/low rate forecast and covered the key assumptions showing high/low rate scenarios. He also reviewed the last two chapters (7 and 8) regarding funds and reserves, as well as risk mitigation strategies.

Ms. Harris concluded the presentation with key points and next steps. Several questions were asked by the Board and staff provided answers.

Ms. Harris presented a summary of rating agency perspectives on the drought impact to water utilities. She reported on Moody’s, Standard and Poor’s and Fitch Ratings. She concluded with a summary of drought related questions.

III. INFORMATION

The following information items were received and filed:

2. Board Calendar.

IV. CLOSED SESSION

Ms. Gallien took the board into Closed Session at 10:15 a.m.

1. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   Name of Case:  Mark Coziahr et al. v. Otay Water District et al.;
   San Diego Superior Court Case No. 37-2015-00023413-CU-MC-CTL

Ms. Gallien brought the committee out of Closed Session at 10:29 a.m. and stated there was no reportable action.

V. ADJOURNMENT

There being no further business to come before the Administrative and Finance Committee, Chair Arant adjourned the meeting at 10:30 a.m.

LEGISLATION, CONSERVATION AND OUTREACH COMMITTEE
CALL TO ORDER/ROLL CALL

Chair Croucher called the Legislation, Conservation and Outreach Committee to order at 10:31 a.m. Committee members present were Chair Croucher, Vice Chairs Guerin and Steiner, and Directors Gallo, Hall, Muir, Saxod and Tu*. Committee members absent were Directors Barnum, Hilliker, Madaffer, Morrison, Preciado and Supervisor Roberts. Other Board members present were Directors Ayala, Evans, Fong-Sakai, Heinrichs, Hogan, Kennedy, Lewinger, Linden, Olson, Razak, Simpson, Verbeke, Watkins, Watton, Weston, Williams and Wilson. There was not a quorum of the committee and Chair Croucher appointed Director Evans as a member 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, Deputy General Counsel Gallien, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Public Outreach and Conservation Foster, Government Relations Manager Farrel and Public Affairs Supervisor Penunuri. Also present were legislative representatives Ken Carpi and Bob Giroux.
ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no members of the public who wished to speak.

CHAIR’S REPORT
Chair Croucher reported that during November and December, members of the LCO Committee and Board officers joined Water Authority staff in conducting briefings of the San Diego legislative delegation in their district offices in San Diego County. Briefings were conducted to share perspective relative to the State Water Resources Control Board’s review of drought regulations, and consideration of adjustments to ensure appropriate crediting of local water supply development.

He reported that LCO Committee leadership, Board Officers, the General Manager’s office, and Sacramento legislative representatives conducted a legislative planning session where they explored a variety of issues expected to be prominent during 2016. They discussed organizational matters to improve coordination and communication, and reviewed the political landscape in Sacramento going into 2016.

* Director Tu arrived at 10:39 a.m.

I. CONSENT CALENDAR
There were no Consent Calendar items.

II. ACTION/DISCUSSION
1. Legislative Issues.

   Mr. Carpi provided a Washington update and reported that Congress was working on passing an omnibus appropriation bill. He provided an update on Senator Feinstein’s California drought bill. He also reported on work being done to make changes to the Internal Revenue Code that would exempt income from water efficiency subsidies and rebates.

   1-B Sacramento Report by Bob Giroux – Lang, Hanson, O’Malley & Miller.

   Mr. Giroux provided a Sacramento report and updates on Water Authority-sponsored bills. He provided an overview of what legislative issues were expected in 2016.

   Staff recommendation: Adopt the proposed 2016 Legislative Policy Guidelines.

   Mr. Farrel presented an overview of proposed Legislative Policy Guidelines and reviewed changes that were made.
Director Steiner moved, Director Saxod seconded, and the motion to approve staffs’ recommendation passed unanimously.

3. Water Authority Sponsorship of Legislation in the 2016 State Legislative Session.  
   Staff recommendation:
   a) Co-sponsor Legislative Proposal #1 to help create an improved path forward for large-scale energy projects, including hydropower pumped storage.
   b) Undertake additionally recommended actions to make progress on the legislative proposals not recommended for bill sponsorship in 2016.

   Mr. Farrel presented an overview of the recommended sponsorship proposal, including the proposed legislative approach.

   Director Muir moved, Director Gallo seconded, and the motion to approve staffs’ recommendation passed unanimously.

III. INFORMATION
   2. Quarterly Water Conservation Garden report.

   Director Linden reported the Garden had elected a President and Vice President for 2016 and were conducting a search to hire an Executive Director.

   3. Small Contractor Outreach and Opportunities Program (SCOOP) Quarterly Report.

   Ms. Penunuri presented a summary of the SCOOP program’s first quarter. She reported that staff participated in five outreach events and 46 percent of contract dollars awarded went to small businesses.

   The following information items were received and filed:
   1. Drought Response Communications and Outreach Update.
   5. Quarterly report on Public Outreach and Conservation activities.

IV. ADJOURNMENT
   There being no further business to come before the Legislation, Conservation and Outreach Committee, Chair Croucher adjourned the meeting at 11:02 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 Chair Watkins, and Directors Ayala, Croucher*, Heinrichs, Hogan, Linden, Olson, Razak, and Simpson. Committee members absent were Vice Chair Miller, Directors Arant, Boyle, Brady, and Morrison. Also
present were Directors Barnum, Cherashore, Evans, Fong-Sakai, Gallo, Guerin, Hall, Hilliker, Kennedy, Lewinger, Muir, Murtland, Saxod, Tu, Verbeke, Watton, Weston, and Wilson. 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, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Deputy General Counsel Gallien, Director of Operations and Maintenance Fisher, Director of Engineering Reed, Operations and Maintenance Managers Faber and Schuler, Energy Program Manager Rodgers, Right of Way Manager Kross, Principal Engineer Griffis, and Senior Right of Way Agent von Gymnich.

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 reminded the Board of the Desalination Plant Dedication scheduled for Monday, December 14, 2015. He asked the Board to RSVP, bring an ID, and encouraged them to take the available shuttle. Additional tours were scheduled for those who could not attend the dedication.

I. CONSENT CALENDAR
   Staff recommendation: Authorize the General Manager to award a construction contract to Palm Engineering Construction Company Inc. in the amount of $488,000 for the Ramona Pipeline Pump Well project.

2. Professional services contract with RF Yeager Engineering Inc. for Asset Management Program support services.
   Staff recommendation: Authorize the General Manager to award a professional services contract to RF Yeager Engineering Inc. for Asset Management Program support services through December 31, 2017, with an option to extend the contract for an additional two years, for a total not-to-exceed amount of $680,000.

3. Professional Services contract with Baker Electric, Inc. for electrical preventative maintenance, inspection, testing and repair services for Water Authority facilities.
   Staff recommendation: Authorize the General Manager to execute a professional services contract to Baker Electric, Inc. for electrical preventative maintenance, inspection, testing and repair services through January 31, 2017, with an option to
extend the contract for an additional three years, for a total not-to-exceed amount of $965,000.

Mr. Belock explained that Consent items 2 and 3 were services contracts versus low bid contracts, and added that they have different criteria and more of a qualitative selection process. He announced there would be an informational session at the January 28, 2016 Board meeting to discuss the process, contrast it with low bid construction contracts, and talk about administrative codes and state laws that affect them.

Director Ayala moved, Director Watkins seconded, and the motion to approve staffs’ recommendation on all three items passed unanimously.

* Director Croucher arrived at 11:17 a.m., after the vote.

II. ACTION/DISCUSSION/PRESENTATION
1. Aqueduct System Shutdown overview.

Mr. Fisher gave a presentation on the Aqueduct System Shutdown Overview. He explained differences between a shutdown and an outage, reviewed the reasons and the planning involved, execution, monitoring and reporting, and shutdown schedule.

2. Hydropower Subcommittee Update.

Director Hogan, Hydro Power Subcommittee Chair, began with an overview of discussion at the subcommittee meeting on December 1, 2015. At the meeting the subcommittee had received an update on the San Vicente pumped storage study including information regarding the Owners’ Advisory team work. They also discussed the Federal Energy Regulatory Commission preliminary application process, and reviewed the 2016 schedule. They were also updated on the Water Authority’s energy initiatives including floating solar panels, request for proposals, the Water Authority’s Strategic Energy Plan, and the City of San Diego’s energy initiatives. Lastly, they received an update on legislative regulatory issues with regards to energy.

Ms. Rodgers presented on the look-ahead schedule for the Phase 2 work for 2016. She reviewed the components of Phase 2 work, work completed, work underway, next steps and the proposed 2016 progress update schedule.

III. INFORMATION
There were no Information items.

IV. CLOSED SESSION
Ms. Gallien took the Committee into Closed Session at 11:41 a.m.
1. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(d)(1)
   Name of Case: Scripps Nob Hill Homeowners Association v. SDCWA; San
   Diego Superior Court Case No. 37-2015-00022131-CU-OR-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; and JCCP 4832.

Ms. Gallien brought the committee out of closed session at 12:15 p.m. and stated that there was no reportable action.

V. ADJOURNMENT
   There being no further business to come before the Engineering and Operations Committee, Chair Williams adjourned the meeting at 12:16 p.m.

WATER PLANNING COMMITTEE
CALL TO ORDER/ROLL CALL
   Chair Tu called the Water Planning Committee Meeting to order at 1:07 p.m.
   Committee members present were Chair Tu, Vice Chair Evans, and Directors Ayala, Cherashore, Fong-Sakai, Hall, Kennedy, Lewinger, Murtland and Simpson. Directors absent were Vice Chair Brady and Directors Boyle, Linden, Miller, and Preciado. Also present were Directors Arant, Barnum, Croucher*, Gallo*, Heinrichs, Hilliker, Hogan, Morrison, Muir*, Olson, Razak, Saxod, Steiner*, Verbeke, Watton*, Weston, Williams and Wilson. 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, Deputy General Counsel Gallien, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Water Resources Managers Friehauf and Purcell, Principal Water Resources Specialist Bombardier, and Senior Water Resources Specialists Chadwick and Tegio.

ADDITIONS TO THE AGENDA
   There were no additions to the agenda.

PUBLIC COMMENT
   There were no members of the public who wished to speak.

CHAIR’S REPORT
   Chair Tu welcomed those present and reviewed the agenda. Chair Tu announced that the San Diego Integrated Regional Water Management Program was awarded $31.1 million in
Proposition 84 grant funds by the California Department of Water Resources to support 13 projects designed to achieve water supply goals through conservation, recycled water, local surface water, seawater desalination and groundwater.

DIRECTORS’ COMMENTS
There were no Directors’ comments.

I. CONSENT CALENDAR
There were no Consent Calendar items.

II. ACTION/DISCUSSION
1. Contract for purchase of wetlands and riparian mitigation credits to fulfill the Carryover Storage Project mitigation requirements.
   Staff recommendation: Authorize the General Manager to enter into one or more contracts with mitigation banking entities to procure wetlands and riparian habitat mitigation credits that satisfy regulatory permits issued for the Carryover Storage Project in a cumulative total not to exceed $2,200,000.

   * Director Watton arrived at 1:21 p.m.

   Mr. Chadwick presented an overview of the Carryover Storage Projects habitat impacts mitigation program including current status of mitigation acreage acquisition; timing issues related to reservoir fill schedules and mitigation credit purchases; mitigation banking options; and next steps.

   Director Ayala moved, Director Fong-Sakai seconded, and the motion to approve staffs’ recommendation. Staff responded to questions and comments posed by Directors Ayala, Razak, Kennedy, Fong-Sakai and Arant, after which the motion passed unanimously.


   Chair Tu opened the public hearing on the Draft Mitigated Negative Declaration for the Hauck Mesa Flow Regulatory Storage Facility Project at 1:25 p.m. There were no members of the public who wished to speak. Chair Tu advised written comments would be accepted until 5:00 p.m. She closed the public hearing at 1:26 p.m.

   *Directors Croucher, Gallo and Muir arrived at 1:28 p.m., 1:30 p.m. and 1:31 p.m. respectively.

3. Update on water supply conditions and drought response activities.

   Ms. Friehauf provided an update on: Northern Sierra, Upper Colorado River Basin, and local precipitation and storage; indicators related to a potential El Niño including recorded sea surface temperatures and predicted temperature and precipitation; and member agency municipal
and industrial water use in response to the ongoing State Water Resources Control Board emergency conservation regulation.

*Director Steiner arrived at 1:41 p.m.

Ms. Friehauf reported on California Governor Brown’s November 13, 2015, Executive Order, which extended statewide restrictions of urban potable water use until October 31, 2016, if the drought persisted, and directed the State Water Resources Control Board to consider modifying existing restrictions to address potable and non-potable water and incorporate insights from ongoing emergency conservation regulation. Along these lines, Ms. Friehauf presented information on basis and rationale for seeking drought-resilient supply credits as an alternative path to achieving required water use reductions, and reported on the December 7, 2015 public workshop conducted by the State Water Resources Control Board on the potential extension of the emergency conservation regulation.

Director Arant and staff responded to questions posed by Chair Tu and Directors Guerin, Weston and Razak.

III. INFORMATION
The following information items were received and filed:
2. Fiscal Year 2016 water supply allocations monitoring.

IV. CLOSED SESSION
Ms. Gallien took the Committee into a Closed Session at 1:49 p.m.

CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: San Diego Coastkeeper v. SDCWA;
San Diego Superior Court Case No. 37-2014-00013216-CU-JR-CTL

Ms. Gallien brought the Committee out of Closed Session at 1:58 p.m. and stated there was no reportable action.

V. ADJOURNMENT
There being no further business to come before the Water Planning Committee, Chair Tu adjourned the meeting at 1:59 p.m.

IMPORTED WATER COMMITTEE
CALL TO ORDER / ROLL CALL
Chair Watton called the Imported Water Committee meeting to order at 2:05 p.m. Committee members present were Chair Watton, Vice Chairs Saxod and Verbeke, and Directors Barnum, Cherashore, Evans, Guerin, Heinrichs, Hogan, Murtland, Olson, Steiner, Weston and Wilson. Director Madaffer and Supervisor Roberts were absent. Also present were Directors
Arant, Ayala, Croucher, Fong-Sakai, Gallo, Hall, Kennedy, Lewinger, Morrison, Muir, Razak, Simpson, and Williams. 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, Deputy General Counsel Gallien, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, MWD Program Director Chen, Colorado River Program Director Denham, and Senior Water Resources Specialist Espe.

**ADDITIONS TO AGENDA**
There were no additions to the agenda.

**PUBLIC COMMENT**
There were no members of the public who wished to speak.

**CHAIR’S REPORT**
Chair Watton reported that the Department of Water Resources (DWR) released the initial allocation for 2016 State Water Project (SWP) water at 10 percent to meet most SWP long-term contractors requests. For MWD, 10 percent of the requested amount was 191,500 acre-feet. The initial allocation is usually a conservative number that factors in the possibility of a fifth year of far-below-normal winter precipitation and is expected to be adjusted depending on El Nino conditions. Chair Watton noted that according to DWR, even with an extremely wet winter water supplies would not return conditions, especially groundwater levels, to normal after four consecutive dry years.

He also reported that the Association of California Water Agencies Fall Conference was held December 1-4, 2015 and that Ms. Stapleton had participated on a panel titled “Four Years and Counting: Is the Drought a Catastrophe, or Are We Showing Resilience?” and Mr. Denham spoke on a panel titled “Coping with Drought on the Colorado”.

**DIRECTORS’ COMMENTS**
There were no Directors’ comments.

**I. CONSENT CALENDAR**

1. **Amend agreement for Consulting Services with M Strategic Communications.**
   **Staff recommendation:** Amend the agreement with M Strategic Communications for continued services to the Water Authority through December 31, 2016, for a period of 12 additional months, and increasing total contract funding to an amount not to exceed $506,000.

   Director Saxod requested staff show both the increased amount of the contract amendment and total not to exceed amount of the contract on consent calendar items.

   Director Evans moved, Director Barnum seconded, and the motion to approve staffs’ recommendation passed unanimously.
II. ACTION/DISCUSSION

1. Metropolitan Water District Issues and Activities update.
   1-A Metropolitan Water District Delegates report for November.
   1-B Metropolitan Water District Delegates report for December.

   The delegates reported on discussion and actions taken at the November and December 2015 MWD board meetings. Following the report outs, Directors asked questions and made comments.

   1-C Out-of-Region Groundwater Storage Programs.

   Ms. Espe provided an update on the Water Authority’s out-of-region groundwater storage programs. Following the presentation, Directors asked questions and made comments.

2. Colorado River Programs.
   2-A Colorado River Board Representative’s report.

   Director Wilson reported on the discussions at the November 2015 Colorado River Board meeting.

   2-B Salton Sea Report.

   Mr. Denham provided an update on the recent and upcoming activities related to the Salton Sea environmental issues. Following the presentation, Directors asked questions and made comments.

3. Bay-Delta Activities.

   Ms. Chen made a presentation on the potential cost impacts of the proposed Bay Delta Conservation Plan/California WaterFix to the Water Authority. She noted the board memo posted contained calculation errors and indicated that a corrected memo would be posted following the meeting. Following the presentation, Directors asked questions and made comments.

   Director Steiner requested that staff provide a list, as part of a report to the Board, of all public record requests made to the Water Authority on a monthly basis.

III. INFORMATION

The following information item was received and filed:

1. Metropolitan Water District Program Report.

   Ms. Gallien took the Committee into Closed Session at 3:38 p.m.
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

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

Ms. Gallien brought the Committee out of Closed Session at 3:53 p.m. and stated there was no reportable action.

V. ADJOURNMENT
There being no further business to come before the Imported Water Committee, Chair Watton adjourned the meeting at 3:54 p.m.
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 who wished to speak.

*Director Morrison left at 4:10 p.m.

7. **PRESENTATIONS AND PUBLIC HEARINGS**

7-A Recognition of Melody Parker, Financial Analyst, Employee of the 1st Quarter.

7-B **Retirement of Director.** Adopt resolution honoring Thomas Wornham upon retirement from Board of Directors.

Director Hogan moved, Director Watton seconded and the motion carried at 87.90% of the vote to approve the resolution honoring Thomas Wornham upon his retirement from the Board of Directors.

Director Wornham thanked the Board and Staff for the time he served on the Board of Directors, and reflected on his years of service.

7-C **Appointment of Director.** Appointment of David Cherashore representing City of San Diego. Term ending May 2, 2021.

Chair Weston welcomed Director Cherashore to the Board of Directors.

*Directors Williams and Wilson left at 4:17 p.m.

8. **REPORTS BY CHAIRS**

8-A **Chairs report:** Chair Weston reminded the Board of the upcoming Carlsbad Desalination Project Dedication on December 14, 2015. He stated that the event would change the direction of future water development in the region and recognized Ms. Stapleton for the perseverance, tenacity and patience she displayed throughout the development and completion of the project. He thanked her for her leadership and presented her with flowers as a token of the Boards appreciation.

Chair Weston reported on various meetings and engagements that he attended in the month of November and early December including a November 30, 2015 meeting with Board Officers and LCO Committee leadership to discuss upcoming work for 2016, attendance at the ACWA Conference December 1st through 4th in Indian Wells where El Nino, drought and desalination were discussed amongst other topics. He also reported on attending the State Water Board Hearing on December 7, 2015, and a meeting with Assembly Members Waldron, Maienschein, and Weber.
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 action taken.
Engineering and Operations Committee. Director Williams reviewed the meeting and the action taken.
Water Planning Committee. Director Evans reviewed the meeting and the action taken.
Imported Water Committee. Director Watton reviewed the meeting and the action taken.

9. CONSENT CALENDAR
Director Arant moved, Director Kennedy seconded, and the motion carried at 85.19% of the vote to approve the consent calendar. Directors voting no or abstaining are listed under the item number.

*Director Watton left at 4:20 p.m. and Director Murtland left at 4:23 p.m.

The Board noted and filed the monthly Treasurer’s report.

9- 2. Adopt the Vote Entitlements Resolution for Calendar Year 2016.
The Board adopted Resolution No. 2015-24 establishing the vote and representative entitlements of each member agency effective January 1, 2016.

9- 3. Adopt Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2016.
The Board adopted the Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2016.

9- 4. Approve the selection of Montague DeRose and Associates, LLC and Acacia Financial Group, Inc. to provide financial advisory services.
The Board authorized the General Manager to award a multi-year professional services contract to Montague DeRose and Associates, LLC and Acacia Financial Group, Inc. for a total base amount not-to-exceed $324,000 for the three-year period from December 10, 2015 to January 1, 2018. The contract has two one-year renewal options.

The Board adopted the proposed 2016 Legislative Policy Guidelines.
9-6. **Water Authority Sponsorship of Legislation in the 2016 State Legislative Session.**
The Board approved to Co-sponsor Legislative Proposal #1 to help create an improved path forward for large scale energy projects, including hydropower pumped storage; and, to undertake additionally-recommended actions to make progress on the legislative proposals not recommended for bill sponsorship in 2016.

9-7. **Construction contract with Palm Engineering Construction Company Inc. for the Ramona Pipeline Pump Well project.**
The Board authorized the General Manager to award a construction contract to Palm Engineering Construction Company Inc. in the amount of $488,000 for the Ramona Pipeline Pump Well project.

9-8. **Professional services contract with RF Yeager Engineering Inc. for Asset Management Program support services.**
The Board authorized the General Manager to award a professional services contract to RF Yeager Engineering Inc. for Asset Management Program support services through December 31, 2017, with an option to extend the contract for an additional two years, for a total not-to-exceed amount of $680,000.

9-9. **Professional services contract with Baker Electric, Inc. for electrical preventative maintenance, inspection, testing and repair services for Water Authority facilities.**
The Board authorized the General Manager to execute a professional services contract to Baker Electric, Inc. for electrical preventative maintenance, inspection, testing and repair services through January 31, 2017, with an option to extend the contract for an additional three years, for a total not-to-exceed amount of $965,000.

9-10. **Contract for purchase of wetlands and riparian mitigation credits to fulfill the Carryover Storage Project mitigation requirements.**
The Board authorized the General Manager to enter into one or more contracts with mitigation banking entities to procure wetlands and riparian habitat mitigation credits that satisfy regulatory permits issued for the Carryover Storage Project in a cumulative total not-to-exceed $2,200,000.

9-11. **Amend agreement for Consulting Services with M Strategic Communications.**
The Board amended the agreement with M Strategic Communications for continued consulting services to the Water Authority through December 31, 2016, for a period of 12 additional months, and increasing total contract funding to an amount not-to-exceed $506,000.

*Directors Hall and Lewinger left at 4:25 p.m.*

The Board authorized General Counsel’s retention of Allen Matkins as special counsel to defend the Coziahr litigation.
The Board authorized General Counsel to amend the legal services contract with Daley & Heft to increase the contract amount by $25,000 for a new contract amount of $75,000 for continued support as special counsel to defend the Nob Hill litigation.

9-14. San Diego Coastkeeper v. SDCWA; San Diego Superior Court Case No. 37-2014-00013216-CU-JR-CTL.
The Board authorized General Counsel to amend the legal services contract with Allen Matkins to increase the contract amount by $80,000 for a new contract amount of $335,000 for continued support as special counsel to defend the Coastkeeper litigation.

10. ACTION/DISCUSSION
10-A Audit Committee Annual Report.
Audit Committee recommendation:
a) Accept and file the Audit Committee Annual Report pursuant to the
b) Accept and file the Comprehensive Annual Financial Report (CAFR) for Fiscal Years ended June 30, 2015 and 2014. (Action)

Audit Committee Chair Barnum provided a brief overview of the Audit Committee Annual Report. He expressed appreciation to the members of the Audit Committee, Water Authority Staff and independent auditors.

Director Barnum moved, Director Evans seconded, and the motion carried at 77.42% of the vote to approve the Audit Committee recommendation.

10-B Designation of Acting General Counsel.
Officers’ recommendation: Designate James J. Taylor as Acting General Counsel to serve until a new General Counsel is installed. (Action)

Director Muir moved, Director Hogan seconded, and the motion carried at 77.42% of the vote to approve the Board Officer’s recommendation.

11. SPECIAL REPORTS
11-A GENERAL MANAGER’S REPORT – Ms. Stapleton introduced Mr. Belock who reviewed transportation options for attending the Carlsbad Desalination Dedication on Monday, December 14, 2015.
11-B GENERAL COUNSEL’S REPORT – Ms. Gallien stated there was nothing to report.
11-C SANDAG REPORT – Vice Chair Muir reported on discussions at the recent SANDAG Board Meeting.
    SANDAG Subcommittee: Borders/Regional Planning Committee – Director Saxod stated there was nothing to report at that time.
11-D AB 1234 Compliance Reports – No reports were given.

12. **CLOSED SESSION(S)**
Ms. Gallien announced there was no need for a Closed Session.

12-A Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: Mark Coziahr et al. v. Otay Water District et al.;
San Diego Superior Court Case No. 37-2015-00023413-CU-MC-CTL

12-B Conference with Legal Counsel – Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: Scripps Nob Hill Homeowners Association v. SDCWA; San
Diego Superior Court Case No. 37-2015-00022131-CU-OR-CTL

12-C 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; and JCCP 4832.

12-D Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(d)(1)
Name of Case: San Diego Coastkeeper v. SDCWA;
San Diego Superior Court Case No. 37-2014-00013216-CU-JR-CTL

12-E 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-F 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

13. **ACTION FOLLOWING CLOSED SESSION**
There was no action following Closed Session.

14. **OTHER COMMUNICATIONS**
15. **ADJOURNMENT**
The meeting was adjourned at 4:30 p.m.

_______________________________  _______________________________
Mark Weston, Chair                Mark Muir, Vice Chair

_______________________________
Melinda Cogle, Clerk of the Board
DATE: January 28, 2016

TO: Board of Directors

FROM: James Taylor, Acting General Counsel

RE: Credentials of Ronald Watkins
Yuima Municipal Water District

Transmitted herewith is notification submitted by Yuima Municipal Water District reappointing Ronald Watkins to the Water Authority’s Board of Directors. His term will expire on January 13, 2022.

The credentials furnished are sufficient for reappointment of Mr. Watkins on the Water Authority Board.

[Signature]

James Taylor
Acting General Counsel

Attachment
RESOLUTION NO. 1644-15

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE YUIMA MUNICIPAL WATER DISTRICT

APPROVING THE APPOINTMENT OF
RONALD W. WATKINS AS REPRESENTATIVE OF THE
YUIMA MUNICIPAL WATER DISTRICT ON THE SAN DIEGO
COUNTY WATER AUTHORITY BOARD OF DIRECTORS

WHEREAS, the San Diego County Water Authority Board of Directors (Board) is the
governing body responsible for the oversight and allocation of the region’s imported water
supply; and

WHEREAS, the Board also advises on the diversification of the region’s water
supply portfolio, optimization of facilities, and development of local resources to ensure a safe
and reliable water supply to its twenty-four member agencies; and

WHEREAS, the Yuima Municipal Water District, as a member of the San Diego
County Water Authority, is entitled to one (1) representative to serve as a member of the San
Diego County Water Authority Board of Directors, a position that Ronald W. Watkins has filled
for the past two years, and

WHEREAS, Ronald W. Watkins desires to serve as the District’s representative on the
Board of Directors of the San Diego County Water Authority; and

WHEREAS, the Board of Directors consents to and approves the appointment of
RONALD W. WATKINS as its representative on the Board of Directors of the San Diego
County Water Authority.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of Yuima Municipal
Water District, approving the reappointment of RONALD W. WATKINS for the term ending
January 13, 2022, or until such time as reappointed or a successor is appointed, as this District’s
representative to the Board of Directors of the San Diego County Water Authority.

RESOLVED FURTHER, that the Secretary of the District is directed to forward to the
San Diego County Water Authority a certified copy of this resolution.

PASSED AND ADOPTED at a regular adjourned meeting of the Board of Directors of
YUIMA MUNICIPAL WATER DISTRICT held November 20, 2015 by the following roll-call
vote:
AYES: Watkins, Fitzsimmons, Villalobos, Knutson
NOES: none
ABSENT: Yasutake
ABSTAIN: none

[Signature]
W.D. Knutson, President

[Signature]
Terry Yasutake, Secretary
CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF SAN DIEGO)

I, Terry Yasutake, the undersigned, state that I am the Secretary of Yuima Municipal Water District and that Resolution No. 1644-15 adopted on November 20, 2015, is true and correct, and that said Resolution has not been modified or rescinded.

WITNESS my hand and seal of said District this 20th day of November, 2015.

[Signature]

Terry Yasutake, Secretary
Yuima Municipal Water District

seal
DATE: January 28, 2016

TO: Board of Directors

FROM: James J. Taylor, Acting General Counsel

RE: Credentials of Betty Evans
Vallecitos Water District

Transmitted herewith is notification submitted by Vallecitos Water District reappointing Betty Evans to the Water Authority’s Board of Directors. Her term will expire on March 13, 2022.

The credentials furnished are sufficient for reappointment of Ms. Evans on the Water Authority Board.

James J. Taylor
Acting General Counsel

Attachment
STATE OF CALIFORNIA )
COUNTY OF SAN DIEGO )
SS
VALLECITOS WATER DISTRICT )

MINUTE ORDER

I, DENNIS O. LAMB, Secretary of the Vallecitos Water District, do hereby certify that Agenda Item No.1.1, Board Appointments, was unanimously approved by the Board of Directors at a Regular Meeting of the Board of Directors on December 8, 2015, to reappoint Betty Evans as Vallecitos Water District’s representative to the SDCWA Board for the term expiring on March 13, 2022.

I HEREBY CERTIFY that the attached is a true and correct copy of the Agenda Item (1.1) that was approved by the Board of Directors on December 8, 2015.

EXECUTED this 6th day of January, 2016.

Dennis O. Lamb, Secretary
Board of Directors
Vallecitos Water District
MINUTES OF A REGULAR MEETING OF THE BOARD OF DIRECTORS
OF THE VALLECITOS WATER DISTRICT
TUESDAY, DECEMBER 8, 2015, AT 4:00 PM AT THE DISTRICT OFFICE,
201 VALLECITOS DE ORO, SAN MARCOS, CALIFORNIA

President Sannella called the Regular meeting to order at the hour of 4:00 p.m.

Girl Scout Troop No. 1215 led the pledge of allegiance.

Present: 
Director Elitharp
Director Evans
Director Hernandez
Director Martin (Arrived 4:07)
Director Sannella

Staff Present:
General Manager Lamb
Assistant General Manager Scaglione
Legal Counsel Scott
Administrative Services Manager Emmanuel
District Engineer Gumpel
Operations & Maintenance Manager Pedrazzi
Capital Facilities Senior Engineer Hubbard
Accounting Supervisor Owen
Public Information/Conservation Supervisor Robbins
Executive Secretary Posvar
Administrative Secretary Johnson

ADOPT AGENDA FOR THE REGULAR MEETING OF DECEMBER 8, 2015

15-12-01  MOTION WAS MADE by Director Evans, seconded by Director Hernandez, and carried unanimously, to adopt the agenda for the Regular Board Meeting of December 8, 2015.

President Sannella presented Director Evans with a book highlighting her term as President.

Director Evans thanked the Board for the opportunity to serve as President.

BOARD APPOINTMENTS

President Sannella distributed a list of committee assignments to the Board, which the Board reviewed.

15-12-02  MOTION WAS MADE by Director Hernandez, seconded by Director Martin, and carried unanimously, to approve the committee members as presented.
COMMITTEES
ENGINEERING/EQUIPMENT
FINANCE/INVESTMENT
LEGAL/LEGISLATIVE AFFAIRS
PUBLIC AWARENESS/PERSONNEL/POLICY
AD HOC

REPRESENTATIVES
ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) BOARD OF DIRECTORS/REGION 10

ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) FINANCE COMMITTEE

ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) ENERGY COMMITTEE

ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) GROUNDWATER COMMITTEE

ASSOCIATION OF CALIFORNIA WATER AGENCIES (ACWA) MEMBERSHIP COMMITTEE

ACWA/JP/IA

CALIFORNIA ASSOCIATION OF SANITATION AGENCIES (CASA) — LEGISLATIVE COMMITTEE

ENCINA WASTEWATER AUTHORITY

SAN DIEGO COUNTY WATER AUTHORITY (SDCWA)

SMEDC

SDNEC

ORAL COMMUNICATIONS

None.

Purpose
This report discusses certain legal matters receiving attention during the months of December 2015/January 2016.

Significant Developments in Pending Litigation

MWD Rate Cases
2010/2012 Rate Cases: On December 23, 2015, the Court denied MWD’s motion for a new trial. MWD’s new-trial motion had argued that Judge Karnow made erroneous legal and evidentiary decisions, and awarded the Water Authority “excessive damages.” Certain member agencies that appeared in the case had separately filed a motion for a new trial. The Court rejected each and every one of MWD’s and the member agencies’ purported justifications for a new trial, and also found that a number of MWD’s arguments were waived because MWD had failed to raise them during the trial proceedings.

On November 19, 2015, MWD filed a notice of appeal of the judgment and the writ of mandate, which has the effect of staying the judgment and writ pending appeal. The MWD member agencies who had participated in the trial separately filed a notice of appeal. The Water Authority filed a notice of cross-appeal, challenging only the Court’s December 2013 summary-judgment ruling concerning MWD’s Rate Structure Integrity (RSI) provision. The trial court is in the process of compiling the record for appeal, after which the parties will begin briefing the appeal. The briefing at the Court of Appeal should be complete by Fall 2016.

As the prevailing party in the litigation, the Water Authority is entitled to recover its litigation costs and attorneys’ fees. The Water Authority submitted its bill of costs on December 3, 2015, seeking reimbursement from MWD of $370,260 in litigation costs. MWD filed a motion to “tax” (reduce) the recoverable costs by approximately $150,000. MWD’s motion will be heard on January 20. The Water Authority intends to file its motion for attorneys’ fees on January 29, 2016, and that motion will be heard on March 18, 2016.

2014 Rate Case: The case filed on May 30, 2014 challenging MWD’s 2014 adopted rates for 2015 and 2016 was transferred to San Francisco Superior Court, assigned to Judge Karnow, and stayed by stipulation of the parties. The Water Authority filed a motion to partially lift the stay for purposes of requiring MWD to file the administrative record pertaining to the adoption of rates in 2014. On December 21, 2015, the Court denied that motion, finding that the result of the pending appeal may moot some issues and thereby affect the scope of the administrative record MWD would assemble. Further, any motion for summary judgment that might be brought now by the Water Authority would presumably be based on the rulings the Court has already made and therefore would not "advance the ball" pending appeal. As a result, the 2014 case remains stayed.
**Coziahr et al. v. Otay Water District et al.**

Plaintiffs Mark Coziahr and Daniel Patz filed a lawsuit in November 2015 against the Otay Water District, the City of San Diego, the San Diego County Water Authority, and the Metropolitan Water District alleging excessive water rates and charges in violation of Proposition 218. Earlier in 2015, Coziahr and Patz separately filed claims on the same basis which the Water Authority denied. The Authority’s response to the complaint is due on January 22, 2016.

**Hemet Manufacturing Company, Inc. v. San Diego County Water Authority**

On December 16, 2015, the Authority was served with a lawsuit by Hemet Manufacturing, doing business as Genesis Construction, asking the Court to void an award of contract for the Ramona Pipeline Pump Well Project to low bidder Palm Engineering, and to order that the contract instead be awarded to Genesis. The Board of Directors had approved the award to Palm on December 10 for a price of $488,000, after bids had been opened on November 13. On December 9, the Authority had rejected a bid protest from Genesis dated the same day on the grounds that the protest was untimely, as the Authority Administrative Code requires that protests be filed within ten days of bid opening. The Authority has retained special counsel for defense of the case. Special counsel answered the complaint on our behalf on January 15, 2016, generally maintaining that the lawsuit is without merit.

**Special Counsel Expenditures**

Funds approved for payments to special counsel during December 2015/January 2016 from the General Counsel’s Operating Budget totaled $315,319.70 for work related to the Metropolitan rate dispute, public records litigation, QSA litigation, and San Diego Coastkeeper litigation. In addition, $123,977.81 was approved for payment from Colorado River Program’s Operating Budget for work related to QSA implementation, $21,710.62 was approved for payment from Human Resources’ Operating Budget for work related to personnel issues, and $1,600 was approved for payment from Finance’s Operating Budget for work related to bond counsel services. CIP expenditures during December 2015/January 2016 were $557,060.88 for litigation expenses related to the San Vicente Tunnel Project (Traylor/Shea Joint Venture v. SDCWA), the San Vicente Dam Raise Project (Shimmick/Obayashi Joint Venture v. SDCWA), Energy Projects and Contracts, the San Vicente Pumped Storage Study FERC permit, and the Nob Hill Improvements Project.

**Requests Pursuant to the Public Records Act Request**

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<tr>
<th>Requestor</th>
<th>Documents Requested</th>
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<td>Inewsource</td>
<td>Inspection Report by the Division of Safety of Dams for the Olivenhain Dam</td>
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<td>Inewsource</td>
<td>Emergency Action Plan for Olivenhain Dam</td>
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Prepared by: James J. Taylor

Attachment: Special Counsel Expenditure Report
<table>
<thead>
<tr>
<th>Special Counsel</th>
<th>Project</th>
<th>OP Budget Invoices Approved for Payment this Period</th>
<th>CIP Budget Invoices Approved for Payment this Period</th>
<th>Total $ Expended of $5,360,000 Budget Allocation for FYs 16 &amp; 17 (Fees &amp; Costs)</th>
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**FY 16 & 17 Budget Remaining:** $4,388,197.33

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1 Not included in totals, these legal expenses related to QSA came out of Colorado River Program budget, not GC budget.
2 Not included in totals, these legal expenses related to personnel issues/labor negotiations came out of Human Resources budget, not GC budget.
3 Not included in totals, these legal expenses related to bond counsel services came out of Finance budget, not GC budget.