O&M Staff Repair Valve at Rancho Penasquitos Pressure Control and Hydroelectric Facility
NOTICE TO THE PUBLIC
BOARD OF DIRECTORS’ AND STANDING COMMITTEES’
REGULAR MEETING
JANUARY 26, 2012
BOARD ROOM
WATER AUTHORITY HEADQUARTERS BUILDING
4677 OVERLAND AVENUE, SAN DIEGO, CALIFORNIA

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

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

3. **MEETING TIMES:** The morning session of Standing Committees will commence at 9:00 a.m. on January 26, 2012 the afternoon session of Standing Committees will commence at 1:00 p.m. Please see the meeting schedule. The full Board will convene in formal session at 3:00 p.m. or as soon thereafter as the last Committee meeting is completed.

4. **ACTION AT COMMITTEE MEETINGS:** Committee meetings are also noticed as meetings of the Board because a quorum of the Board may be present. Members of the Board who are not members of the Committee may participate in the meeting, but only members of the Committee may make, second or vote on any motion or other action of the Committee unless the Board determines to convene for consideration of action on an item or items on the Committee agenda. If a quorum of the Board is present during a Committee meeting, upon approval of a motion by any Board member to convene for consideration of action on an item or items on the Committee agenda, the Board may take action on that item or items. If the Board takes action on an item during a Committee meeting, the matter will not be subject to further action at the Formal Board meeting unless a motion to reconsider is approved according to the provisions of the Water Authority Administrative Code. Persons interested in an item and wishing to hear the staff report, present oral or written comments and hear the deliberations should attend the Committee meeting. Closed Sessions also occur at Committee meetings and may not be repeated at the formal Board meeting.

5. **CONSENT CALENDAR:** The agenda contains items listed on a consent calendar which is for matters considered routine or otherwise not requiring further deliberation. A committee or the Board will take action as recommended by one motion. There will be no individual discussion on
such items prior to the vote unless an item is removed for discussion. If a member of the public wishes to talk about a consent calendar item, please notify the Chair before the calendar is called. Persons who wish to be heard on an item are encouraged to speak before the assigned committee.

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

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

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

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

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

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

11. **RULES GOVERNING MEETINGS:** The Water Authority’s Administrative Code Chapter 2.00 governs conduct of meetings of the Board and the Committees. The Administrative Code is available on line at www.sdcwa.org or at the Water Authority Headquarters.
MEETING SCHEDULE

JANUARY 26, 2012

MORNING SESSION

Imported Water
Estimated time: 1 hour 30 minutes

Water Planning
Estimated time: 1 hour 15 minutes

LUNCHEON FOR DIRECTORS

12:00 p.m. – 1:00 p.m.

AFTERNOON SESSION

Legislation, Conservation and Outreach
Estimated time: 30 minutes

Administrative & Finance
Estimated time: 35 minutes

Engineering & Operation
Estimated time: 40 minutes

FORMAL BOARD MEETING

3:00 p.m.

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

AGENDA FOR

JANUARY 26, 2012

Mark Watton – Chair     John Linden
Gary Arant – Vice Chair    Ralph McIntosh
Yen Tu – Vice Chair    Ron Morrison
Jim Bond    Fern Steiner
Brian Brady    Mark Weston
Lynne Heidel    Barbara Wight
Bill Knutson    Doug Wilson
Keith Lewinger

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 Progress report on Imported Water Committee Goals for 2011 and 2012.
   4-B Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. Bay-Delta.
   1-A Presentation on Draft Environmental Impact report on Delta Plan. (Discussion)    Jeff Volberg

   1-B Draft Delta Policy Principles. (Information)    Amy Chen

   2-A Metropolitan Water District Delegates report. (Information) (pickup packet)    Amy Chen

   2-B Report on Metropolitan Water District’s 2012/13 and 2013/14 Proposed Budget and associated Rates and Charges. (Discussion)
2-C Review of Metropolitan Water District’s Regional Urban Water Management Plan and Metropolitan Water District Member Agencies’ Urban Water Management Plans. (Discussion)  
Dennis Cushman

3. Colorado River Programs.  
3-A Colorado River Board representative’s report. (Information) (pickup packet)  
Bill Knutson

3-B Colorado River Program quarterly report. (Information)  
Halla Razak

4. Authorization to enter into an agreement with Imperial Irrigation District for Environmental Cost Sharing. (Provided under separate cover.)  
Halla Razak

III. INFORMATION

1. Metropolitan Water District Program report.  
Amy Chen

IV. CLOSED SESSION

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

2. CLOSED SESSION:  
Conference with Legal Counsel - Existing Litigation  
Government Code §54956.9(a) -  
SDCWA v Metropolitan Water District of Southern California;  
Case No. CPF-10-510830  
Dan Hentschke

V. ADJOURNMENT

Doria F. Lore  
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 (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 18, 2012

Attention: Imported Water Committee

Progress Report on Imported Water Committee’s Goals for 2011 and 2012 (Information)

Purpose
This report provides a progress report on the Imported Water Committee’s goals that were established by the Board in April 2009.

Background
The Imported Water Committee is responsible for imported water matters, including: Activities and issues as a member agency of the Metropolitan Water District of Southern California; administration of the Colorado River Quantification Settlement Agreement and related agreements; Colorado River Board; State Water Project; Bay-Delta; and other matters relating to water supplies from outside San Diego County.

Discussion
The attached progress report lists the Imported Water Committee’s goals for 2010 and 2011 and provides an update on the activities taken to achieve the goals. The goals were prepared under the direction of the Imported Water Committee Chair and Vice Chairs and were provided for Committee review at the February 24, 2011 Committee meeting.

Prepared by: Amy I. Chen, MWD Program Chief
Halla Razak, Colorado River Program Director
Reviewed by: Mark Watton, Chair, Imported Water Committee

Progress Report on Imported Water Committee Goals
Calendar Years 2011 and 2012

Strategic Plan Objectives

1. Desalination – Support efforts to facilitate and/or develop local seawater and brackish groundwater desalination facilities that represent 10% of the region’s total water supply requirements. (2012 – SP #4)

   Activities: This item was relocated to the Water Planning Committee.

2. Water Transfers – Obtain short-term water transfers and storage to meet dry year supply needs as required. (2012 – SP #6)

   Activities: As a result of decreased water demands and improved local supply conditions, this item was deferred. Staff continues to monitor conditions and will report to the Imported Water Committee as opportunities are made available.

3. Political Influence – Adopt and implement a biennial water policy agenda directed toward MWD, the state, the seven basin states, and various federal agencies. (2012 – SP #7)

   Activities: The Committee heard updates on efforts by the MWD Delegates, Water Authority Board officers and staff to work with MWD and its member agencies towards shared goals (Ongoing). In addition, the MWD Delegates and MWD Program staff continue to provide insight on current water issues and Water Authority’s goals and objectives relative to MWD during inspection and education trips of MWD and local facilities (Ongoing). Board officers and other directors met with board representatives of the Imperial Irrigation District and Coachella Valley Water Authority to discuss resolution of litigation and other issues related to the Quantification Settlement Agreement and Colorado River water transfers (Ongoing).

4. Public Awareness – Create broad public support for and awareness of issues surrounding water, water resources, and water infrastructure. (January 2015 – SP #15)

   Activities: Members of the committee and Board of Directors participated in the Water Authority’s Speaker’s Bureau and Water-Talks programs throughout 2011, delivering more than 50 presentations to inform the public, member agencies, the media and civic organizations on MWD policy and rate issues, and matters relating to the Colorado River Quantification Settlement Agreement, among other issues.

Business Plan Goals

Bay-Delta Program

1. Adopt updated Bay-Delta work plan for 2011/12. (June 2011 – BP #1)
Activities: The Committee and Board adopted the 2011-2012 Bay-Delta Workplan (June 2011).

2. Adopt policies and provide direction to staff to evaluate the cost benefit of a long-term Delta fix. (June 2012 – BP #4)

   Activities: The Committee received updates on the Bay-Delta activities through quarterly Bay-Delta reports, monthly Imported Water and MWD Program Activities reports and other reports (Ongoing). Staff continues to monitor the estimated costs of the Delta fix and will keep the Committee and Board apprised of any new developments. Policy recommendations will be presented to the Committee for review in January 2012 and adoption in February 2012.

3. Consider staff recommendations on efforts to implement near-term Bay-Delta actions and to construct conveyance facilities for long-term water supply reliability. (June 2012 – BP #3)

   Activities: See Bay-Delta Program #2.

4. Consider staff recommendations on the Bay-Delta Conservation Plan. (January 2012 – BP #2)

   Activities: See Bay-Delta Program #2. The Committee heard updates on the Bay-Delta Conservation Plan through quarterly Bay-Delta reports, monthly Imported Water and MWD Program Activities reports and other reports (Ongoing). Staff provided testimony to California State Assembly (October 2011) and comments on the First Amendment to the Bay-Delta Conservation Plan Memorandum of Agreement.

5. Consider staff recommendations on advocating the Water Authority’s position on Delta strategies. (July 2014 – BP #6)

   Activities: Staff presented to the Committee a historic overview of the Delta and reviewed the various governmental processes and efforts taking place to address water supply reliability on the Delta (August 2011). The Imported Water Committee hosted two Bay-Delta Workshops to facilitate the board’s understanding of other stakeholders’ issues and concerns on the Delta (September and October 2011). Staff has advocated for inclusion of California Urban Water Agencies' Delta Financing Principles during public comment periods. Policy recommendations will be presented to the Committee for review in January 2012.

Colorado River Water Supplies

1. Provide direction 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 (BP #7) during legal challenge of agreements.

**Activities: The Committee:**
- Discussed in closed session activities related to Superior Court and Appeals Court rulings on the QSA and related agreements.
- Heard a report on a water demand and supply study being conducted by Reclamation and the seven Colorado River Basin states (February 2011);
- Heard a report on a recommendation from the California governor’s office to eliminate the Colorado River Board (May 2011);
- Received a presentation on a range of binational activities including potential water supply projects, Mexican shortage criteria, and water quality management (July 2011);
- Adopted a resolution in support of restoring the Salton Sea (March 2011)
- Heard quarterly updates on QSA water supply status and Colorado River activities, and monthly closed session reports on QSA litigation activities affecting the IID/Water Authority water transfer; and
- Authorized an agreement with the Coachella Valley Water District to repair cracked panels on the Coachella Canal Lining Project and to fund other project improvements (October 2011).

2. Consider staff recommendations related to the feasibility study of a binational seawater desalination plant at Rosarito Beach, Baja California, Mexico (BP #6).

**Activities: The Committee authorized Water Authority participation in Phase 2 of a study to develop a seawater desalination plant at Rosarito Beach in Baja California, Mexico (January 2011) and heard periodic reports on binational activities involving the local, state, and federal U.S. agencies and their Mexican counterparts. Subsequently, in July, this item was relocated to the Water Planning Committee.**

3. Consider staff recommendations related to the identification and development of potential water supply projects to augment existing Colorado River supply sources (BP #9).

**Activities: The Committee heard updates on the Colorado River through monthly Colorado River reports and other reports (Ongoing). Staff reported on the progress of the Colorado River Basin study, its purpose to evaluate the supply and demand on the River for the next 50 years, and recommendations to mitigate imbalances (January 2011).**

**Metropolitan Water District Water Supplies**

1. Consider staff recommendations on efforts to ensure long-term regional water supply reliability and quality from MWD while minimizing costs (2012 – BP #3, 6).
Activities: The Committee heard reports on the progress and final report of MWD’s Blue Ribbon Committee, which formed to review developing new water options for MWD and make recommendations to meet its future water supply and demands; (February and May 2011). Staff also updated the Committee on correspondence made to MWD requesting a need for modeling, operating plan and explanation on how certain programs, such as replenishment or local resources projects, enhance MWD’s overall service capabilities (Ongoing).

2. Provide direction to ensure MWD’s Supply Allocation Plan is set at the appropriate level of allocation to meet current demands and adequate amount of water is kept in storage for future needs. (2012 – BP #3, 6)

Activities: The Committee received, reviewed, or provided direction to staff on:
- MWD’s 2011 water supply and demand outlook and storage levels (March 2011);
- MWD’s termination of its water supply allocation plan in April (April 2011); and
- MWD’s storage and replenishment program (April 2011).

3. Consider staff’s recommendations on MWD’s proposed revenue generating programs ensuring it does not risk water ratepayers’ money. (2012 – BP #3, 6)

Activities: Staff continues to monitor MWD’s proposed revenue generating programs and will report to the Committee as necessary.

4. Provide direction to ensure cost containment and appropriate level of MWD’s budget expenditures and that associated rates and charges are reasonable. (2012, BP #3,6)

Activities: The Committee received, reviewed, or provided direction to staff on:
- MWD’s Long Range Finance Plan update, which was based on MWD’s current cost of service methodology and was intended to provide a ten-year rate forecast that MWD’s member agencies could rely on for financial planning (January 2011);
- MWD’s financial policies and strategies (February 2011);
- MWD’s Biennial Budget for Fiscal Years 2011/12 and 2012/13 and the transition from a one-year budget to a two-year budget (March 2011); and
- Fitch’s downgrading of MWD’s bond rating (May 2011).

5. Provide policy direction to staff to ensure cost-effective incentive implementation for conservation and Local Resources Programs, including seawater desalination, better reflect the Water Authority’s financial contribution to MWD. (2012 – BP #3, 6)

Activities: The Committee heard reports on MWD’s conservation and Local Resources Program incentives (April 2011) and through monthly Imported Water and MWD Program Activities reports (Ongoing). The Committee also heard a report on MWD’s termination of subsidy program funding agreements with the Water Authority as a result of the Water Authority’s rate challenge (June 2011). The Committee approved
agreement for assignment by the Ramona Municipal Water District of claims arising from MWD’s termination of a Local Resources Project agreement (August 2011). The Committee was also copied on letters from the Water Authority Delegates to MWD on MWD’s replenishment service program and local resources program. (April, May, June and September)

**Other Goals**

1. Adopt a water policy position on the governance, operation and ownership of the State Water Project. (June 2012 – BP #3)

_**Activities:** The Board of Directors adopted a Legislative Policy Guideline 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. The Committee also received reports on Department of Water Resources and State Water Contractors operations through monthly Imported Water and MWD Program Activities reports (Ongoing). Staff provided the Committee a written report on DWR’s publication on the “State Water Project Delivery Reliability Report 2009 and California Drought Contingency Plan (January 2011)."

2. Consider opportunities, including partnerships with others, for additional conjunctive use of imported water or storage supplies. (June 2012 – BP #4)

_**Activities:** As a result of decreased water demands and improved local supply conditions, this item was deferred. Staff continues to monitor conditions, however."
Attention: Imported Water Committee

Draft Environmental Impact Report on Delta Plan. (Information)

Background
In 2009, the California Legislature passed a package of legislation relating to the Sacramento-San Joaquin River Delta that included a Delta Reform Act and a water bond. The Delta Reform Act established the Delta Stewardship Council as the successor to the CalFED program and gave it the task of preparing a Delta Plan. The Delta Plan was to have been completed by the end of 2011, however, it is now scheduled for completion in early 2012.

The DSC worked throughout 2011 and produced five drafts of the Delta Plan. The DSC released a draft Environmental Impact Report on November 4 for public comment. The comment period will end February 2, 2012.

Discussion
When a state agency promulgates regulations that may have an impact on the environment, the agency is required to produce an environmental analysis under the California Environmental Quality Act. The Delta Plan contains a set of regulatory policies, so the DSC is required to prepare an environmental impact report. However, the regulatory policies either require, or recommend that other agencies take certain actions, which would be in the discretion of the other agencies. The draft EIR deals with the speculative nature of the environmental impacts by describing possible projects or actions and assessing the potential impacts from those projects or actions. The Sixth Draft Delta Plan must also undergo a review by the Office of Administrative Law.

The draft EIR is based on the Fifth Staff Draft of the Delta Plan, which is referred to as the Proposed Project. The draft EIR also describes five alternatives to the Proposed Project, all of which it finds to be environmentally inferior to the Proposed Project.

The five alternatives include:

1. An alternative proposed by the state and federal water contractors to restore water exports to amounts that were prevalent before the Wanger decision in 2008;
2. Another alternative proposed by the ACWA Ag-Urban coalition that would also restore water exports and would require a phased approach to improving water supply reliability that would rely on continued scientific studies and adaptive management;
3. An environmentalist alternative that proposes decreasing exports to no more than 3 million acre feet per year and concentrating on ecosystem restoration throughout the state;
4. An alternative that places increased emphasis on protection and enhancement of Delta communities, culture, and agriculture, with less ecosystem restoration; and,
5. A no-project alternative.

The five alternatives are all rejected in the EIS in favor of the Proposed Project.
When it established the DSC, the Legislature charged the DSC with accomplishing the policy of the state to achieve the coequal goals of providing a more reliable water supply and protecting, restoring, and enhancing the Delta ecosystem, while protecting and enhancing the unique cultural, recreational, natural resource, and agricultural values of the Delta as a place. Proponents of the Delta package understood that the DSC would combine and coordinate the plans and planning activities of the more than 200 government agencies that have responsibilities in the Delta, and would set forth a blueprint for proceeding with infrastructure projects that will help the state achieve the coequal goals. The DSC would have appellate powers to ensure that actions covered by the Plan would be consistent with the Plan.

Instead, the Fifth Staff Draft of the Delta Plan concentrates on regulatory actions to ensure that exporters of Delta water reduce their reliance on the Delta. The DSC would require that local and regional water suppliers report on their efforts to reduce reliance on the Delta in their agricultural and urban water management plans. The DSC would also require that local and regional water suppliers adopt rate structures that encourage water conservation. Rather than fixing the Delta water supply system and restoring exports, the DSC would improve water supply reliability through increased local and regional self-sufficiency and reduced demand for water.

The Plan also emphasizes increasing flows of freshwater into and through the Delta, to provide environmental improvements for species of fish that are listed under the state and federal Endangered Species Acts. The Plan does not provide at all for the building of water infrastructure. Under the Delta Reform Act, the Bay-Delta Conservation Plan will be incorporated into the Delta Plan, when it is completed and if it qualifies as a Natural Communities Conservation Plan under state law. The BDCP is the document and planning process that will propose an infrastructure project and will provide permits for the projects under endangered species laws. The BDCP is scheduled to release a draft Plan and EIR in June 2012, with final approval scheduled for early 2013.

If the BDCP fails to qualify as an NCCP, the Delta Plan will have no provisions for infrastructure improvements and will largely rely on increased regional self-reliance and flow criteria. The Delta Plan also establishes a Delta Science Program and a system of adaptive management. The Draft EIR mainly examines the environmental impacts of these actions.

The Delta Plan establishes a series of policies, which are intended to have the force of regulatory law. The policies include the following:

- Water suppliers who receive water from the Delta must include a Water Reliability Element in their Urban Water Management Plan or Agricultural Water Management Plan. This element must be in place by December 31, 2015. The element must detail how water suppliers are sustaining and improving their regional self-reliance and reducing reliance on the Delta.

- Update Delta flow requirements. The Delta Plan requires the State Water Resources Control Board to adopt and implement updated flow objectives for the Delta by June 2014, and for tributaries to the Delta by June 2018. The flow objectives are intended to
control salinity in tidal waters and to provide fresh water conditions for spawning and migrating fish.

- All new water use from the Delta or transfers through the Delta for more than one year must be developed in a transparent manner consistent with Department of Water Resources and U.S. Bureau of Reclamation policies.

- Habitat restoration activities must be consistent with habitat type locations shown in an adopted Conservation Strategy.

- Actions other than habitat restoration activities must avoid or mitigate any loss of opportunity for habitat restoration.

- State and local agencies constructing new levees or substantially rehabilitating or reconstructing existing levees must incorporate alternatives that would increase the extent of floodplain and riparian habitats.

- Agencies proposing actions covered under the Delta Plan must show that they have fully considered whether their actions will cause the introduction of invasive species and shall prevent or mitigate any introduction of invasive species.

- Covered actions may not involve the unmitigated encroachment on floodways, floodplains, or potential future floodplain or bypass locations in the Delta.

The Delta Plan also includes a large number of recommendations, which do not have the force of law. The recommendations include timely completion of the BDCP. The Delta Plan makes recommendations for storage facilities upstream of the Delta. The Delta Plan does not directly provide for the construction of any water conveyance or storage infrastructure or institute a process to move toward construction. The draft EIR does not examine any environmental impacts construction would cause. That examination is left to the EIR for the BDCP.

In the final analysis, the Delta Plan relies almost entirely on regional self-reliance and the reduction of dependence on the Delta to achieve the coequal goal of water supply reliability. It primarily relies upon flow requirements to achieve the coequal goal of ecosystem restoration. ACWA and the state and federal water contractors have already commented that this plan and its attendant draft EIR do little to achieve the coequal goals, particularly with regard to water supply reliability. Water Authority staff will draft comments and submit them to the DSC by the February 2 deadline. The comments will address the following concerns, among others:

- The draft EIR does not address how the Delta Plan will achieve the coequal goals of water supply reliability and ecosystem restoration. It merely states that it will.

- The draft EIR does not define what would constitute achievement of the coequal goals of water supply reliability and ecosystem restoration.
• The Delta Plan does not address, and the draft EIR does not analyze, construction of an infrastructure project to improve water supply reliability, other than to call for completion of the BDCP.

• The Delta Plan does not address, and the draft EIR does not analyze, any ecosystem restoration project or program other than merely increasing freshwater flows through the Delta.

• The draft EIR does not analyze how increasing freshwater flows through the Delta will achieve the goal of ecosystem restoration.

• The draft EIR dismisses the ACWA Ag-Urban Alternate Plan without analysis. Without a definition of achievement of the coequal goals, it is impossible to analyze alternatives to the Proposed Project. The ACWA Alternate Plan lays out a process for achieving the coequal goals through the construction of water infrastructure based on the BDCP, and through habitat restoration through a combination of seasonal freshwater flows and wetlands restoration.

• The draft EIR and the Delta Plan assume a regulatory authority in the DSC that was not intended in the Delta Reform Act of 2009. The Legislature never intended that the DSC take a regulatory role in overseeing the efforts of local water suppliers outside of the Delta to reduce local and regional demand for water.

On Wednesday, January 11, Water Authority Assistant General Manager Dennis Cushman testified before the DSC in San Diego on the Delta Plan Draft EIR. His testimony is attached to this board memo. The DSC is holding a series of five regional hearings on the Delta Plan Draft EIR. Representatives from the City of San Diego, MWD, the Association of California Water Agencies, and Eastern Municipal Water District also testified.

Prepared by: Jeffrey Volberg, Government Relations Manager
Reviewed by: Dennis Cushman, Assistant General Manager

Attachment: Testimony of Dennis Cushman to the DSC
Good evening, Chairman Isenberg and Council Members Gray and Marcus. I’m Dennis Cushman, assistant General Manager of the San Diego County Water Authority. Thank you for the opportunity to testify on the Delta Plan Draft EIR from the viewpoint of the San Diego region.

The Water Authority will provide written comments on the Draft EIR before the deadline of February 2, and appreciates the opportunity to provide these initial comments.

The San Diego County Water Authority imports water through the Metropolitan Water District and through its water transfer with the Imperial Irrigation District and through investments our ratepayers made in lining the All American and Coachella canals.

The Water Authority and its 24 member retail water agencies and cities have made billions of dollars of investments over the past 20 years to diversify San Diego County’s water supply and reduce dependence on water imported from the Metropolitan Water District. In 1991, San Diego County was dependent upon MWD for 95 percent of all water used in the county. Today, supplies from MWD account for less than 50 percent of the county’s water supplies. By 2020, supplies from MWD will represent 30 percent of the county’s water supplies. I will submit a copy of my testimony, and attach to it a graphic that shows the tremendous strides we have made to improve our regional self-sufficiency.

By 2020, the Water Authority will have invested $3.5 billion in capital improvements to support its regional self-sufficiency through water supply diversification and investments in major, large-scale infrastructure.

However, for the foreseeable future, the Water Authority and Southern California will need water from the Bay-Delta to meet demand.

The Water Authority supports a reasonably sized and cost-effective Delta fix for which firm financial commitments have been obtained from the water agencies expected to pay for the facilities.

The Water Authority was strongly supportive of the Delta Vision Strategic Plan and worked for the passage of the Delta Reform Act of 2009.

The Water Authority is concerned that the Proposed Project examined in the Draft EIR relies on regulating local and regional efforts toward self-sufficiency to achieve the coequal goal of water supply reliability.

Over the past two decades, without the burden of such proposed additional regulations, the Water Authority has shown that it is fully capable of improving regional self-sufficiency through its own efforts and those of our 24 member retail water agencies and cities.
• What the Water Authority sees as achievement of the coequal goal of improving water supply reliability would be the restoration of water supplies that have been restricted under the Endangered Species Act, through the removal of threats to the listed species and recovery of those species.

• We do not see anything in the Proposed Project that achieves this goal. Rather, the Proposed Project seems to emphasize adjusting to the restrictions on water supply.

• The Water Authority is also concerned with the emphasis on water flows through the Delta as the primary means of achieving the coequal goal of ecosystem restoration. While some changes to seasonal flows may be necessary to restore fish populations, there are many other stressors on fish that are not adequately addressed in the Delta Plan or the Draft EIR.

• With respect to the Draft EIR, the document does not define achievement of the coequal goals. Without such definition, it is impossible to fully evaluate the Proposed Project and alternatives.

• The Draft EIR asserts that the Proposed Project will achieve the coequal goals and that the alternatives will not, but the Draft EIR does not say how it will achieve the coequal goals, nor does it define what achievement of the coequal goals consists of.

• At a minimum, the Draft EIR must define and quantify achievement of the coequal goals and evaluate the Proposed Project and project alternatives against that definition.

• While the Draft EIR evaluates project alternatives against the Proposed Project, it does not set out the alternatives in full, as they were submitted to the Council. The alternatives are merely paraphrased in a manner that does not accurately depict the proposals and prejudices the reader against the alternatives.

• The alternatives should be laid out, in full, in the Draft EIR and evaluated fairly against the Proposed Project and the definitions of achievement of the coequal goals.

• Other than a recommendation that the BDCP be completed on time, the Draft EIR and the Proposed Project do not include a process for moving forward with a project to build a dual conveyance system. There is no contingency plan if the BDCP fails to meet the standards of an NCCP, other than to reduce local demand for Delta supplies.

• On the whole, the Proposed Project is only different from the No-project Alternative in that it adds a layer of regulation to local and regional efforts to achieve self-sufficiency – regulation that is unwarranted and unneeded.

• Thank you.
Improving Regional Self-Sufficiency
San Diego County Water Supply Diversification
1991–2020

1991

- 26 TAF (5%)
- 75 TAF (12%)
- 285 TAF (47%)

Total = 578 TAF

2011 (estimated)

- 80 TAF (13%)
- 72 TAF (12%)
- 20 TAF (3%)
- 190 TAF (24%)
- 51 TAF (8%)

28 TAF (5%)

Total = 611 TAF

2020

- 80 TAF (10%)
- 103 TAF (13%)
- 231 TAF (30%)
- 44 TAF (6%)
- 56 TAF (7%)
- 27 TAF (4%)
- 48 TAF (6%)

Total = 779 TAF

Legend:
- Yellow: Metropolitan Water District
- Blue: Imperial Irrigation District Transfer
- Red: All American & Coachella Canal Lining
- Green: Conservation (existing and additional)
- Purple: Recycled Water
- Orange: Seawater Desalination
- Gray: Groundwater
- Light Blue: Local Surface Water
January 18, 2012

Attention: Imported Water Committee

Draft Delta Policy Principles (Information).

Purpose
The Delta Policy Principles will guide staff in evaluating Bay-Delta planned initiatives and the cost and sources of funding to implement the projects and actions. These policy principles are presented in draft form (Attachment 1) this month with board action sought in February.

Background
The Metropolitan Water District (MWD) imports water from the Colorado River through its Colorado River Aqueduct and from northern California via the State Water Project (SWP). Because the reliability of MWD supplies is of vital importance to the Water Authority, the Water Authority has consistently been a strong proponent and leading voice advocating for a Delta fix.

Despite recently improved hydrological conditions, California continues to have long-term water supply challenges in the Sacramento-San Joaquin Bay Delta. State and federal agencies with responsibility for different aspects of California’s Bay-Delta estuary along with various stakeholders seek to develop a comprehensive, long-term plan to achieve the co-equal goals of ecosystem restoration and water supply reliability. Last May, as part of management actions in response to the end of the drought and termination of supply cutbacks from MWD, the Water Authority Board renewed its resolve to call upon the state of California to finalize a plan to achieve the co-equal goals, including a viable financing plan to attain them (April 28, 2011, Water Planning Committee Item #1C). More recently, in December, the Water Authority Board adopted its 2012 Legislative Policy Guidelines, which reflected Bay-Delta policy principles adopted by the Board throughout 2011 (Attachment 2).

Discussion
The Water Authority has been involved in efforts to implement a long-term, comprehensive solution of the Bay-Delta estuary. The Water Authority has sought to attain a resolution to the Bay-Delta’s long-standing problems that will help to provide San Diego County with a reliable, high-quality supply of water while restoring the estuary’s ecosystem by actively engaging in Bay-Delta matters at MWD and other forums in support of a Bay-Delta fix. It successfully lobbied for the passage of the 2009 comprehensive Bay-Delta bill package. Most recently, the Water Authority held two Bay-Delta workshops receiving input from stakeholders on their views of a Delta solution.

Throughout this time, the Water Authority has advocated for a “right-size” fix for the Delta: that the fix must be supported by a broad range of stakeholders to ensure it is implementable; that the water contractors who finance the solution must show firm financial commitment and be capable of financing and maintaining the improvements. Of particular concern, 20 of MWD’s other 25 member agencies buy less than 5 percent of MWD’s water, and contribute less than 5 percent of MWD’s revenues (See Figure 1). Because 80 percent of MWD’s revenues come from water
sales, which have declined by one-third since 2007, this is a major vulnerability for MWD. MWD does not have assurances from its member agencies that they will provide revenues to MWD to ensure it can pay for its share of the Delta fix, which could more than double its SWP costs (approximately $670 million annually).

The Water Authority has steadfastly advocated that the costs for the Delta fix be allocated among beneficiaries of the improvements, and that MWD member agencies be required to make firm long-term contractual commitments (e.g. take-or-pay contracts) to pay their share of MWD’s SWP contract obligations. Currently, MWD’s 26 member agencies are not required to buy any water from MWD. Yet, MWD says it will continue to rely upon water sales revenues to pay for the Delta fix. Further, as MWD rates continue to rise, MWD’s member agencies are expanding their local water supply projects, such as recycling, Indirect Potable Reuse, groundwater and seawater desalination, which are becoming more cost-competitive and affordable. While developing local water supplies and reducing reliance on imported water is sound public policy, it is important that MWD protect its long-term fiscal sustainability and strengthen its ability to meet its financial obligations by requiring take-or-pay contracts or similar firm financial commitments from its member agencies. Requiring firm financial commitments would also provide the needed information of how much water MWD member agencies truly need (i.e., are willing to pay for) from a Delta fix. Last May, a broad-based coalition of urban water agencies and environmental organizations also expressed concerns over Delta project financing and wrote a letter to the California Natural Resources Agency Secretary urging an immediate focus on Delta financing, affordability of a Delta conveyance project, and the need for commitments to pay project costs by water end-users (Attachment 3). In spite of rising costs (and water rates) and reduced sales, in 2011 MWD continued selling water at a discount for replenishment. This had the effect of further driving up the cost of MWD’s Tier 1 water.

The attached draft policy principles are divided into five decision-making guidelines – Water Supply Reliability, Ecosystem Restoration, Finance and Funding, Facilities, and Governance. The draft offers policy principles to help guide staff as they evaluate the many projects and actions that make the Bay-Delta co-equal goals of ecosystem restoration and water supply reliability a reality.
Because of the Water Authority’s continued reliance on the SWP, the Water Authority supports an affordable, comprehensive approach that focuses on steps to ensure reliable water supplies and Delta restoration.

Prepared by: Debbie S. Discar-Espe, Senior Water Resources Specialist
Reviewed by: Jeff Volberg, Government Relations Manager
Amy I. Chen, MWD Program Chief
Approved by: Dennis A. Cushman, Assistant General Manager

Attachment 1: Draft Delta Policy Principles
Attachment 2: 2012 Legislative Policy Guidelines – Bay-Delta, December 2011
Attachment 3: Urban/Environmental Coalition Letter on BDCP, May 2011
San Diego County Water Authority  
Draft Delta Policy Principles

The San Diego County Water Authority Board of Directors supports a solution to the Bay-Delta’s long-standing problems that will provide San Diego County with a reliable, high-quality supply of water and enhance the estuary’s ecosystem in an affordable, cost-effective manner. The adopted policy principles will guide staff in evaluating projects and actions affecting the Bay-Delta.

Water Supply Reliability

• Continue to support the co-equal goals of water supply reliability and environmental restoration embodied in the 2009 Delta bill package.
• Address conflicts between water management and the Bay-Delta environment including meaningful dialogue with all stakeholders.
• Provide regulatory certainty and predictable supplies to help meet California’s water needs in the long-term.
• Improve the ability of water-users to divert water from the Delta during wet periods, when impacts on fish and ecosystem are lower and water quality is higher.
• Encourage and support the development of water resources at the local level such as seawater and brackish water desalination, groundwater, storage, graywater, rainwater harvesting (e.g., cisterns and rain barrels), and recycled water (including direct and indirect potable reuse), to make water supplies more reliable, reduce demands on the Bay-Delta, and improve water quality.
• Encourage the development of a statewide water transfer market that will facilitate better water management.
• Provide better coordination of Central Valley Project and State Water Project operations.
• Encourage cost-effective water use efficiency measures.

Ecosystem Restoration

• Restore the Bay-Delta ecosystem to a point where species listed under the state and federal Endangered Species Acts are no longer threatened or endangered, taking into account all factors that have degraded Bay-Delta habitat and wildlife.
• Work with all stakeholders to ensure meaningful dialogue and that all issues are addressed in an open and transparent process.

Finance and Funding

• Encourage projects and actions that provide conveyance and storage facilities that are cost-effective when compared with other water supply development options for meeting Southern California’s water needs.
• Support construction of Delta improvements only upon securing take-or-pay contracts or similar firm financial commitments by water contractors and their member agencies, as well as other entities, to pay for the fixed costs of the improvements.
• Condition financial support on allowing access to facilities to facilitate water transfers.
• Encourage the establishment of a stable funding stream and improve oversight transparency, only in support of a clearly defined project with clearly defined benefits, with clearly defined costs that are commensurate with the project’s benefits to each stakeholder and that are cost-effective compared to alternative sources of supply.
• Allocate costs proportionally to all those benefitting from improvements to the Bay-Delta system, so that financial support for the program reflect the benefits that are received.
• Use public funds to support specific projects and actions with identified costs that protect and restore the environment and provide broad-based public benefits.
• Oppose water user fees to fund ecosystem restoration and other public purpose, non-water-supply improvements in the Delta that are the responsibility of the broader public.
• Seek and support independent financial analyses of project costs and the ability of water contractors and their agencies to pay the costs of the project.

Facilities
• Require technical analysis of proposed key elements of the Bay-Delta solution, such as forecasting future urban and agricultural demands and size and cost of a new conveyance facility, to ensure projected projects realistically match statewide needs.
• Support “right-sizing” of the facilities by requiring agencies back up their forecasted demands Delta with a firm contractual commitment to pay for improvements and facilities.
• Allow access to State Water Project facilities to facilitate water transfers.
• Require that financial support by water agencies and other entities be enforceable.
• Improve the ability to transport water by enhancing State Water Project operations and facilities.

Governance
• Oppose transfer of operational 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, any entity comprised of MWD or other water project contractors, or any other special interest group.
BAY-DELTA

Generally, the Water Authority has supported a solution to the conflicts between water supplies and ecosystems in the Delta that have made water supply less reliable. However, the Water Authority is also concerned that the solution to Delta conflicts be cost-effective, and that the water contractors who finance the solution be capable of financing and maintaining improvements to the Delta. The Water Authority is also concerned that the costs be shared equitably among beneficiaries of the improvements, and that MWD member agencies be required to make firm commitments to pay their share of MWD’s State Water Project contract obligations.

It shall be the Water Authority’s policy to support legislation that:

1. Requires the Delta Stewardship Council or DWR to provide periodic analyses of the cost of proposed Delta improvements to the Legislature and the public.

2. Provides conveyance and storage facilities that are cost-effective, improve the reliability and quality of the San Diego region’s water supplies and protect the Bay-Delta’s ecosystem.

3. Requires water agencies and other entities that contract to pay the costs of improvements in the Delta to obtain take-or-pay contracts with their member agencies to pay the fixed costs of the improvements.

4. Implements a long-term, comprehensive solution for the Bay-Delta that:
   a. Focuses on resolution of conflicts between water management and the environment in the Bay-Delta.
   b. Provides reliable water supplies to meet California’s short- and long-term needs.
   c. Improves the ability to transport water to enhance State Water Project deliveries and facilitate transfers from north of the Delta to south of the Delta.
   d. Improves the quality of water delivered by the Metropolitan Water District to San Diego County.
   e. Enhances the Bay-Delta’s ecological health, taking into account all factors that have degraded Bay-Delta habitat and wildlife.
   f. Encourages cost-effective water use efficiency measures.
   g. Provides a cost-effective solution when compared with other water supply development options.
   h. Equitably allocates costs of the Bay-Delta solution to all those benefiting from improvements to the Bay-Delta system.
   i. Provides a firm commitment that the state will pursue water supply reliability and environmental restoration as co-equal goals.
   j. Encourages the development of local supplies such as seawater desalination, groundwater, storage, graywater, rainwater harvesting (e.g., cisterns and rain barrels), and recycled water (including indirect potable reuse), in order to make water supplies more reliable, reduce demand on the Bay-Delta, and improve water quality.
   k. Encourages the development of water transfers that will reduce demand on the Bay-Delta.
1. Provides better coordination of Central Valley Project and State Water Project operations.

m. Improves Delta levees to control flooding, maintain water supply reliability and reduce seawater intrusion to protect water quality.

n. Develops adequate and reliable funding for maintenance of Delta levees.

5. Authorizes and appropriates the federal share of funding for the long-term Bay-Delta solution.

6. Provides the ongoing state share of funding for the long-term Bay-Delta solution.

7. Provides state funding for aquatic toxicity monitoring in the Bay-Delta. Such legislation should not place a surcharge on water supply exports nor should it substantively reduce funding for other measures that protect environment and public health.

It shall be the Water Authority’s policy to oppose legislation that:

1. Requires additional reviews or approvals of Delta conveyance options beyond those provided by SBX7-1 (2009).

2. 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 comprised of MWD or other water project contractors.
May 31, 2011

John Laird, Secretary
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Dear Secretary Laird:

We wish to congratulate you on renewing the effort to advance the Bay Delta Conservation Plan (BDCP), with an increased emphasis on transparency and broader inclusiveness for stakeholders. Establishing workgroups for the most critical issue areas in the BDCP will provide vital input from various interests, and help develop solutions that are broadly acceptable.

In particular, focusing attention on the plan for financing the implementation of the BDCP is critical, as this issue has received inadequate attention so far. The documents released to date have offered some total cost estimates, but critical details remain to be addressed such as cost allocation, the ability and willingness of prospective end users to pay, as well as the financial commitments from the BDCP applicants to cover not only the infrastructure, but also associated mitigation costs. In addition, there is no consensus on how the ecosystem restoration element of the BDCP will be paid for.
The recently published National Research Council study has provided an important service in underscoring the importance of a full and thorough review of alternative water supply scenarios, including those that would lessen the pressures upon the Delta. None of us would consider signing a contract to purchase a home without first assessing whether we can afford it and determining how we would finance the purchase. Given the huge cost estimates associated with the BDCP, we must approach this program in a similar manner.

For these reasons, we support your decision to form a Financing Working Group. We respectfully recommend that you begin this important work as soon as possible and not delay until the fall as indicated in the work group announcement. The total project cost is intrinsically linked to all aspects of the planning process, and therefore this work should proceed immediately to ensure that cost considerations fully inform the BDCP process. We look forward to working with you and the other stakeholders to ensure that the BDCP has a viable financing plan before any decisions are made to select an alternative.

Thank you for your consideration of our views.

Steve Rothert, California Regional Director
American Rivers

Kim Delfino, California Program Director
Defenders of Wildlife

Michael Sweeney, Mayor
City of Hayward

Alexander R. Coate, General Manager
East Bay Municipal Utility District

Jerry Brown, General Manager
Contra Costa Water District

Cynthia Kohler, California Water Legislative Director
Environmental Defense Fund
David Nesmith, Facilitator
Environmental Water Caucus

Barry Nelson, Senior Policy Analyst, Western Water Program
Natural Resources Defense Council

Mark Watton, General Manager
Otay Water District

Jonas Minton, Senior Water Policy Advisor
Planning and Conservation League

Maureen A. Stapleton, General Manager
San Diego County Water Authority

Michael Carlin, Deputy General Manager
San Francisco Public Utilities Commission

Gary Bobker, Program Director
The Bay Institute

cc: Senators Dianne Feinstein & Barbara Boxer
Members of California Congressional delegation
Kenneth Salazar, Secretary of the Interior
David Hayes, Deputy Secretary of the Interior
Michael Connor, Commissioner, Bureau of Reclamation
Donald Glaser, Director, USBR Mid-Pacific Region
Governor Jerry Brown
Gerald Meral, Deputy Secretary, Natural Resources Agency
Mark Cowin, Acting Director, Department of Water Resources
John McCamman, Acting Director, Department of Fish and Game
Members of the California Legislature
Delta Stewardship Council
State Water Resources Control Board
January 18, 2012

Attention: Imported Water Committee


Purpose
This report summarizes the Metropolitan Water District of Southern California’s (MWD) proposed biennial budget for 2012/13 and 2013/14 and the associated recommended rates and charges for calendar year (CY) 2012 and 2013.

Background
In 2007, the MWD board, faced with unplanned reduction in its State Water Project (SWP) supplies, increased its rates and charges for CY 2008 by an average of 5.8 percent, in part to purchase water from the spot market to augment supplies. In 2008, faced with continued supply shortages, the MWD board increased its rates and charges by an average of 14.3 percent for CY 2009. In 2009, MWD instituted supply allocation to manage demand. Confronted with reduced sales against large fixed expenses, the MWD board increased its CY 2010 rates and charges by an average of 19.7 percent starting September 1, 2009 (an unprecedented move as MWD usually increases its rates on January 1 of each year, but this action allowed an extra four months of increased revenues). A Delta Supply Surcharge was also added. In 2010, the MWD board adopted two years of rate increases averaging 7.5 percent per year for CY 2011 and 2012. MWD staff forecasted average rates and charges increase of 5 percent for CY 2013 when the fiscal year 2012/13 budget was provisionally adopted last April. As part of its transition from annual budget to biennial budget cycle, the MWD board adopted a “provisional” budget last April for 2012/13.

Discussion
MWD water supply and transportation services represent about 82 percent of the Water Authority’s purchased water cost. The Water Authority has consistently provided review and recommendations regarding MWD’s rate and charges because they have a significant impact on the Water Authority’s cost of water and, therefore, the water rates it passes through to its member agencies and water ratepayers. No agency pays “average” rates as reported by MWD; indeed, the actual water rate increases the Water Authority has paid have differed considerably than the “average” rate increases described in MWD board memos.

This January, the MWD board reviewed the recommended revenue requirements for fiscal years (FY) 2012/13 and 2013/14, and approved March 12 as the public hearing date for rates and charges. The board also approved changing MWD’s budget from a cash-year accounting basis to a modified accrual basis. This change will afford MWD a one-time additional revenue of $17 million due to the additional two months of incremental rate increases revenues gained from changing the budget base from cash to a modified accrual basis.
The proposed budget expenditure for 2012/13 is $1.78 billion, which reflects a $129 million decrease over the 2012/13 provisionally approved budget. The proposed budget expenditure for 2013/14 is $1.89 billion. Table 1 is a summary of total expenditures for the proposed biennial budget.

Table 1. Budget Summary—Total Expenditures (dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th>2011/12 1.8 MAF “Managed” Budget</th>
<th>2012/13 Budget (Provisional)</th>
<th>2012/13 Proposed</th>
<th>2013/14 Proposed</th>
<th>2012/13 Proposed vs 2011/12 1.8 MAF “Managed” Budget</th>
<th>2013/14 Proposed vs 2012/13 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Water Contract</td>
<td>$557.5</td>
<td>$552.7</td>
<td>$593.4</td>
<td>$563.8</td>
<td>$36.0</td>
<td>$ (29.7)</td>
</tr>
<tr>
<td>Supply Programs</td>
<td>47.5</td>
<td>45.4</td>
<td>45.1</td>
<td>44.9</td>
<td>(2.4)</td>
<td>(0.2)</td>
</tr>
<tr>
<td>Colorado River Power</td>
<td>45.4</td>
<td>46.5</td>
<td>36.2</td>
<td>24.9</td>
<td>(9.2)</td>
<td>(11.3)</td>
</tr>
<tr>
<td>Debt Service</td>
<td>332.8</td>
<td>355.3</td>
<td>343.3</td>
<td>352.3</td>
<td>10.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Demand Management</td>
<td>59.1</td>
<td>60.7</td>
<td>53.2</td>
<td>53.6</td>
<td>(5.9)</td>
<td>0.4</td>
</tr>
<tr>
<td>Departmental O&amp;M</td>
<td>309.8</td>
<td>316.2</td>
<td>315.1</td>
<td>329.3</td>
<td>5.4</td>
<td>14.2</td>
</tr>
<tr>
<td>Treatment Chemicals, Solids &amp; Power</td>
<td>22.9</td>
<td>24.3</td>
<td>25.5</td>
<td>26.4</td>
<td>2.6</td>
<td>0.9</td>
</tr>
<tr>
<td>Other O&amp;M</td>
<td>23.6</td>
<td>27.6</td>
<td>30.7</td>
<td>38.1</td>
<td>7.1</td>
<td>7.4</td>
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<tr>
<td>Subtotal Expenditures</td>
<td>1,398.5</td>
<td>1,428.6</td>
<td>1,442.6</td>
<td>1,433.3</td>
<td>44.0</td>
<td>(9.3)</td>
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<tr>
<td>Capital Investment Plan</td>
<td>281.9</td>
<td>346.8</td>
<td>257.3</td>
<td>294.6</td>
<td>(24.7)</td>
<td>37.3</td>
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<tr>
<td>Fund Deposits</td>
<td>114.0</td>
<td>132.0</td>
<td>78.1</td>
<td>160.2</td>
<td>(35.9)</td>
<td>82.1</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$1,794.5</strong></td>
<td><strong>$1,907.4</strong></td>
<td><strong>$1,778.0</strong></td>
<td><strong>$1,888.1</strong></td>
<td><strong>$16.5</strong></td>
<td><strong>$110.1</strong></td>
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</table>

*Totals may not foot due to rounding

To correspond with the biennial budget, MWD staff is recommending the adoption of rate increases for two years with an average increase of 7.5 percent for CY 2013 and 5 percent for CY 2014. These rate changes are premised on water “sales” of 1.7 million acre-feet (MAF) (sales as defined by MWD includes its transportation of the Water Authority’s QSA water) in both FY’s 2012/13 and 2013/14. Under the rate proposal, no discounted water sales are assumed because agricultural water rates have been phased out (CY 2012 was the last year the discounted agricultural rates are offered) and the MWD staff is recommending a different form of program for replenishment that may provide a form of a credit or subsidy offsetting the full service purchases. The Water Authority has stated a number of concerns about the new program and is awaiting further responses from MWD staff.

The budget assumption of 1.7 MAF for sales (including exchanges) assumption is more appropriate than MWD’s past assumptions (e.g., the MWD board adopted the FY 2011/12 budget in August 2010 based on 2 MAF of sales (including exchanges), but directed staff to “manage” the budget at 1.8 MAF last April when FY 2012/13 budget was provisionally adopted). However, the assumption that MWD would sell 1.5 MAF at full service rates for FY’s 2012/13 and 2013/14 is still more optimistic than what MWD’s currently tracking. MWD’s full service sales are tracking closer to 1.3 MAF for FY 2011/12, staff reported this month (2011/12 water sales also include 225 TAF of discounted replenishment sales and 163 TAF of the Water
Authority’s exchange water). With the drier than anticipated hydrology this water year, MWD staff has indicated that the city of Los Angeles will roll back onto the MWD system this year, thus driving up sales and revenues for FY 2012/13 (MWD does not have a peaking charge that captures the standby costs associated with the Los Angeles Department of Water and Power’s hydrologic peaking).

Under the proposed rates, MWD’s Tier 1 full service treated rate would increase 9.3 percent and 5.1 percent for CYs 2013 and 2014, respectively. The estimated rates and charges also include a suspension of the Delta Supply Surcharge after 2012 (there was no prior discussion of this change and the Water Authority is attempting to gain more information about it). With the suspension of the Delta Supply Surcharge, MWD’s “de facto” Tier 1 supply rate (Delta Supply Surcharge was added on Tier 1 purchases only) would decrease 9.1 percent in 2013 and increase 5.4 percent in 2013, while the transportation rate (combination of System Access Rate, System Power Rate and Water Stewardship Rate) would increase 15.9 percent and decrease by 1.3 percent for CYs 2013 and 2014, respectively. There is no explanation why these rates and charges are increasing at the stated levels. Table 2 illustrates the specific elements of the estimated rates and charges effective January 1, 2013 and January 1, 2104.

**Table 2. Budget Summary-Total Expenditures (dollars in millions)**

<table>
<thead>
<tr>
<th></th>
<th>2012</th>
<th>2013</th>
<th>2013 % change</th>
<th>2014</th>
<th>2014 % change</th>
<th>2012-2013 % change</th>
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<tr>
<td>Supply Rate Tier 1* ($/AF)</td>
<td>$164</td>
<td>$149</td>
<td>-9.1%</td>
<td>$157</td>
<td>5.4%</td>
<td>-4.3%</td>
</tr>
<tr>
<td>Supply Rate Tier 2 ($/AF)</td>
<td>$290</td>
<td>$290</td>
<td>0%</td>
<td>$290</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>System Access Rate ($/AF)</td>
<td>$217</td>
<td>$228</td>
<td>5.1%</td>
<td>$247</td>
<td>8.3%</td>
<td>13.8%</td>
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<tr>
<td>System Power Rate ($/AF)</td>
<td>$136</td>
<td>$190</td>
<td>39.7%</td>
<td>$164</td>
<td>-13.7%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Water Stewardship Rate ($/AF)</td>
<td>$43</td>
<td>$41</td>
<td>-4.7%</td>
<td>$42</td>
<td>2.5%</td>
<td>-2.3%</td>
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<tr>
<td>Treatment Surcharge ($/AF)</td>
<td>$234</td>
<td>$260</td>
<td>11.1%</td>
<td>$302</td>
<td>16.2%</td>
<td>29.1%</td>
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<tr>
<td>Basic (M&amp;I)/Full Service ($/AF)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Untreated</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tier 1</td>
<td>$560</td>
<td>$608</td>
<td>8.6%</td>
<td>$610</td>
<td>0.3%</td>
<td>8.9%</td>
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<tr>
<td>Tier 2</td>
<td>$686</td>
<td>$749</td>
<td>9.2%</td>
<td>$743</td>
<td>-0.8%</td>
<td>8.3%</td>
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<td>Treated</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Tier 1</td>
<td>$794</td>
<td>$868</td>
<td>9.3%</td>
<td>$912</td>
<td>5.1%</td>
<td>14.9%</td>
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<tr>
<td>Tier 2</td>
<td>$920</td>
<td>$1,009</td>
<td>9.7%</td>
<td>$1,045</td>
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<td>13.6%</td>
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<td>Long Term Seasonal/Replenishment ($/AF)</td>
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<tr>
<td>Untreated</td>
<td>$442</td>
<td>**</td>
<td></td>
<td>**</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Treated</td>
<td>$651</td>
<td>**</td>
<td></td>
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<tr>
<td>Agricultural ($/AF)</td>
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</tr>
<tr>
<td>Untreated</td>
<td>$537</td>
<td>***</td>
<td></td>
<td>***</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Treated</td>
<td>$765</td>
<td>***</td>
<td></td>
<td>***</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Readiness-to-Serve (SM)</td>
<td>$146</td>
<td>$146</td>
<td>0%</td>
<td>$189</td>
<td>29.5%</td>
<td>29.5%</td>
</tr>
<tr>
<td>Capacity Charge ($/cfs)</td>
<td>$7,400</td>
<td>$6,600</td>
<td>-10.8%</td>
<td>$8,900</td>
<td>34.9%</td>
<td>20.3%</td>
</tr>
</tbody>
</table>

* Tier 1 rate includes a $58/af Delta Supply Surcharge in 2012; MWD proposes to eliminate Delta Supply Surcharge after 2012.
** Under the current replenishment program proposal there would be no discounted replenishment rates after 2012.
*** The Interim Agricultural Water Program will be discontinued after 2012.
Two MWD board budget workshops (January 24 and February 28) have been scheduled. A public hearing date for March 12, 2012 has been set for interested parties to provide input regarding MWD’s rates and charges to be effective January 1, 2013 and January 1, 2014. The MWD board will consider taking action on the proposed biennial budget and rates and charges in April. Water Authority staff will continue to monitor the biennial budget and rate and charges and will report back to the Imported Water Committee.

Prepared by: Amy Chen, MWD Program Chief
Reviewed by: Dennis Cushman, Assistant General Manager

Attachment 1: MWD January 2012 Board Memo 8-1: Present proposed biennial budget, revenue requirements and water rate and charges for fiscal year 2012/13 and 2013/14, and set a public hearing date.
Subject

Present proposed biennial budget, revenue requirements, and water rates and charges for fiscal years 2012/13 and 2013/14, and set a public hearing date

Description

SUMMARY

The proposed biennial budget for fiscal years 2012/13 and 2013/14 (FY 2012/13 and FY 2013/14) continues to reflect Metropolitan’s key priorities while keeping proposed increases to water rates and charges as low as possible. This letter proposes a two-year (biennial) budget and corresponding two years of rates. Figure 1 below shows the proposed rate increases for FY 2012/13 and FY 2013/14 as well as historical and projected rate increases, the funding provided for key Metropolitan priorities, and progress towards meeting Metropolitan’s financial policy goals.

Figure 1. Historical and Projected Rates, Reserves, Financial Indicators and Water Supply and Conservation Spending

* Reserves includes Water Rate Stabilization Fund (including SDCWA litigation account), Water Treatment Surcharge Stabilization Fund, Revenue Remainder, and Water Stewardship Fund.

FY 2008 to FY 2012 are based on cash, FY 2013 and beyond are based on modified accrual
The proposed biennial budget uses a more conservative water sales estimate of 1.70 million acre-feet (MAF) that is 5.6 percent lower than the previous projection of 1.8 MAF. The reduction in projected water sales combined with increased State Water Project (SWP) costs of $85 million and increased debt service costs of $10 million make it necessary to have a proposed rate increase of 7.5 percent in FY 2012/13 and 5 percent in FY 2013/14. In the three years beyond the proposed biennial budget, current projections are for rate increases in the 3 percent range with all financial policy goals met or exceeded.

**STEPS TAKEN TO KEEP PROPOSED RATE INCREASES LOW**

Over the past several years, staff has taken a number of steps to minimize the financial impacts resulting from a dramatic and sudden drop in projected water sales and increases in SWP and debt service costs. These steps are as outlined below.

**Careful management of vacant positions** - Since 2008, Metropolitan has been steadily reducing authorized positions and holding positions vacant whenever possible. In that time, 162 positions have been eliminated, of which 138 were regular employee positions. This was done by carefully assessing the need for each position vacated as employees retired from service. Over the last five years, 266 employees have retired. An examination of current workforce demographics indicates that the pace of retirements is expected to approximately double over the next five years. This will provide continuing opportunities to carefully consider each position before filling to optimize staffing levels while challenging Metropolitan to retain required skill sets needed to maintain operational efficiency.

**Careful prioritization of capital program** - Proposed capital spending over the biennial budget period totals $552 million and would fund projects that are critical to maintaining water quality, reliability and worker safety. This is $165 million less than in last year’s estimates. The primary factors driving the projected decrease in capital expenditures are: (1) deferral of solar power projects that are not required for reliability and do not have an adequate return on investment; (2) rescheduling several rehabilitation/retrofit projects that are still being studied; (3) rescheduling of other rehabilitation projects to optimize contract work in coordination with day-to-day treatment plant operations; and (4) redesign of the Weymouth Oxidation Retrofit Program (ORP) to stage the constructed capacity of the new facilities.

**FUNDING OF KEY PRIORITIES**

While every effort has been made to keep spending as low as possible, many of Metropolitan’s key priorities are funded in this budget as outlined below.

**Prioritized Capital Investment Plan (CIP)**

The CIP budget for FY 2012/13 and FY 2013/14 is estimated to be $257 million and $295 million, respectively, and is funded by a combination of debt and current operating revenues (PAYGO). The CIP will continue to reflect the deferral of facility expansion and other projects that neither enhance reliability nor provide an adequate return on investment while focusing on necessary refurbishment and replacement of aging infrastructure. Major expenditures on CIP projects that will be in design, construction, and/or start-up during the next two years include ORP projects at the Diemer and Weymouth treatment plants ($143 million); Infrastructure Reliability projects at Metropolitan’s five treatment plants, not including the ORP ($140 million); and Infrastructure Reliability projects throughout Metropolitan’s Colorado River Aqueduct, conveyance, and distribution systems ($150 million). These projects account for almost 80 percent of the total CIP expenditures for fiscal years 2012/13 and 2013/14.

**Rebuilding Water Storage Accounts**

Supplies exceeding demands will allow Metropolitan to continue to increase storage reserves. The proposed biennial budget provides funding for continued maximization of storage agreements in the region, the Central Valley, and the Colorado River system. This initiative will help reduce the likelihood that Metropolitan will need to declare a Water Supply Allocation in coming years.
Conservation Programs

Funding is continued at the previously budgeted level of $20 million in FY 2012/13 and FY 2013/14 to help ensure that our member agencies and retail water agencies meet the 20 percent by 2020 goal of reduced per capita water consumption. While conservation expenditures for FY 2011/12 are trending below budget, incentives could return to higher levels consistent with Metropolitan's long-term conservation plan adopted in August 2011, depending upon board approval of conservation projects pursuant to the long-term conservation plan.

Local Resources Program (LRP)

LRP expenditures for FY 2012/13 and FY 2013/14 reflect incentives for existing LRP and Groundwater Recovery Program projects. By FY 2016/17, it is anticipated that additional projects, which are eligible for incentives based on project cost, will come on-line to meet the 2010 Integrated Resources Plan Update goals for local resource development.

Focus on Bay-Delta/DHCCP

The proposed FY 2012/13 and FY 2013/14 biennial budget provides increased funding to aggressively pursue near-term and long-term Bay-Delta solutions that will ensure a greater degree of water supply reliability for Metropolitan's SWP supplies. Funding is directed at habitat restoration surveys and studies, environmental documentation activities, technical evaluations and science modeling to support the Bay Delta Conservation Plan and the Delta Habitat Conservation and Conveyance Program.

Workforce Planning/Succession

Metropolitan faces significant challenges in maintaining the required skills and capabilities needed to ensure quality operations as technology, workforce demographics, governmental and regulatory issues, and unplanned events evolve and unfold over the next decade. Current workforce demographic trends indicate that the pace of retirements is expected to about double over the next five years. To address the expected vacancies, Metropolitan has initiated a workforce planning/ succession effort to ensure the availability of skilled employees needed to fill critical positions. This effort will include assessment of leadership competencies, executive development, use of disciplined workforce skill-gap analyses to understand critical skills at the various organizational levels, and creation of training programs to prepare existing staff to replace critical positions. In addition to improved tools for recruiting external talent, initiatives such as the Apprenticeship Program, Tuition Reimbursement, e-learning, cross-training, mentoring, internships, and other forms of learning and development will take on increasing importance as viable candidates are recruited, interviewed, and hired.

Addressing the Other Post Employment Benefits/Retiree Health Care (OPEB) Liability

Metropolitan has been funding the OPEB liability on a pay-as-you-go basis without setting aside assets to pay the present value of the future liability to active employees and retirees. This future liability exceeds $400 million and will continue to grow if left unaddressed.

This biennial budget begins the process of funding the actuarial required contribution by phasing in, over a five-year period, the additional $25 million that needs to be set aside annually thereafter. In FY 2012/13, $5 million will be set aside, increasing to $10 million in the second year of the biennial budget. This amount will increase by $5 million each year until the $25 million actuarial required contribution to the OPEB fund is reached in FY 2016/17.

Operations and Maintenance

The FY 2012/13 budget includes $371.3 million for Operations and Maintenance (O&M), including labor and benefits, water treatment chemicals, power, solids handling, professional services, and operating equipment purchases. This is $15 million higher than the 2011/12 revised 1.8 MAF budget of $356.3 million reviewed by the Board in April 2011, due primarily to: initial funding of Metropolitan's OPEB obligation, variable treatment costs, initiation of the PC Replacement Program, an increase in employee medical insurance costs, promotion of key initiatives and legal costs related to the Bay-Delta, and water quality, employment, and water rates litigation costs.
As compared to the provisional 2012/13 budget of $368 million approved by the Board in April 2011, the proposed 2012/13 budget is $3.3 million higher due primarily to an increase in funding of the OPEB obligation, variable treatment costs, and operating equipment offset by a reduction in O&M labor and elimination of the budget contingency.

The proposed 2013/14 O&M budget is $393.8 million, an increase of $22.5 million as compared to the 2012/13 proposed budget. This is primarily due to merit increases for eligible employees, an increase in funding of OPEB, variable treatment costs, and completion of the PC Replacement Program.

A summary of Metropolitan's FY 2012/13 and FY 2013/14 biennial budget is presented in Attachment 1.

**RECOMMENDED FINANCIAL REPORTING CHANGE**

The proposed biennial budget has been prepared on a modified-accrual basis instead of a cash basis. The modified-accrual basis of accounting is in accordance with Generally Accepted Accounting Principles and provides a better match of revenues and expenses for budgeting and reporting. This change in accounting basis allows the recognition of a full six months of rate increase revenues that take effect on January 1 of each fiscal year instead of only four months under the cash basis of accounting. As a result, revenues are $17 million greater in FY 2012/13 and $18 million greater in FY 2013/14 than under the previous cash basis of accounting resulting in a lower proposed rate increase. An added benefit is that a significant amount of staff time will be saved by not having to maintain and report on a separate set of cash basis accounting records. If approved by the Board pursuant to section 5106 of the Administrative Code, the adopted budget will reflect this change.

**REVENUE REQUIREMENTS**

To support the key priorities, the revenue requirements for FY 2012/13 and FY 2013/14 are estimated to be $1.38 billion and $1.46 billion, respectively. As shown in Table 1, the revenue requirement for FY 2012/13 is about $112 million more than the projected revenue requirement in the current fiscal year. Costs are projected to increase from about $1.43 billion in 2011/12 to about $1.51 billion in FY 2012/13. The main driver for the increase is the substantial increase in SWP costs by $85 million, mostly due to increases in variable power rates. Also increasing is debt service by $10 million and pay-as-you-go funding of the CIP. Taxes, interest income, power, and miscellaneous income are expected to generate about $125 million, reducing the revenue requirement from rates and charges in FY 2012/13 to about $1.38 billion.

In FY 2013/14, costs are projected at $1.58 billion, or $74 million higher than FY 2012/13. The main driver for the increase is the substantial increase in pay-as-you-go funding of the CIP by $70 million. With $121 million in revenue offsets, the revenue requirement is $1.46 billion in FY 2013/14.

**Table 1. Revenue Requirements for FY 2012/13 and FY 2013/14**

<table>
<thead>
<tr>
<th></th>
<th>2011/12 Projected</th>
<th>2012/13 Test Year</th>
<th>2013/14 Test Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Departmental &amp; Other O&amp;M (w/o Variable Treatment)</td>
<td>$340.6</td>
<td>$345.8</td>
<td>$367.4</td>
</tr>
<tr>
<td>Chemicals, Sludge &amp; Power for Treatment</td>
<td>32.2</td>
<td>25.5</td>
<td>26.4</td>
</tr>
<tr>
<td>State Water Project (without Variable Power)</td>
<td>373.1</td>
<td>392.8</td>
<td>364.0</td>
</tr>
<tr>
<td>SWP Variable Power</td>
<td>135.2</td>
<td>200.6</td>
<td>199.7</td>
</tr>
<tr>
<td>CRA Power</td>
<td>33.0</td>
<td>36.2</td>
<td>24.9</td>
</tr>
<tr>
<td>Supply Programs paid from O&amp;M</td>
<td>64.0</td>
<td>45.1</td>
<td>44.9</td>
</tr>
<tr>
<td>Demand Management</td>
<td>55.1</td>
<td>53.2</td>
<td>53.6</td>
</tr>
<tr>
<td>Debt Service</td>
<td>333.3</td>
<td>343.3</td>
<td>352.3</td>
</tr>
<tr>
<td>PAYGO</td>
<td>45.0</td>
<td>55.0</td>
<td>125.0</td>
</tr>
<tr>
<td>Change in Required Reserves</td>
<td>18.2</td>
<td>11.0</td>
<td>24.2</td>
</tr>
<tr>
<td><strong>Subtotal expenditures</strong></td>
<td><strong>1,429.7</strong></td>
<td><strong>1,508.6</strong></td>
<td><strong>1,582.5</strong></td>
</tr>
<tr>
<td>Revenue Offsets</td>
<td>158.6</td>
<td>125.0</td>
<td>121.5</td>
</tr>
<tr>
<td><strong>Total Revenue Requirement</strong></td>
<td><strong>$1,271.1</strong></td>
<td><strong>$1,383.6</strong></td>
<td><strong>$1,461.0</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
RATES AND CHARGES FOR 2013 AND 2014

Pursuant to Metropolitan’s Administrative Code (section 4304), at its January meeting, the Finance and Insurance Committee will set a public hearing to receive input on Metropolitan’s rates and charges. This hearing is to take place prior to the committee’s regularly scheduled meeting in April. In addition to this action, the committee also reviews the General Manager’s analysis of the revenue requirement for FY 2012/13 and FY 2013/14, and the rates and charges needed to meet the revenue requirement. The Cost of Service analysis detailed in Attachment 2 and Attachment 3 is consistent with the Cost of Service process used since the Board adopted the current rate structure in October 2001. This analysis shows that an overall rate increase of 7.5 percent in 2013 and 5 percent in 2014 would be necessary to achieve the Board direction of collecting the full Cost of Service in FY 2012/13 and FY 2013/14.

The specific elements of the rate increase effective January 1, 2013 and January 1, 2014, shown in Table 2, “Estimated Rates and Charges,” were determined pursuant to the Cost of Service analysis shown in Attachment 2 and Attachment 3. The estimate of rates and charges for FY 2012/13 was based on a total revenue requirement of $1.38 billion. The existing rates, which are effective through December 31, 2012, and the rates under a 7.5 percent increase, effective January 1, 2013, would generate combined revenue of $1.37 billion based on total sales of 1.7 million acre-feet.

The estimate of rates and charges for FY 2013/14 was determined on a total revenue requirement of $1.46 billion. Projected revenues from rates and charges in FY 2013/14 are $1.46 billion on total sales of 1.7 million acre-feet. Rate increases for FY 2014/15 to FY 2016/17 are projected to be 3 percent each year.

Table 2. Estimated Rates and Charges

<table>
<thead>
<tr>
<th>Effective January 1</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Supply Rate ($/AF)</td>
<td>$95</td>
<td>$149</td>
<td>$157</td>
</tr>
<tr>
<td>Delta Supply Surcharge ($/AF)</td>
<td>$69</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Tier 2 Supply Rate ($/AF)</td>
<td>$290</td>
<td>$290</td>
<td>$290</td>
</tr>
<tr>
<td>System Access Rate ($/AF)</td>
<td>$217</td>
<td>$228</td>
<td>$247</td>
</tr>
<tr>
<td>Water Stewardship Rate ($/AF)</td>
<td>$43</td>
<td>$41</td>
<td>$42</td>
</tr>
<tr>
<td>System Power Rate ($/AF)</td>
<td>$136</td>
<td>$190</td>
<td>$164</td>
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<tr>
<td>Full Service Untreated Volumetric Cost ($/AF)</td>
<td>$560</td>
<td>$608</td>
<td>$610</td>
</tr>
<tr>
<td>Tier 1</td>
<td>$686</td>
<td>$749</td>
<td>$743</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$442</td>
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<td>**</td>
</tr>
<tr>
<td>Replenishment Water Rate Untreated ($/AF)</td>
<td>$537</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Interim Agricultural Water Program Untreated ($/AF)</td>
<td>$234</td>
<td>$260</td>
<td>$302</td>
</tr>
<tr>
<td>Tier 1</td>
<td>$794</td>
<td>$868</td>
<td>$912</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$920</td>
<td>$1,009</td>
<td>$1,045</td>
</tr>
<tr>
<td>Treated Replenishment Water Rate ($/AF)</td>
<td>$651</td>
<td>**</td>
<td>**</td>
</tr>
<tr>
<td>Treated Interim Agricultural Water Program ($/AF)</td>
<td>$765</td>
<td>***</td>
<td>***</td>
</tr>
<tr>
<td>Readiness-to-Serve Charge ($M)</td>
<td>$146</td>
<td>$146</td>
<td>$169</td>
</tr>
<tr>
<td>Capacity Charge ($/cfs)</td>
<td>$7,400</td>
<td>$6,600</td>
<td>$8,900</td>
</tr>
</tbody>
</table>

* The Delta Supply Surcharge will be suspended after 2012.
** Under the current replenishment program proposal there would be no discounted replenishment rates after 2012.
*** The Interim Agricultural Water Program will be discontinued after 2012.
RECOMMENDATION

This letter requests that the Board set a public hearing for the March 2012 meeting of the Finance and Insurance Committee at which interested parties may provide input regarding Metropolitan’s rates and charges to be effective January 1, 2013 and January 1, 2014; and approve the modified-accrual basis of accounting as described in this letter.

Policy

Metropolitan Water District Administrative Code Sections 4304 and 5107: Apportionment of Revenues and Setting of Water Rates and Charges to Raise Firm Revenues, and Biennial Budget Process

California Environmental Quality Act (CEQA)

CEQA determination for Options #1 and #2:

The proposed action is not defined as a project under CEQA, because it involves continuing administrative activities, such as general policy and procedure making (Section 15378(b)(2) of the State CEQA Guidelines). In addition, the proposed action is not subject to CEQA because it involves the creation of government funding mechanisms or other government fiscal activities, which do not involve any commitment to any specific project which may result in a potentially significant physical impact on the environment (Section 15378(b)(4) of the State CEQA Guidelines). For those anticipated projects listed in the budget that may require subsequent board approval, a CEQA review will be carried out and, if appropriate, environmental documentation for such projects will be prepared and processed in accordance with CEQA and the State CEQA Guidelines.

The CEQA determination is: Determine that the proposed action is not subject to CEQA pursuant to Sections 15378(b)(2) and 15378(b)(4) of the State CEQA Guidelines.

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the CEQA determination and
a. Set a public hearing for the March 2012 meeting of the Finance and Insurance Committee at which interested parties may provide input regarding Metropolitan’s rates and charges to be effective January 1, 2013 and January 1, 2014; and
b. Approve the modified-accrual basis of accounting as described in this letter.

Fiscal Impact: Recognition of a full six months of rate increase revenue instead of only four months, and some reduction in costs by eliminating the need to maintain a separate set of accounting records on the cash basis.

Option #2

Adopt the CEQA determination and
a. Set a public hearing for the March 2012 meeting of the Finance and Insurance Committee at which interested parties may provide input regarding Metropolitan’s rates and charges to be effective January 1, 2013 and January 1, 2014; and
b. Do not approve the modified-accrual basis of accounting as described in this letter.

Fiscal Impact: Potentially higher required rate increases, or further cost reductions, and continued higher costs due to the need to maintain a separate set of accounting records on a cash basis.

Option #3

Take no action.

Fiscal Impact: Delay in rate setting process, and potentially no increase in revenues from rates and charges.
Staff Recommendation

Option #1

Attachment 1 – Biennial FY 2012/13 and FY 2013/14 Budget Summary
Attachment 2 – Metropolitan Water District of Southern California, FY 2012/13 Cost of Service
Attachment 3 – Metropolitan Water District of Southern California, FY 2013/14 Cost of Service

Ref# cfo12615597
The biennial budget includes a discussion of sources and uses of funds. The budget is developed and monitored on a modified-accrual basis. This means that revenues and expenses are recognized in the period they are earned and incurred regardless of whether cash has been received or disbursed.

The modified-accrual basis of accounting is in accordance with Generally Accepted Accounting Principles (GAAP) and provides a better match of revenues and expenses for budgeting and reporting.

Figure 1. Sources of Funds

<table>
<thead>
<tr>
<th>2011/12 Revised 1.8 MAF Budget</th>
<th>2012/13 Proposed</th>
<th>2013/14 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>R&amp;R &amp; General Fund</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bond Proceeds &amp; Reserves</td>
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<td></td>
</tr>
<tr>
<td>Other Revenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Taxes &amp; Annexation Fees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Charges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Sales</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SOURCES OF FUNDS

Estimated revenues from water sales, fixed charges (readiness-to-serve charge and capacity charge), taxes and annexation fees, and other miscellaneous income (interest income, power recovery, etc.) are projected to be $1.50 billion for fiscal year 2012/13 and $1.58 billion for fiscal year 2013/14. For 2012/13 this is $35.6 million more than the 2011/12 revised budget and for 2013/14 this is $80.4 million more than 2012/13. The increase in revenues is due to increases in water rates and charges in 2012, and estimated increases in 2013 and 2014. Figure 1 shows the major sources of funds.

Water Sales

Revenues from water sales are budgeted at $1,197.2 million in 2012/13 and $1,271.3 million in 2013/14 and are based on rates and charges adopted by the Board for January 1, 2012, plus a 7.5 percent rate increase estimated for January 1, 2013 and 5 percent rate increase for January 1, 2014.

Water sales for both 2012/13 and 2013/14 are estimated to be 1.70 million acre-feet (MAF) during the July through June fiscal year period.
**Figure 2. Water Sales Trend**

* Proposed budget for FY 2012/13 and FY 2013/14 are based on modified accrual and represent water sales for July through June, prior years are based on cash basis and represent water sales for May through April.

The 2012/13 fiscal year water sales include 1.52 MAF of firm sales, zero replenishment sales, zero agricultural sales, and 185 thousand acre-feet (TAF) of exchange sales. Treated sales are estimated to be 973 TAF or 57 percent of total sales in 2012/13. The 2013/14 fiscal year water sales include 1.50 MAF of firm sales, zero replenishment sales, zero agricultural sales, and 198 TAF of exchange sales. Treated sales are estimated to be 973 TAF or 57 percent of total sales in 2013/14. Figure 2 shows the trend of water sales.

**Fixed Charges**

The fixed charges are comprised of the Capacity Charge and Readiness-to-Serve Charge. In 2012/13 these charges are estimated to generate $30.8 million and $146.0 million, respectively. In 2013/14 these charges are estimated to generate $29.1 million and $157.5 million, respectively. In total this represents a $6.5-million increase from the 2011/12 to the 2012/13 and a $9.8 million increase from the 2012/13 to the 2013/14 budget.

**Other Revenue**

Interest earnings are estimated to total $13.8 million and $14.3 million for 2012/13 and 2013/14, respectively, (including trust accounts and construction funds). Receipts from hydroelectric and Colorado River Aqueduct (CRA) power sales are estimated to be $23.6 million for 2012/13 and $20.5 million for 2013/14.
Other Sources
To meet the ongoing funding requirements of the CIP, Metropolitan plans to issue $190 million of fixed rate bonds in 2012/13 and $180 million of fixed rate bonds in 2013/14. These bonds are expected to generate $352.8 million in bond proceeds, after about $3 million to cover the cost of issuance and $14 million to fund reserves. The remaining CIP funding requirements will be met from current operating funds (i.e., PAYGO from the R&R and General Fund). In 2012/13, a total of $1.78 billion will be available for expenditures and other obligations and in 2013/14 this figure will increase to $1.89 billion.

Figure 3. Uses of Funds

USES OF FUNDS
Total uses of funds are $1.78 billion for 2012/13 and $1.89 billion for 2013/14. Figure 3 shows the breakdown of expenditures and other obligations that make up the Uses of Funds for 2012/13 and 2013/14.

Colorado River Aqueduct Power
CRA power costs are projected to be $36.2 million and $24.9 million based on pumping 727 TAF and 890 TAF at Whitsett Intake Pumping Plant, respectively, in 2012/13 and 2013/14. 2013/14 is $11.2 million lower despite the increase in pumping as a result of the expected use of exchange energy in 2013/14.

State Water Contract
State Water Contract (SWC) expenditures are budgeted at $593.4 million for 2012/13 and $563.8 million in 2013/14. This is based on total deliveries of 1.26 MAF for 2012/13, of which 120 TAF are received via exchange, and 1.14 MAF for 2013/14, of which 108 TAF are received via exchange. SWC power costs are expected to be $270.7 million for 2012/13 and $230.0 million for 2013/14 and include the cost of pumping 1.14 MAF and 1.03 MAF, respectively. For 2012/13 the average total unit cost of SWC power is expected to be about $238 per acre-foot, which includes $61 per acre-foot for fixed power costs and $176 per acre-foot for variable pumping costs. For 2013/14 the average total unit cost of SWC power is expected to be about $223 per acre-foot, which includes $29 per acre-foot for fixed power costs and $193 per acre-foot for variable pumping costs.
SWC minimum operations, maintenance, power, and replacement charges are estimated to increase $5.1 million to $184.6 million in 2013/14. Capital charges are expected to increase $5.9 million to $149.2 million in 2013/14.

**Demand Management Costs**

Metropolitan provides financial assistance to its member agencies for the development of local water recycling and groundwater recovery projects through the Local Resource Program (LRP). Metropolitan also provides financial assistance for the development of conservation programs through the Conservation Credits Program (CCP).

As part of the LRP, Metropolitan has entered into agreements to provide financial assistance to water-recycling projects. Recycling projects that receive Metropolitan contributions are expected to produce 162 TAF of recycled water, principally for landscape irrigation, groundwater recharge, and industrial uses in 2012/13 and 169 TAF in 2013/14. Metropolitan is expected to spend $24.7 million in 2012/13 and $24.9 million on these efforts in 2013/14.

Metropolitan has also entered into agreements to provide financial assistance to projects to recover contaminated groundwater. These groundwater recovery projects are expected to produce about 58 TAF in 2012/13 at a cost to Metropolitan of $8.5 million. In 2013/14 groundwater recovery projects are expected to produce about 62 TAF at a cost to Metropolitan of $8.7 million.

**OPERATIONS AND MAINTENANCE**

The proposed 2012/13 operations and maintenance (O&M) budget, including operating equipment purchases, is estimated to be $371.3 million. This is $15.0 million higher than the 2011/12 Revised 1.8 MAF budget of $356.3 million presented to the Board in April 2011. The proposed 2013/14 O&M budget is $393.8 million, an increase of $22.5 million as compared to the 2012/13 proposed budget. Table 1 summarizes the O&M budget by expenditure type. A more detailed discussion of significant factors impacting the proposed O&M budgets follows Table 1.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Benefits*</td>
<td>224,881,800</td>
<td>229,248,400</td>
<td>226,059,500</td>
<td>238,244,500</td>
<td>(3,188,900)</td>
<td>12,185,000</td>
</tr>
<tr>
<td>Variable Treatment **</td>
<td>22,891,400</td>
<td>24,281,700</td>
<td>25,512,700</td>
<td>26,409,500</td>
<td>1,231,000</td>
<td>896,800</td>
</tr>
<tr>
<td>Outside Services</td>
<td>38,279,600</td>
<td>38,868,200</td>
<td>41,439,000</td>
<td>41,239,300</td>
<td>2,570,800</td>
<td>(199,700)</td>
</tr>
<tr>
<td>Materials &amp; Supplies ***</td>
<td>46,657,200</td>
<td>48,106,900</td>
<td>47,616,400</td>
<td>49,795,400</td>
<td>(490,500)</td>
<td>2,179,000</td>
</tr>
<tr>
<td>Cargill Settlement &amp; OPEB</td>
<td>500,000</td>
<td>-</td>
<td>5,000,000</td>
<td>10,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
</tr>
<tr>
<td>Other</td>
<td>15,604,400</td>
<td>20,187,400</td>
<td>17,652,800</td>
<td>19,936,700</td>
<td>(2,534,600)</td>
<td>2,283,900</td>
</tr>
<tr>
<td>Operating Equipment</td>
<td>7,489,400</td>
<td>7,344,700</td>
<td>8,041,600</td>
<td>8,192,900</td>
<td>696,900</td>
<td>151,300</td>
</tr>
<tr>
<td><strong>Total O&amp;M</strong></td>
<td><strong>356,303,800</strong></td>
<td><strong>368,037,300</strong></td>
<td><strong>371,322,000</strong></td>
<td><strong>393,818,300</strong></td>
<td><strong>3,284,700</strong></td>
<td><strong>22,496,300</strong></td>
</tr>
<tr>
<td><strong>Total Budgeted Positions</strong></td>
<td>1,921</td>
<td>1,921</td>
<td>1,907</td>
<td>1,907</td>
<td>(14)</td>
<td>-</td>
</tr>
</tbody>
</table>

* Includes Overhead Credit for Construction.
** Costs associated with treatment plants only.
*** Without chemicals associated with treatment plants.
The proposed 2012/13 O&M budget includes $371.3 million for labor and benefits, water treatment chemicals, power, and solids handling, materials and supplies, professional services, and operating equipment purchases. This is $15.0 million higher than the 2011/12 Revised 1.8 MAF budget of $356.3 million reviewed by the Board in April 2011 due primarily to initial funding of Metropolitan's Other Post-Employment Benefits (OPEB) obligation; variable treatment costs; initiation of the PC Replacement Program; an increase in employee medical insurance costs; promotion of key initiatives and legal costs related to the Bay-Delta; and increased litigation costs related to water quality, employment, and water rates.

The proposed 2012/13 budget is $3.3 million higher than the provisional 2012/13 budget of $368.0 million approved by the Board in April 2011 due primarily to beginning the phasing in process towards full funding of the OPEB obligation.

Salaries and Benefits – Labor costs, not including those charged to construction, are $226.7 million. Although the proposed 2012/13 budget assumes no across-the-board salary increases, consistent with the bargaining unit contracts approved by the Board, overall O&M labor is $1.2 million higher than the Revised 1.8 MAF 2011/12 budget. This increase reflects a $3.1-million increase in the cost of employee benefits as compared to the 2011/12 budget driven primarily by employee and retiree medical insurance cost increases. In addition, the O&M budget also reflects $1.6 million for merit increases for eligible employees and a $0.9-million increase in overtime for planned shutdown support offset by a reduction of $2.4 million for elimination of 15 positions and an increase in the construction overhead applied as a credit reducing O&M labor by $2.0 million.

The total personnel complement for 2012/13 is 1,907 positions, including 24 agency and district temporary full-time equivalents (FTEs), and reflects a decrease of 15 regular positions from the 2011/12 budget. Total regular employee positions are 138 positions below the 2008/09 budget. The proposed 2012/13 budget assumes a vacancy rate of approximately 2.7 percent. Although this is slightly less than the 3.2 percent assumed for the 2011/12 budget, 10 regular employee positions are held unfunded in lieu of a vacancy rate. The value of these 10 positions is equivalent to an overall vacancy rate of about 3.3 percent.

Other O&M – As a result of reduced revenues from water sales, initial funding of Metropolitan's OPEB obligation to its current and future retirees was eliminated from the Revised 1.8 MAF 2011/12 budget. The proposed 2012/13 budget includes $5 million to renew that commitment. Consistent with Metropolitan's IT Strategic Plan, the proposed 2012/13 budget includes $1.4 million to initiate replacement of outdated desktop workstations at the end of their anticipated useful life as part of the two-year PC Replacement Program. This program was deferred one year beyond the planned refresh cycle to mitigate budget increases, but now needs to proceed since many computers will be about six years old by the time of replacement. The General Manager's costs in support of Bay-Delta activities for near-term and long-term activities and the General Counsel's legal costs related to water quality, employment, and water rates are expected to increase by $2.2 million. Chemicals, solids, and power reflect the cost of the water treatment process and is anticipated to increase by $1.2 million in 2012/13 driven primarily by an overall increase in chemical unit commodity prices, increased treated water volumes, higher electricity rates, and refined assumptions on solids removal.

The proposed 2013/14 O&M budget is $393.8 million, an increase of $22.5 million as compared to the 2012/13 proposed budget. This is primarily due to merit increases for eligible employees, an increase in funding of OPEB, variable treatment costs, and completion of the PC Replacement Program. Salaries and Benefits – The proposed 2013/14 O&M labor budget is about
$12.2 million higher than the proposed 2012/13 budget driven primarily by $13.2 million in merit increases for eligible employees partially offset by an increase in the construction overhead applied as a credit reducing O&M labor by $0.6 million and reductions in overtime, agency temporary, and district temporary employees.

The total personnel complement for 2013/14 remains at 1,907 positions, including 24 agency and district temporary FTEs. The proposed 2013/14 budget assumes a vacancy rate of approximately 2.9 percent. The 2013/14 budget retains 6 regular employee positions held unfunded in lieu of a vacancy rate, resulting in an effective vacancy rate of about 3.3 percent. Additional changes in personnel will depend on long-range staffing plan inputs related primarily to CIP impacts, a continued emphasis on maintenance management best practices, and careful review of vacated positions as a result of increasing employee retirements.

**Other O&M** – The proposed 2013/14 budget increases the ongoing funding of Metropolitan's OPEB obligation to $10 million, a $5-million increase as compared to 2012/13. The proposed 2013/14 budget also funds $3.5 million for completion of the two-year PC Replacement Program to replace outdated desktop workstations at the end of their anticipated useful life, an increase of $2.1 million as compared to 2012/13. The cost of chemicals, power, and sludge disposal incurred in the water treatment process is anticipated to increase by $0.9 million in 2013/14 driven primarily by modest inflationary pressure on chemical commodity prices and electricity rates.
Figure 4. Departmental Budget by Expenditure Type

Figure 4 summarizes the total departmental O&M budget by expenditure type, of which 59 percent is for salaries and benefits.

Figure 5 depicts the distribution of the departmental O&M by organization without other O&M, the overhead credit, and operating equipment. Including treatment costs, the Water System Operations (WSO) Group accounts for 59 percent of the total departmental budget for both 2011/12 and 2012/13.

A summary of the O&M budget by organization is shown in Table 2.
### Table 2. Operations & Maintenance Budget by Organization

<table>
<thead>
<tr>
<th>Departmental Units</th>
<th>2011/12 Revised 1.8 MAF Budget</th>
<th>2012/13 Budget</th>
<th>2012/13 Proposed</th>
<th>2013/14 Proposed</th>
<th>2012/13 Budget vs. 2012/13 Proposed</th>
<th>%</th>
<th>2012/13 Proposed vs. 2013/14 Proposed</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the General Manager</td>
<td>$10,450,800</td>
<td>$10,601,700</td>
<td>$12,287,200</td>
<td>$12,666,200</td>
<td>$1,685,500</td>
<td>15.9%</td>
<td>$379,000</td>
<td>3.1%</td>
</tr>
<tr>
<td>Water System Operations w/o Variable Treatment</td>
<td>172,304,600</td>
<td>176,710,700</td>
<td>175,947,200</td>
<td>184,581,500</td>
<td>(632,300)</td>
<td>(0.4%)</td>
<td>8,634,300</td>
<td>4.9%</td>
</tr>
<tr>
<td>Water Resource Management</td>
<td>14,470,700</td>
<td>15,444,900</td>
<td>14,903,500</td>
<td>15,197,200</td>
<td>(541,400)</td>
<td>(3.5%)</td>
<td>293,700</td>
<td>2.0%</td>
</tr>
<tr>
<td>Engineering Services</td>
<td>23,916,400</td>
<td>24,764,900</td>
<td>24,476,000</td>
<td>25,759,100</td>
<td>(1,685,100)</td>
<td>(6.5%)</td>
<td>1,283,100</td>
<td>5.2%</td>
</tr>
<tr>
<td>Business Technology</td>
<td>49,877,100</td>
<td>50,340,500</td>
<td>49,321,700</td>
<td>52,106,300</td>
<td>(384,600)</td>
<td>(0.8%)</td>
<td>2,784,600</td>
<td>6.6%</td>
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<tr>
<td>Real Property Development &amp; Mgmt</td>
<td>5,560,900</td>
<td>5,839,600</td>
<td>5,021,000</td>
<td>5,288,300</td>
<td>(567,300)</td>
<td>(11.1%)</td>
<td>267,300</td>
<td>5.3%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>11,477,400</td>
<td>11,672,800</td>
<td>11,545,800</td>
<td>11,853,000</td>
<td>(307,200)</td>
<td>(2.6%)</td>
<td>307,200</td>
<td>2.7%</td>
</tr>
<tr>
<td>Office of the Chief Financial Officer</td>
<td>8,262,300</td>
<td>8,385,200</td>
<td>8,396,500</td>
<td>8,726,800</td>
<td>330,300</td>
<td>4.0%</td>
<td>330,300</td>
<td>3.9%</td>
</tr>
<tr>
<td>External Affairs</td>
<td>15,020,600</td>
<td>16,079,900</td>
<td>15,521,800</td>
<td>15,998,100</td>
<td>(476,300)</td>
<td>(3.0%)</td>
<td>476,300</td>
<td>3.1%</td>
</tr>
<tr>
<td>Subtotal - General Manager's Dep.</td>
<td>312,240,800</td>
<td>319,840,200</td>
<td>317,420,700</td>
<td>332,178,300</td>
<td>(2,419,500)</td>
<td>(0.8%)</td>
<td>14,757,600</td>
<td>4.6%</td>
</tr>
<tr>
<td>General Counsel</td>
<td>12,552,600</td>
<td>12,535,900</td>
<td>14,666,300</td>
<td>14,555,900</td>
<td>2,130,400</td>
<td>17.0%</td>
<td>(110,400)</td>
<td>(0.8%)</td>
</tr>
<tr>
<td>General Auditor</td>
<td>2,682,000</td>
<td>2,682,000</td>
<td>2,686,500</td>
<td>2,759,500</td>
<td>7,600</td>
<td>0.2%</td>
<td>71,000</td>
<td>2.6%</td>
</tr>
<tr>
<td>Ethics Office</td>
<td>573,800</td>
<td>573,700</td>
<td>570,800</td>
<td>592,400</td>
<td>(2,500)</td>
<td>(0.5%)</td>
<td>21,600</td>
<td>3.8%</td>
</tr>
<tr>
<td>Overhead Credit from Construction</td>
<td>(18,230,600)</td>
<td>(19,408,300)</td>
<td>(20,231,400)</td>
<td>(20,806,900)</td>
<td>(575,500)</td>
<td>2.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Departmental Budget</td>
<td>309,818,600</td>
<td>316,223,500</td>
<td>315,114,900</td>
<td>329,279,200</td>
<td>(1,108,600)</td>
<td>(0.4%)</td>
<td>14,164,300</td>
<td>4.5%</td>
</tr>
<tr>
<td>Other O&amp;M</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cargill Settlement</td>
<td>500,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>PC Replacement</td>
<td>-</td>
<td>1,400,000</td>
<td>1,400,000</td>
<td>3,525,000</td>
<td>-</td>
<td>NA</td>
<td>2,125,000</td>
<td>151.8%</td>
</tr>
<tr>
<td>CCP Vendor Administration</td>
<td>1,839,100</td>
<td>1,589,100</td>
<td>1,589,100</td>
<td>1,589,100</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
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<tr>
<td>Performance Programs</td>
<td>673,000</td>
<td>673,000</td>
<td>673,000</td>
<td>673,000</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>Association Dues</td>
<td>4,432,500</td>
<td>4,849,700</td>
<td>4,849,700</td>
<td>4,816,000</td>
<td>-</td>
<td>NA</td>
<td>131,300</td>
<td>2.7%</td>
</tr>
<tr>
<td>OPEB Funding</td>
<td>-</td>
<td>-</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>5,000,000</td>
<td>NA</td>
<td>5,000,000</td>
<td>100.0%</td>
</tr>
<tr>
<td>Contingency</td>
<td>-</td>
<td>2,681,200</td>
<td>-</td>
<td>(2,681,200)</td>
<td>(100.0%)</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>Insurance</td>
<td>7,504,000</td>
<td>7,766,600</td>
<td>7,766,600</td>
<td>7,766,600</td>
<td>-</td>
<td>NA</td>
<td>-</td>
<td>NA</td>
</tr>
<tr>
<td>Leases</td>
<td>600,000</td>
<td>630,000</td>
<td>776,600</td>
<td>790,000</td>
<td>14,600</td>
<td>23.3%</td>
<td>13,400</td>
<td>1.7%</td>
</tr>
<tr>
<td>Taxes</td>
<td>555,800</td>
<td>597,800</td>
<td>597,800</td>
<td>612,000</td>
<td>-</td>
<td>NA</td>
<td>14,200</td>
<td>2.4%</td>
</tr>
<tr>
<td>Subtotal - Other</td>
<td>16,104,400</td>
<td>20,187,400</td>
<td>22,652,800</td>
<td>29,936,700</td>
<td>2,465,400</td>
<td>12.2%</td>
<td>7,283,900</td>
<td>32.2%</td>
</tr>
<tr>
<td>TOTAL OPERATIONS &amp; MAINTENACE</td>
<td>325,923,000</td>
<td>336,410,900</td>
<td>337,767,700</td>
<td>359,215,900</td>
<td>1,356,800</td>
<td>0.4%</td>
<td>21,448,200</td>
<td>6.3%</td>
</tr>
<tr>
<td>Operating Equipment</td>
<td>7,489,400</td>
<td>7,344,700</td>
<td>8,041,600</td>
<td>8,192,900</td>
<td>696,900</td>
<td>9.5%</td>
<td>151,300</td>
<td>1.9%</td>
</tr>
<tr>
<td>Variable Treatment</td>
<td>22,891,400</td>
<td>24,281,700</td>
<td>25,512,700</td>
<td>26,409,500</td>
<td>1,231,000</td>
<td>5.1%</td>
<td>896,800</td>
<td>3.5%</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>$356,303,800</td>
<td>$368,037,300</td>
<td>$371,322,000</td>
<td>$393,818,300</td>
<td>$3,284,700</td>
<td>0.9%</td>
<td>$22,496,300</td>
<td>6.1%</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
LABOR

The total personnel complement (including temporary workers) for 2012/13 and 2013/14 is 1,907 positions, a reduction of 15 regular full time equivalent positions from 2011/12. Total O&M personnel are down by 15 positions to 1,619 in 2012/13 and drop one more position to a total of 1,618 in 2013/14. Positions dedicated to capital work remain relatively flat during the biennium. The proposed 2012/13 budget assumes a vacancy rate of approximately 2.7 percent and holds 10 regular employee positions unfunded. When the value of these 10 positions is taken into account, the effective overall vacancy rate is about 3.3 percent, which is about the same as the 3.2 percent rate assumed for the 2011/12 budget. Similarly, the proposed 2013/14 budget assumes a vacancy rate of approximately 2.9 percent and holds 6 regular employee positions unfunded in lieu of a vacancy rate, resulting in an effective vacancy rate of about 3.3 percent. The personnel complement is broken down on Tables 3 and 4.

Table 3. Regular and Temporary Positions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular Full Time Positions</td>
<td>1,899</td>
<td>1,898</td>
<td>1,883</td>
<td>1,883</td>
<td>-15</td>
<td>0</td>
</tr>
<tr>
<td>District Temporary Positions</td>
<td>22</td>
<td>18</td>
<td>18</td>
<td>18</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Agency Temporary Positions</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1,924</td>
<td>1,921</td>
<td>1,907</td>
<td>1,907</td>
<td>-14</td>
<td>0</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.

Table 4. O&M and Capital Staffing Levels

<table>
<thead>
<tr>
<th></th>
<th>2011/12 Budget</th>
<th>2012/13 Proposed</th>
<th>2013/14 Proposed</th>
</tr>
</thead>
<tbody>
<tr>
<td>O&amp;M Positions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Full Time Positions</td>
<td>1,613</td>
<td>1,599</td>
<td>1,598</td>
</tr>
<tr>
<td>District &amp; Agency Temporary Positions</td>
<td>21</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Total O&amp;M</td>
<td>1,634</td>
<td>1,619</td>
<td>1,618</td>
</tr>
<tr>
<td>Capital Positions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular Full Time Positions</td>
<td>285</td>
<td>284</td>
<td>285</td>
</tr>
<tr>
<td>District &amp; Agency Temporary Positions</td>
<td>3</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Total Capital</td>
<td>287</td>
<td>288</td>
<td>289</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>1,921</td>
<td>1,907</td>
<td>1,907</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
Supply Programs

Major supply program expenditures for 2012/13 and 2013/14 are estimated to be $45.1 million and $44.9 million, respectively, and include (may not foot due to rounding):

- $13.7 million in 2012/13 and $13.4 million in 2013/14 for Central Valley Storage Programs;
- $13.0 million in 2012/13 and $13.7 million in 2013/14 for operating and maintaining the IID/MWD conservation agreement;
- $13.3 million in 2012/13 and $12.2 million in 2013/14 for Colorado Programs;
- $4.8 million in 2012/13 and $4.7 million in 2013/14 for the Palo Verde Irrigation District (PVID) Land Management Program;
- $0.1 million in 2012/13 and $0.6 million in 2013/14 for State Water Project Transfer Programs; and
- $0.3 million in 2012/13 and $0.3 million in 2013/14 for In-Basin Programs.

ANNUAL CAPITAL INVESTMENT PLAN

The CIP budget for 2012/13 and 2013/14 is estimated to be $257.3 million and $294.6 million in 2013/14 and is funded by a combination of debt and current operating revenues (R&R and General Fund). The 2012/13 capital budget is $89.5 million lower than the 2011/12 budget and the 2013/14 capital budget is $37.3 million higher than the 2012/13 budget.

The CIP is funded by a combination of debt and current operating revenues (PAYGO). The two largest areas of expenditures in the 2012/13 and 2013/14 CIP are Infrastructure Reliability and Water Quality. It is currently anticipated that infrastructure expenditures will continue to grow as more facilities reach the end of their service life.

Cash Funded Capital

The CIP includes R&R and other projects that are funded from current operating revenues in the R&R and General Fund. In total these funds are commonly referred to as Pay-As-You-Go (PAYGO) funding. The PAYGO funding for 2012/13 has been budgeted at $55 million. In 2013/14 PAYGO funding has been budgeted at $125 million and enables the majority of R&R projects to be funded from PAYGO in 2013/14.

Debt Service

The portion of the CIP that is not funded from cash will be funded from bond proceeds. In 2012/13, $202.3 million of capital will be funded with bond proceeds. In 2013/14, $169.6 million of capital will be funded with bond proceeds. Metropolitan plans to issue $190 million in new debt in 2012/13 and an additional $180 million in 2013/14. This will result in construction proceeds of $352.8 million, after allowing for about $3 million to cover the cost of issuance and $14 million to fund reserves.

Debt service payments in 2012/13 are budgeted to be $343.3 million and include $40.4 million in G.O. bond debt service, $293.6 million in revenue bond debt service, $8.1 million in variable rate debt administration costs (liquidity, remarketing fees, and broker-dealer fees), and $1.3 million for State Revolving Fund Loan payments. Total debt service costs in 2012/13 are expected to be $10.5 million more than the revised 2011/12 budget.

Debt service payments in 2013/14 are budgeted to be $352.3 million and include $40.4 million in G.O. bond debt service, $302.3 million in revenue bond debt service, $8.4 million in variable rate debt administration costs (liquidity, remarketing fees, and broker-dealer fees), and $1.3 million for State Revolving Fund Loan payments. Total debt service costs in 2013/14 are expected to be $9.0 million more than the 2012/13 budget.

Metropolitan currently has $4.8 billion in outstanding debt. Of this amount, $4.6 billion is revenue bond debt, of which 11 percent is in a variable rate mode.

Reserve Transfers

The 2012/13 budget forecasts a $3.4-million decrease in reserves by June 30, 2013. The Water Rate Stabilization Fund (WRSF) and the Treatment Surcharge Stabilization Fund (TSSF)
are expected to be drawn down $13.2 million. The Revenue Remainder Fund is expected to increase by $6.2 million and the Water Stewardship Fund (WSF) is expected to increase by $3.8 million.

The 2013/14 budget forecasts a $0.5-million decrease in reserves by June 30, 2014. The WRSF and the TSSF are expected to be drawn down $4.1 million. The Revenue Remainder Fund is expected to increase by $2.6 million and the Water Stewardship Fund (WSF) is expected to increase by $1.0 million.

FUND BALANCES AND RESERVE LEVELS

Metropolitan operates as a single enterprise fund for financial statements and budgeting purposes. Through its Administrative Code, Metropolitan identifies a number of accounts, which are referred to as funds, to separately track uses of monies for specific purposes as summarized in Table 5. Figure 6 shows the distribution of these funds by type.

Fund balances are budgeted to be $975.8 million at June 30, 2013. Of that total, $734.1 million is restricted by bond covenants, contracts, or board policy, and $241.7 million is unrestricted. In addition, fund balances are budgeted to be $1,006.8 million at June 30, 2014. Of that total, $766.6 million is restricted by bond covenants, contracts, or board policy, and $240.2 million is unrestricted.

On June 30, 2013 the minimum and maximum reserve fund targets are estimated to be $199.8 million and $475.6 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF, TSSF, Revenue Remainder Fund, and WSF will total about $215.6 million, about $15.8 million over the minimum target.

On June 30, 2014 the minimum and maximum reserve fund targets are estimated to be $202.4 million and $487.5 million, respectively. Based on projected revenues and expenditures, it is estimated that the balance in the WRSF, TSSF, Revenue Remainder Fund, and WSF will total about $215.1 million, about $12.7 million over the minimum target.
Table 5. Projected Fund Balances (dollars in millions)

<table>
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<th>Restricted</th>
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<tr>
<td></td>
<td>Contractual</td>
<td>Board</td>
<td>Unrestricted</td>
<td>Total</td>
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<tr>
<td>2012/13 Proposed</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating Funds</td>
<td>231.0</td>
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<td>345.7</td>
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<tr>
<td>Debt Service Funds</td>
<td>322.7</td>
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<td>322.7</td>
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<tr>
<td>Construction Funds</td>
<td>64.7</td>
<td></td>
<td>33.8</td>
<td>98.5</td>
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<tr>
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<td>208.0</td>
<td></td>
<td>208.0</td>
<td></td>
</tr>
<tr>
<td>Trust and Other Funds</td>
<td>1.0</td>
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</tr>
<tr>
<td>Total June 30, 2013</td>
<td>619.4</td>
<td>114.6</td>
<td>241.7</td>
<td>975.8</td>
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<tr>
<td>2013/14 Proposed</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Operating Funds</td>
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<td>Debt Service Funds</td>
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<td>336.2</td>
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<tr>
<td>Construction Funds</td>
<td>67.7</td>
<td></td>
<td>33.8</td>
<td>101.5</td>
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<tr>
<td>Rate Stabilization Funds*</td>
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<td>206.4</td>
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<tr>
<td>Trust and Other Funds</td>
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<td>1.0</td>
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<tr>
<td>Total June 30, 2014</td>
<td>643.8</td>
<td>122.9</td>
<td>240.2</td>
<td>1,006.8</td>
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</tbody>
</table>

Based on modified accrual accounting. Totals may not foot due to rounding.

* includes Water Rate Stabilization Fund (including SDCWA litigation account), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.

Figure 6. Fund Distribution by Type

* Includes Water Rate Stabilization Fund (including SDCWA litigation account), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.
Table 6. Sources and Uses of Funds  (dollars in millions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
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<td></td>
</tr>
<tr>
<td>Expenditures</td>
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<td>45.1</td>
<td>44.9</td>
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<td>352.3</td>
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<td>32.2</td>
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<td>45.0</td>
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<td>55.0</td>
<td>125.0</td>
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<td>78.1</td>
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<td>82.1</td>
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<td>$1,907.4</td>
<td>$1,778.0</td>
<td>$1,888.1</td>
<td>($16.5)</td>
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<td>81.6</td>
<td>80.1</td>
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<td>14.3</td>
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<td>20.9</td>
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<td>Fixed Charges (RTS &amp; Capacity Charge)</td>
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<td>170.2</td>
<td>186.9</td>
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<td>6.1</td>
<td>(12.2)</td>
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<td>Bond Proceeds and Reimbursements</td>
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<td>188.5</td>
<td>178.6</td>
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<td>(9.9)</td>
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<td>Sub-total Receipts</td>
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<td>1,758.9</td>
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<td></td>
</tr>
<tr>
<td>R&amp;R and General Fund</td>
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<td>45.0</td>
<td>45.0</td>
<td>60.0</td>
<td>55.0</td>
<td>125.0</td>
<td>10.0</td>
<td>70.0</td>
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<td>Bond Funds for Construction</td>
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<td>127.5</td>
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<td>(21.1)</td>
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<td>Water Stewardship Fund</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Decrease in Required Reserves</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Decrease in Rate Stabilization Fund</td>
<td>23.2</td>
<td>17.1</td>
<td>33.7</td>
<td>13.4</td>
<td>4.2</td>
<td>(3.7)</td>
<td>(9.2)</td>
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<td>Sub-total Fund Withdrawals</td>
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<td>251.7</td>
<td>89.5</td>
<td>129.2</td>
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<td>39.7</td>
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<tr>
<td><strong>TOTAL SOURCES OF FUNDS</strong></td>
<td>$1,710.9</td>
<td>$1,794.5</td>
<td>$1,627.0</td>
<td>$1,907.4</td>
<td>$1,778.0</td>
<td>$1,888.1</td>
<td>($16.5)</td>
<td>$110.1</td>
</tr>
</tbody>
</table>

FY2012 is based on cash, FY2013 and beyond are based on modified accrual accounting.
Totals may not foot due to rounding.
Table 7. June 30, 2013 Sources and Uses by Fund (dollars in millions)

<table>
<thead>
<tr>
<th>Fiscal Year Ending June 30th, 2013 ($ in Millions)</th>
<th>All Funds</th>
<th>Operating Funds</th>
<th>Debt Service Funds</th>
<th>Construction Funds</th>
<th>Trust &amp; Other Funds</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>All Funds</td>
<td>General Revenue</td>
<td>Water O&amp;M</td>
<td>Water Standby</td>
<td>Water Stewardship</td>
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<td>1.1</td>
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<td><strong>USES OF FUNDS</strong></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Expenditures</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>State Water Contract</td>
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<td>-</td>
<td>424.6</td>
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<td>Supply Programs</td>
<td>45.1</td>
<td>-</td>
<td>-</td>
<td>45.1</td>
<td>-</td>
</tr>
<tr>
<td>Colorado River Power</td>
<td>36.2</td>
<td>-</td>
<td>-</td>
<td>36.2</td>
<td>-</td>
</tr>
<tr>
<td>Debt Service</td>
<td>343.3</td>
<td>1.3</td>
<td>-</td>
<td>8.1</td>
<td>-</td>
</tr>
<tr>
<td>Demand Management</td>
<td>53.2</td>
<td>-</td>
<td>-</td>
<td>53.2</td>
<td>-</td>
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<tr>
<td>Departmental O&amp;M</td>
<td>315.1</td>
<td>-</td>
<td>-</td>
<td>315.1</td>
<td>-</td>
</tr>
<tr>
<td>Treatment Chemicals, Sludge &amp; Power</td>
<td>25.5</td>
<td>5.8</td>
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</tr>
<tr>
<td>Other O&amp;M</td>
<td>30.7</td>
<td>8.0</td>
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<td><strong>Fund Deposits</strong></td>
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<td></td>
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<tr>
<td>R&amp;R and General Fund</td>
<td>55.0</td>
<td>27.4</td>
<td>-</td>
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<tr>
<td>Revenue Bond Construction</td>
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<tr>
<td>Interest for Construction &amp; Trust Funds</td>
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<td>Increase in Required Reserves</td>
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<td>(2.6)</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Increase in Rate Stabilization Fund</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td><strong>Sub-total Fund Deposits</strong></td>
<td>78.1</td>
<td>27.4</td>
<td>-</td>
<td>(2.6)</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>TOTAL USES OF FUNDS</strong></td>
<td>1,778.0</td>
<td>64.2</td>
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<td>927.9</td>
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<tr>
<td><strong>SOURCES OF FUNDS</strong></td>
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<td></td>
<td></td>
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<tr>
<td><strong>Revenues</strong></td>
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<tr>
<td>Taxes</td>
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<td>Hydro Power</td>
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<td>Fixed Charges (RTS &amp; Capacity Charge)</td>
<td>176.8</td>
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<td>-</td>
<td>176.8</td>
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<tr>
<td>Water Sales Revenue</td>
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<td>1,197.2</td>
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<tr>
<td>Miscellaneous Revenue</td>
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<td>6.0</td>
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<td>Bond Proceeds</td>
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<tr>
<td><strong>Sub-total Revenues</strong></td>
<td>1,688.5</td>
<td>6.9</td>
<td>-</td>
<td>1,397.6</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>Fund Withdrawals</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer Fund</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>R&amp;R and General Fund</td>
<td>55.0</td>
<td>27.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Bond Funds for Construction</td>
<td>21.1</td>
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<td>Water Stewardship Fund</td>
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<td>Decrease in Required Reserves</td>
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<tr>
<td>Decrease in Rate Stabilization Fund</td>
<td>13.4</td>
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<tr>
<td><strong>Sub-total Fund Withdrawals</strong></td>
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<td>27.4</td>
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<td><strong>TOTAL SOURCES OF FUNDS</strong></td>
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<tr>
<td><strong>Inter-Fund Transfers</strong></td>
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<td>-</td>
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<td>3.7</td>
</tr>
<tr>
<td><strong>End of Year Balance</strong></td>
<td>975.8</td>
<td>64.4</td>
<td>-</td>
<td>166.6</td>
<td>1.1</td>
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</table>

Based on modified accrual accounting.
Totals may not foot due to rounding.
(1) includes Water Rate Stabilization Fund (including SDCWA litigation account), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.
## Table 8. June 30, 2014 Sources and Uses by Fund (dollars in millions)

<table>
<thead>
<tr>
<th>Fiscal Year Ending June 30th, 2014 ($ in Millions)</th>
<th>All Funds</th>
<th>Operating Funds</th>
<th>Debt Service Funds</th>
<th>Construction Funds</th>
<th>Trust &amp; Other Funds</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General</td>
<td>Water Revenue</td>
<td>O&amp;M</td>
<td>Water Standby</td>
<td>Water Stewardship</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USES OF FUNDS</td>
<td>975.8</td>
<td>64.4</td>
<td>-</td>
<td>166.6</td>
<td>1.1</td>
</tr>
<tr>
<td>Expenditures</td>
<td>563.8</td>
<td>-</td>
<td>-</td>
<td>400.2</td>
<td>-</td>
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<tr>
<td>State Water Contract</td>
<td>44.9</td>
<td>-</td>
<td>-</td>
<td>44.9</td>
<td>-</td>
</tr>
<tr>
<td>Supply Programs</td>
<td>24.9</td>
<td>-</td>
<td>-</td>
<td>24.9</td>
<td>-</td>
</tr>
<tr>
<td>Colorado River Power</td>
<td>326.3</td>
<td>-</td>
<td>1.3</td>
<td>8.4</td>
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<tr>
<td>Debt Service</td>
<td>53.6</td>
<td>-</td>
<td>-</td>
<td>53.6</td>
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<tr>
<td>Demand Management</td>
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<td>-</td>
<td>329.3</td>
<td>-</td>
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<tr>
<td>Departmental O&amp;M</td>
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<td>26.4</td>
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<tr>
<td>Other O&amp;M</td>
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<td>8.2</td>
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<td>Sub-total Expenditures</td>
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<td>9.5</td>
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<tr>
<td>R&amp;R and General Fund</td>
<td>125.0</td>
<td>22.6</td>
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<td>-</td>
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</tr>
<tr>
<td>Revenue Bond Construction</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>2.0</td>
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<tr>
<td>Water Stewardship Fund</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Interest for Construction &amp; Trust Funds</td>
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<td>-</td>
<td>7.8</td>
<td>-</td>
<td>1.0</td>
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<tr>
<td>Increase in Required Reserves</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Increase in Rate Stabilization Fund</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>Sub-total Fund Deposits</td>
<td>160.2</td>
<td>22.6</td>
<td>-</td>
<td>7.8</td>
<td>-</td>
</tr>
<tr>
<td>TOTAL USES OF FUNDS</td>
<td>1,888.1</td>
<td>54.7</td>
<td>-</td>
<td>925.4</td>
<td>-</td>
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</tbody>
</table>

## SOURCES OF FUNDS

<table>
<thead>
<tr>
<th>Revenues</th>
<th>Fund Deposits</th>
<th>Inter-Fund Transfers</th>
<th>Based on modified accrual accounting.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taxes</td>
<td>80.1</td>
<td>-</td>
<td>397.8</td>
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<tr>
<td>Annexations</td>
<td>1.0</td>
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<td>397.8</td>
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<tr>
<td>Interest Income</td>
<td>14.3</td>
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<td>397.8</td>
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<tr>
<td>Fixed Charges (RTS &amp; Capacity Charge)</td>
<td>186.6</td>
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<tr>
<td>Water Sales Revenue</td>
<td>1,271.3</td>
<td>-</td>
<td>397.8</td>
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<tr>
<td>Miscellaneous Revenue</td>
<td>6.1</td>
<td>-</td>
<td>397.8</td>
</tr>
<tr>
<td>Bond Proceeds</td>
<td>178.6</td>
<td>-</td>
<td>397.8</td>
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<tr>
<td>Sub-total Receipts</td>
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<td>7.1</td>
<td>1,478.8</td>
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<tr>
<td>Fund Withdrawals</td>
<td>-</td>
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<tr>
<td>Transfer Fund</td>
<td>-</td>
<td>-</td>
<td>397.8</td>
</tr>
<tr>
<td>R&amp;R and General Fund</td>
<td>125.0</td>
<td>22.6</td>
<td>397.8</td>
</tr>
<tr>
<td>Bond Funds for Construction</td>
<td>-</td>
<td>-</td>
<td>397.8</td>
</tr>
<tr>
<td>Water Stewardship Fund</td>
<td>-</td>
<td>-</td>
<td>397.8</td>
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<tr>
<td>Decrease in Required Reserves</td>
<td>-</td>
<td>-</td>
<td>397.8</td>
</tr>
<tr>
<td>Decrease in Rate Stabilization Fund</td>
<td>4.2</td>
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<td>397.8</td>
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<td>Sub-total Fund Withdrawals</td>
<td>129.2</td>
<td>22.6</td>
<td>397.8</td>
</tr>
<tr>
<td>TOTAL SOURCES OF FUNDS</td>
<td>1,888.1</td>
<td>29.7</td>
<td>1,478.8</td>
</tr>
<tr>
<td>Inter-Fund Transfers</td>
<td>-</td>
<td>-</td>
<td>397.8</td>
</tr>
<tr>
<td>End of Year Balance</td>
<td>1,006.8</td>
<td>64.4</td>
<td>-</td>
</tr>
</tbody>
</table>

(1) includes Water Rate Stabilization Fund (including SDCWA litigation account), Water Treatment Surcharge Stabilization Fund and Revenue Remainder.
Metropolitan Water District of Southern California

Fiscal Year 2012/13 Cost of Service

December 2011
Table of Contents

1 Cost of Service ........................................................................................................... 4
  1.1 Cost of Service Process ....................................................................................... 4
  1.2 Revenue Requirements ..................................................................................... 6
  1.3 Service Function Costs ..................................................................................... 8
    1.3.1 Functional Allocation Bases ........................................................................ 9
      (a) Direct assignment ....................................................................................... 10
      (b) Work-In-Progress; Net Book Value Plus Work-In-Progress ...................... 10
      (c) Prorating in proportion to other allocations .............................................. 11
      (d) Manager analyses ..................................................................................... 12
  1.4 Classified Costs ............................................................................................... 15

2 Rates and Charges ...................................................................................................... 21
  2.1 System Access Rate (SAR) ............................................................................. 24
  2.2 Water Stewardship Rate (WSR) ................................................................. 24
  2.3 System Power Rate (SPR) ............................................................................. 24
  2.4 Treatment Surcharge ..................................................................................... 24
  2.5 Capacity Charge ............................................................................................ 24
  2.6 Readiness-to-Serve Charge ........................................................................... 26
  2.7 Purchase Order ............................................................................................... 27
  2.8 Tier 2 supply rate ......................................................................................... 28
  2.9 Tier 1 supply rate ........................................................................................... 28
  2.10 Replenishment water rates ........................................................................... 28

3 Sales ......................................................................................................................... 28

4 Proof of Revenue ..................................................................................................... 29
<table>
<thead>
<tr>
<th>Schedule</th>
<th>Description</th>
<th>Page</th>
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<tbody>
<tr>
<td>Schedule 1</td>
<td>Revenue Requirements (by budget line item)</td>
<td>7</td>
</tr>
<tr>
<td>Schedule 2</td>
<td>Summary of Functional Allocations by Type of Allocation Basis</td>
<td>10</td>
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<tr>
<td>Schedule 3</td>
<td>Net Book Value and Work in Progress Allocation Base</td>
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<td>Schedule 4</td>
<td>Revenue Requirement (by service function)</td>
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<td>Schedule 5</td>
<td>Service Function Revenue Requirements (by budget line item)</td>
<td>14</td>
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<td>Schedule 6</td>
<td>Classification Percentages</td>
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<td>Schedule 7</td>
<td>Service Function Revenue Requirements (by classification category)</td>
<td>20</td>
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<tr>
<td>Schedule 8</td>
<td>Classified Service Function Revenue Requirements (by rate design element)</td>
<td>22</td>
</tr>
<tr>
<td>Schedule 9</td>
<td>Rates and Charges Summary</td>
<td>23</td>
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<tr>
<td>Schedule 10</td>
<td>Capacity Charge (by member agency)</td>
<td>26</td>
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<tr>
<td>Schedule 11</td>
<td>Readiness-to-Serve Charge (by member agency)</td>
<td>27</td>
</tr>
<tr>
<td>Schedule 12</td>
<td>FY 2012/13 Proof of Revenue if Rates Effective for Full Test Year ($ millions)</td>
<td>30</td>
</tr>
<tr>
<td>Schedule 13</td>
<td>FY 2012/13 Proof of Revenue if Rates Effective January 1 ($ millions)</td>
<td>30</td>
</tr>
</tbody>
</table>
1 Cost of Service

Prior to discussing the specific rates and charges that make up the rate structure, it is important to understand the cost of service process that supports the rates and charges. The purpose of the cost of service process is to: (1) identify which costs should be recovered through rates and charges; (2) organize Metropolitan’s costs into service functions; and (3) classify service function costs on the basis for which the cost was incurred. The purpose of sorting Metropolitan’s costs in a manner that reflects the type of service provided (e.g., supply vs. conveyance), the characteristics of the cost (e.g., fixed or variable) and the reason why the cost was incurred (e.g. to meet peak or average demand) is to create logical cost of service “building blocks”. The building blocks can then be arranged to design rates and charges with a reasonable nexus between costs and benefits.

1.1 Cost of Service Process

The general cost of service process involves the four basic steps outlined below.

**Step 1 - Development Of Revenue Requirements**

In the revenue requirement step, the costs that Metropolitan must recover through rates and charges, after consideration of revenue offsets, are identified. The cash needs approach, an accepted industry practice for government-owned utilities, has historically been used in identifying Metropolitan’s revenue requirements and was applied for the purposes of this study. Under the cash needs approach, revenue requirements include operating costs and annual requirements for meeting financed capital items (debt service, funding of replacement and refurbishment from operating revenues, etc.).

**Step 2 – Identification Of Service Function Costs**

In the functional allocation step, revenue requirements are allocated to different categories based on the operational functions served by each cost. The functional categories are identified in such a way as to allow the development of logical allocation bases. The functional categories used in the cost of service process include:

- Supply
- Conveyance and Aqueduct
- Storage
- Treatment
- Distribution
- Demand Management
- Administrative and General
- Hydroelectric

In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water Project (SWP), Colorado River Aqueduct (CRA), and Other. Similarly, costs in the Storage function are broken down into the sub-functions Emergency Storage, Drought Carryover Storage, and Regulatory Storage.
**Step 3 - Classification Of Costs**

In the cost classification step, functionalized costs are separated into categories according to their causes and behavioral characteristics. Proper cost classification is critical in developing a rate structure that recovers costs in a manner consistent with the causes and behaviors of those costs. Under American Water Works Association (AWWA) guidelines, cost classification may be done using either the Base/Extra-Capacity approach or the Commodity/Demand approach. In the simplest sense, these approaches offer alternative means of distinguishing between utility costs incurred to meet average or base demands and costs incurred to meet peak demands. The Commodity/Demand approach was modified for its application to Metropolitan’s rate structure by adding a separate cost classification for costs related to providing standby service. Analysis of system operating data indicated that a modified Commodity/Demand approach was most appropriate for developing Metropolitan’s cost of service classification bases.

**Step 4 - Allocation Of Costs To Rate Design Elements**

The allocation of costs to the rate design elements depends on the purpose for which the cost was incurred and the manner in which the member agencies use the Metropolitan system. For example, costs incurred to meet average system demands are typically recovered by dollar per acre-foot rates and are allocated based on the volume of water purchased by each agency. Rates that are levied on the amount or volume of water delivered are commonly referred to as volumetric rates as the customer’s costs vary with the volume of water purchased. Costs incurred to meet peak demands (referred to in this report as demand costs) are recovered through a peaking charge (the Capacity Charge) and are allocated to agencies based on their peak demand behavior. Costs incurred to provide standby service in the event of an emergency are referred to here as standby costs. Differentiating between costs for average usage and peak usage is just one example of how the cost of service process allows for the design of rates and charges that improves overall customer equity and efficiency. Figure 1 summarizes the cost of service process.
1.2 Revenue Requirements

The estimated revenue requirements presented in this report are for FY 2012/13. Throughout the report, FY 2012/13 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2012/13 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately $1.51 billion in FY 2012/13.

The rates and charges do not have to cover this entire amount. Metropolitan generates a significant amount of revenue from interest income, hydroelectric power sales and miscellaneous income. These internally generated revenues are referred to as revenue offsets and are expected to generate about $42 million in FY 2012/13. It is expected that Metropolitan will also generate about $82.6 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2012/13 are estimated to be around $125 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or $1.38 billion. Given an effective date of January 1, 2013, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2012 will generate a total of $1.37 billion in 2012/13. The shortfall of $10 million will be covered through withdrawals from the Water Rate Stabilization Fund during 2012/13.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River
Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment Program (CIP), and Water Management Programs. General District Requirements also include reserve fund transfers required by bond covenants and Metropolitan’s Administrative Code.

When considered in total, General District Requirements make up approximately 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 36 percent of Metropolitan’s FY 2012/13 revenue requirements. Metropolitan’s SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan’s capital financing program is the second largest component of the revenue requirement, constituting approximately 24 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2012/13. Water System Operations is the largest single component of the Departmental Costs and accounts for 12 percent of the revenue requirements. Water System Operations responsibilities include operating and maintaining Metropolitan’s pumping, storage, treatment, and hydroelectric facilities, as well as the Colorado River Aqueduct and other conveyance and supply facilities.

Schedule 1. Revenue Requirements (by budget line item)

<table>
<thead>
<tr>
<th>Departmental Operations &amp; Maintenance</th>
<th>Fiscal Year Ending 2013</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the General Manager &amp; Human Resources</td>
<td>$19,656,300</td>
<td>1.2%</td>
</tr>
<tr>
<td>External Affairs</td>
<td>15,521,800</td>
<td>1.0%</td>
</tr>
<tr>
<td>Water System Operations</td>
<td>201,459,900</td>
<td>12.3%</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>6,460,400</td>
<td>0.4%</td>
</tr>
<tr>
<td>Corporate Resources</td>
<td>63,365,100</td>
<td>3.9%</td>
</tr>
<tr>
<td>Real Property Development &amp; Mgmt</td>
<td>5,021,000</td>
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</tr>
<tr>
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<tr>
<td>Ethics Department</td>
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<tr>
<td>General Counsel</td>
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<tr>
<td>Audit Department</td>
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</tr>
<tr>
<td><strong>Total</strong></td>
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<td><strong>20.9%</strong></td>
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</table>

<table>
<thead>
<tr>
<th>General District Requirements</th>
<th>Fiscal Year Ending 2013</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Water Project</td>
<td>593,444,201</td>
<td>36.3%</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>36,178,684</td>
<td>2.2%</td>
</tr>
<tr>
<td>Supply Program Costs paid from operating revenues</td>
<td>45,125,279</td>
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</tr>
<tr>
<td>Water Management Programs</td>
<td>53,205,188</td>
<td>3.3%</td>
</tr>
<tr>
<td>Capital Financing Program</td>
<td>398,314,175</td>
<td>24.4%</td>
</tr>
<tr>
<td>Other O&amp;M</td>
<td>30,694,400</td>
<td>1.9%</td>
</tr>
<tr>
<td>Increase (Decrease) in Required Reserves</td>
<td>11,000,000</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,167,961,927</strong></td>
<td><strong>71.5%</strong></td>
</tr>
</tbody>
</table>

Revenue Offsets

<table>
<thead>
<tr>
<th>Revenue Offsets</th>
<th>Fiscal Year Ending 2013</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(124,965,018)</td>
<td></td>
<td>7.6%</td>
</tr>
</tbody>
</table>

Net Revenue Requirements

<table>
<thead>
<tr>
<th>Net Revenue Requirements</th>
<th>Fiscal Year Ending 2013</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1,383,624,509</td>
<td></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(1) Given as a percentage of the absolute values of total dollars allocated. Totals may not foot due to rounding.
1.3 Service Function Costs

Several major service functions result in the delivery of water to Metropolitan’s member agencies. These include the supply itself, the conveyance capacity and energy used to move the supply, storage of water, distribution of supplies within Metropolitan’s system, and treatment of these supplies. Metropolitan’s rate structure recovers the majority of the cost of providing these functions through rates and charges.

The functional categories developed for Metropolitan’s cost of service process are consistent with the AWWA rate setting guidelines, a standard chart of accounts for utilities developed by the National Association of Regulatory Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan’s unique physical, financial, and institutional characteristics.

A key goal of functional allocation is to maximize the degree to which rates and charges reflect the costs of providing different types of service. For functional allocation to be of maximum benefit, two criteria must be kept in mind when establishing functional categories.

- The categories should correlate charges for different types of service with the costs of providing those different types of service; and
- Each function should include reasonable allocation bases by which costs may be allocated.

Each of the functions developed for the cost of service process is described below.

- **Supply.** This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies’ demands. For example, Metropolitan’s supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include transfer programs such as Kern Delta Program, Semitropic Water Storage Program, Yuba Accord Program, and the Arvin-Edison Water Storage Program. Costs for in-basin programs within Metropolitan’s service area, such as Proposition 13 are also included.

- **Conveyance and Aqueduct.** This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan’s internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a “power” sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan’s other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.

- **Storage.** Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan’s larger storage facilities are operated to provide (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the
storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

- **Treatment.** This function includes capital financing, operating, maintenance, and overhead costs for Metropolitan’s five treatment plants and is considered separately from other costs so that treated water service may be priced separately.

- **Distribution.** This function includes capital financing, operating, maintenance, and overhead costs for the “in-basin” feeders, canals, pipelines, laterals, and other appurtenant works. The “in-basin” facilities are distinguished from Conveyance and Aqueduct facilities at the point of connection to the SWP, Lake Mathews, and other major turnouts along the CRA facilities.

- **Demand Management.** A separate demand management service function has been used to clearly identify the cost of Metropolitan’s investments in local resources like conservation, recycling, and desalination.

- **Administrative and General (A&G).** These costs occur in each of the Groups’ departmental budgets and reflect overhead costs that cannot be directly functionalized. The cost-of-service process allocates A&G costs to the service functions based on the labor costs of non-A&G dollars allocated to each function.

- **Hydroelectric.** Hydroelectric costs include the capital financing, operating, maintenance, and overhead costs incurred to operate the 16 small hydroelectric plants located throughout the water distribution system.

### 1.3.1 Functional Allocation Bases

The functional allocation bases are used to allocate a cost to the various service functions. The primary functional allocation bases used in the cost-of-service process are listed below.

- Direct assignment
- Net Book Value plus Work-In-Progress
- Prorating in proportion to other allocations
- Manager analysis

Schedule 2 summarizes the amounts of total cost allocated using each of the above types of allocation bases.
Schedule 2. Summary of Functional Allocations by Type of Allocation Basis

<table>
<thead>
<tr>
<th>Primary Functional Allocation Bases</th>
<th>Estimated for FY 2013</th>
<th>% of Allocated Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Assignment</td>
<td>$1,056,969,297</td>
<td>64.7%</td>
</tr>
<tr>
<td>Work in Progress/Net Book Value</td>
<td>438,185,275</td>
<td>26.8%</td>
</tr>
<tr>
<td>Prorating</td>
<td>58,854,194</td>
<td>3.6%</td>
</tr>
<tr>
<td>Manager Analysis</td>
<td>34,420,500</td>
<td>2.1%</td>
</tr>
<tr>
<td>Other</td>
<td>$45,125,279</td>
<td>2.8%</td>
</tr>
<tr>
<td>Total Dollars Allocated</td>
<td>$1,633,554,545</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Portion of Above Allocations Relating to:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Requirements before Offsets</td>
<td>1,508,589,527</td>
<td></td>
</tr>
<tr>
<td>Revenue Offsets</td>
<td>124,965,018</td>
<td></td>
</tr>
<tr>
<td>Total Dollars Allocated</td>
<td>$1,633,554,545</td>
<td></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

Each of the primary allocation bases is discussed in detail in the remainder of this section. Discussion of each allocation basis includes examples of costs allocated using that particular basis.

(a) Direct assignment

Direct assignment makes use of a clear and direct connection between a revenue requirement and the function being served by that revenue requirement. Directly assigned costs typically include: costs associated with specific treatment plants, purely administrative costs, and certain distribution and conveyance departmental costs. Examples of costs that are directly assigned to specific functional categories are given below.

* Water System Operations Group departmental costs for treatment plants are directly assigned to treatment.
* Transmission charges for State Water Contract are directly assigned to conveyance SWP.

(b) Net Book Value Plus Work-In-Progress

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 24 percent of Metropolitan’s annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records
rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.

Schedule 3. Net Book Value and Work in Progress Allocation Base

<table>
<thead>
<tr>
<th>Functional Categories</th>
<th>NBV for FY 2013</th>
<th>% of Total NBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Supply</td>
<td>$23,297,862</td>
<td>0.3%</td>
</tr>
<tr>
<td>Conveyance &amp; Aqueduct</td>
<td>1,864,648,314</td>
<td>20.8%</td>
</tr>
<tr>
<td>Storage</td>
<td>2,261,013,314</td>
<td>25.2%</td>
</tr>
<tr>
<td>Treatment</td>
<td>3,057,396,365</td>
<td>34.1%</td>
</tr>
<tr>
<td>Distribution</td>
<td>1,316,181,317</td>
<td>14.7%</td>
</tr>
<tr>
<td>Administrative &amp; General</td>
<td>322,585,783</td>
<td>3.6%</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>115,593,239</td>
<td>1.3%</td>
</tr>
<tr>
<td><strong>Total Fixed Assets Net Book Value</strong></td>
<td><strong>$8,960,716,194</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

In most instances, the cost-of-service process uses net book value plus work-in-progress to develop allocation bases for debt and capital costs. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

Examples of revenue requirements allocated using these net book value and work-in-progress allocations are shown below.

* Revenue Bond Debt Service: *allocated using Work In Progress plus Net Book Value.*
* Annual deposit of operating revenue to replacement and refurbishment fund: *allocated using Work In Progress plus Net Book Value.*

To calculate the relative percentage of fixed assets in each functional category, Metropolitan staff conducted a detailed analysis of historical accounting records and built a database of fixed asset accounts that contains records for all facilities currently in service and under construction. Each facility was sorted into the major service function that best represented the facilities primary purpose and was then further categorized into the appropriate sub-functions described earlier.

(c) Prorating in proportion to other allocations

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a
logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.

(d) Manager analyses

The functional interrelationships of some organizational units are so complex and/or dynamic that reliable allocation bases can only be developed with extensive input from the organization’s managers. In these cases, managers use their first hand knowledge of the organization’s internal operations to generate a functional analysis of departmental costs. An example of revenue requirements allocated based on manager analyses is: Water System Operations Group: Operations Planning Unit.

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2012/13 into the major service functions and sub-functions prior to the redistribution of administrative and general costs. Schedule 5 serves as a cross-reference summarizing how the budget line items are distributed among the service functions. The largest functional component of Metropolitan’s revenue requirement is the Conveyance and Aqueduct function, which constitutes approximately 44 percent of the allocated revenue requirement.
Schedule 4. Revenue Requirement (by service function)

<table>
<thead>
<tr>
<th>Functional Categories</th>
<th>Fiscal Year Ending</th>
<th>% of Allocated Dollars (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>$ 37,174,283</td>
<td>2.6%</td>
</tr>
<tr>
<td>SWP</td>
<td>107,004,590</td>
<td>7.6%</td>
</tr>
<tr>
<td>Other Supply</td>
<td>10,248,313</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>154,427,186</td>
<td>11.0%</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA Power (net of sales)</td>
<td>41,611,082</td>
<td>3.0%</td>
</tr>
<tr>
<td>CRA All Other</td>
<td>42,649,458</td>
<td>3.0%</td>
</tr>
<tr>
<td>SWP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWP Power</td>
<td>270,437,807</td>
<td>19.2%</td>
</tr>
<tr>
<td>SWP All Other</td>
<td>201,985,938</td>
<td>14.4%</td>
</tr>
<tr>
<td>Other Conveyance &amp; Aqueduct</td>
<td>67,329,047</td>
<td>4.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>624,013,332</td>
<td>44.4%</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Costs Other Than Power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>52,748,160</td>
<td>3.8%</td>
</tr>
<tr>
<td>Drought</td>
<td>42,974,754</td>
<td>3.1%</td>
</tr>
<tr>
<td>Regulatory</td>
<td>12,864,227</td>
<td>0.9%</td>
</tr>
<tr>
<td>Wadsworth plant pumping/generation</td>
<td>(313,364)</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>108,273,777</td>
<td>7.7%</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jensen</td>
<td>40,749,041</td>
<td>2.9%</td>
</tr>
<tr>
<td>Weymouth</td>
<td>42,718,886</td>
<td>3.0%</td>
</tr>
<tr>
<td>Diemer</td>
<td>50,125,754</td>
<td>3.6%</td>
</tr>
<tr>
<td>Mills</td>
<td>30,052,124</td>
<td>2.1%</td>
</tr>
<tr>
<td>Skinner</td>
<td>63,228,909</td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>226,874,714</td>
<td>16.1%</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Demand Management</td>
<td>119,296,103</td>
<td>8.5%</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>61,128,834</td>
<td>4.3%</td>
</tr>
<tr>
<td>Administrative &amp; General</td>
<td>(11,106,693)</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>Total Functional Allocations:</strong></td>
<td>$ 1,383,624,509</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(1) Given as a percentage of the absolute values of total dollars allocated.
Totals may not foot due to rounding
### Schedule 5. Service Function Revenue Requirements (by budget line item)

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Conveyance &amp; Aqueduct</th>
<th>Storage</th>
<th>Treatment</th>
<th>Distribution</th>
<th>Demand Management</th>
<th>Hydro Electric</th>
<th>Administrative &amp; General</th>
<th>Total $ Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Departmental Operations &amp; Maintenance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office of the General Manager &amp; Human Resources</td>
<td>$973,547</td>
<td>$7,535,604</td>
<td>$575,486</td>
<td>$3,242,444</td>
<td>$2,223,760</td>
<td>$196,010</td>
<td>$174,582</td>
<td>$4,734,867</td>
</tr>
<tr>
<td>External Affairs</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water System Operations</td>
<td>12,250,467</td>
<td>35,011,017</td>
<td>3,418,916</td>
<td>92,038,406</td>
<td>53,778,592</td>
<td>8,426</td>
<td>4,033,386</td>
<td>920,690</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Business Technology &amp; Engineering Services</td>
<td>1,950,202</td>
<td>8,283,277</td>
<td>7,463,691</td>
<td>14,286,131</td>
<td>7,995,789</td>
<td>379,340</td>
<td>653,611</td>
<td>22,353,059</td>
</tr>
<tr>
<td>Real Property Development &amp; Mgmt</td>
<td>-</td>
<td>-</td>
<td>5,021,000</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water Resource Management</td>
<td>10,186,819</td>
<td>5,776</td>
<td>-</td>
<td>236,832</td>
<td>1,184,509</td>
<td>3,289,564</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethics Department</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>438,300</td>
</tr>
<tr>
<td>General Counsel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>11,741,300</td>
</tr>
<tr>
<td>Audit Department</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,060,000</td>
</tr>
<tr>
<td><strong>Total Departmental O&amp;M</strong></td>
<td>25,361,036</td>
<td>50,835,675</td>
<td>16,479,093</td>
<td>109,803,812</td>
<td>65,182,649</td>
<td>6,716,890</td>
<td>4,861,579</td>
<td>61,386,866</td>
</tr>
</tbody>
</table>

| **General District Requirements** | | | | | | | | |
| State Water Project | 83,601,729 | 509,842,472 | - | - | - | - | - | - | 593,444,201 |
| Colorado River Aqueduct | - | 36,178,684 | - | - | - | - | - | - | 36,178,684 |
| Water Transfers and Storage Programs | 45,125,279 | - | - | - | - | - | - | - | 45,125,279 |
| Demand Management | - | - | - | - | - | 53,205,188 | - | - | 53,205,188 |
| Capital Financing Program | 966,434 | 75,817,745 | 92,862,039 | 130,368,230 | 81,154,467 | 4,617,409 | 12,527,853 | 368,314,175 |
| Other Operating Costs | 689,103 | 1,133,376 | 407,345 | 2,295,089 | 1,574,037 | 1,727,841 | 123,574 | 22,744,034 | 30,694,400 |
| Increase (Decrease) in Required Reserves | - | - | - | - | - | - | - | 11,000,000 | 11,000,000 |
| **Total General District Requirements** | 130,382,546 | 622,972,276 | 93,269,383 | 132,663,319 | 82,728,504 | 54,933,029 | 4,740,983 | 46,271,887 | 1,167,961,927 |

| Revenue Offsets | (1,316,396) | (49,794,619) | (1,474,699) | (15,592,418) | (28,615,051) | (521,085) | (20,709,255) | (6,941,496) | (124,965,018) |
| **Net Revenue Requirements** | $154,427,186 | $624,013,332 | $108,273,777 | $226,874,714 | $119,296,103 | $61,128,834 | $(11,106,693) | $100,717,257 | $1,383,624,509 |

Totals may not foot due to rounding.
1.4 Classified Costs

In the cost classification step, functionalized costs are further categorized based on the causes and behavioral characteristics of these costs. An important part of the classification process is identifying which costs are incurred to meet average demands vs. peak demands and which costs are incurred to provide standby service. As with the functional allocation process, the proposed classification process is consistent with AWWA guidelines, but has been tailored to meet Metropolitan’s specific operational structure and service environment.

In the cost of service process, cost classification is done using a hybrid of two methods discussed in the AWWA M1 Manual, Principles of Water Rates, Fees and Charges. These two methods are the Commodity/Demand method and the Base/Extra Capacity method.

The Commodity/Demand method allocates costs that vary with the amount of water produced to the commodity category with all other costs associated with water production allocated to the demand category. In the Base/Extra Capacity method, costs related to average demand conditions are allocated to the base category and capacity costs associated with meeting above average demand conditions are allocated to the extra capacity category.

The approach used to classify Metropolitan’s costs differs from the Base/Extra Capacity method by the fact that costs are separated into a variable category and a fixed category. The Base/Extra Capacity method does not separate these costs into two categories but rather combines them into one category referred to as base costs. The approach used to classify Metropolitan’s costs differs from the Commodity/Demand method in the fact that demand costs are separated into fixed commodity and fixed demand costs. The Commodity/Demand method would not make this distinction, but would combine these costs into the demand category. By using the hybrid method, costs are disaggregated to a lower level of detail, providing greater visibility to costs. Under the hybrid classification method, functional cost categories are reallocated into demand, commodity, or standby categories, which are discussed below. Classification of costs into these categories depends on an analysis of system capacity as well as actual system operating data.

Classification categories used in the analysis include:

- Fixed demand costs
- Fixed commodity costs
- Fixed standby costs
- Variable commodity costs
- Hydroelectric costs

Demand costs are incurred to meet peak demands. Only the direct capital financing costs were included in the demand classification category. A portion of capital financing costs was included in the demand cost category because in order to meet peak demands additional physical capacity is designed into the system and, therefore, additional capital costs are incurred. Commodity costs are generally associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.
Standby service costs relate to Metropolitan’s role in ensuring system reliability during emergencies such as an earthquake or an outage of a major facility like the Colorado River Aqueduct. The two principal components of the standby costs were identified as the emergency storage capacity within the system and the standby capacity within the State Water Project conveyance system.

An additional component used in Metropolitan’s cost classification process is the hydroelectric component. While not a part of most water utilities’ cost classification procedures, the hydroelectric classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

Schedule 6 provides the classification percentages used to distribute the service function costs into demand, commodity and standby service classification categories. All of the supply costs are classified as fixed commodity costs. Because these particular supply costs have been incurred to provide an amount of annual reliable system yield and not to provide peak demand delivery capability or standby service, they are reasonably treated as fixed commodity costs.

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2013 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor \(^1\) of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

Storage service function costs for emergency, drought and regulatory storage are also distributed to the classification categories based on the type of service provided. Emergency storage costs are classified as 100 percent standby related. Emergency storage is a prime example of a cost Metropolitan incurs to ensure the reliability of deliveries to the member agencies. In effect, through the emergency storage capacity in the system, Metropolitan is “standing by” to provide service in the event of a catastrophe such as a major earthquake that disrupts regional conveyance capacity for an extended period of time. Drought carryover storage serves to provide reliable supplies by carrying over surplus supplies from periods of above normal precipitation and snow pack to drought periods when supplies decrease. Drought storage creates supply and is one component of the portfolio of resources that result in a reliable amount of annual system supplies. As a result, drought storage is classified as a fixed commodity cost, in the same manner as Metropolitan’s supply costs. Regulatory storage within the Metropolitan system provides operational flexibility in meeting peak demands and

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\(^1\) Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.
flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is classified in the same manner as distribution costs.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2013. During this period, the average annual volume of deliveries to the member agencies used 43 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 37 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident\(^2\) 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2013. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

\[^2\] The term “non-coincident” means that the peak day flow for each agency may or may not coincide with the peak day system flow. Both non-coincident and coincident approaches to measuring peak demands are used in rate design approaches. A non-coincident approach is used in the rate design to capture the different operating characteristics of the member agencies (e.g., the distribution system is designed to meet peak demands in different load areas within the System that have non-coincident demands due to each member agencies unique operating characteristics).
## Schedule 6. Classification Percentages

<table>
<thead>
<tr>
<th>Function</th>
<th>Classification Percentages</th>
<th>Total % Classified</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Supply costs classified as commodity</td>
</tr>
<tr>
<td>State Water Project</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Supply costs classified as commodity</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td>Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.</td>
</tr>
<tr>
<td>State Water Project</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>0% 0% 100% 100%</td>
<td>100%</td>
<td>Standby service (recovered by RTS)</td>
</tr>
<tr>
<td>Drought</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Recovered by Supply Rates</td>
</tr>
<tr>
<td>Regulatory</td>
<td>43% 37% 20% 100%</td>
<td>100%</td>
<td>See distribution (below)</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>32% 36% 32% 100%</td>
<td>100%</td>
<td>Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td>43% 37% 20% 100%</td>
<td>100%</td>
<td>Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding
A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 8 percent, or $106 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan’s property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.
### Schedule 7. Service Function Revenue Requirements (by classification category)

<table>
<thead>
<tr>
<th>Functional Categories (by sub-Function)</th>
<th>Fixed Demand</th>
<th>Commodity</th>
<th>Standby</th>
<th>Variable Commodity</th>
<th>Hydroelectric</th>
<th>Total Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>$</td>
<td>$ 41,072,458</td>
<td>$</td>
<td>$</td>
<td></td>
<td>$ 41,072,458</td>
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<td>SWP</td>
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<td>118,225,322</td>
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<td>118,225,322</td>
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<tr>
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<tr>
<td><strong>Subtotal: Source of Supply</strong></td>
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<td>170,620,754</td>
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<td>-</td>
<td></td>
<td>170,620,754</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>2,040,117</td>
<td>42,444,666</td>
<td>2,406,646</td>
<td></td>
<td></td>
<td>46,891,429</td>
</tr>
<tr>
<td><strong>SWP All Other</strong></td>
<td>16,740,326</td>
<td>184,788,293</td>
<td>19,747,905</td>
<td></td>
<td></td>
<td>221,276,525</td>
</tr>
<tr>
<td><strong>Other Conveyance &amp; Aqueduct</strong></td>
<td>13,561,607</td>
<td>42,557,828</td>
<td>16,706,220</td>
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<td></td>
<td>72,825,654</td>
</tr>
<tr>
<td><strong>Subtotal: Conveyance &amp; Aqueduct</strong></td>
<td>32,342,050</td>
<td>279,146,613</td>
<td>38,860,771</td>
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<td>664,076,891</td>
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<tr>
<td>CRA Power</td>
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<td>9,355,825</td>
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<td>34,250,945</td>
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<td>43,606,770</td>
</tr>
<tr>
<td>CRA All Other</td>
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<td>2,040,117</td>
<td>42,444,666</td>
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<td></td>
<td>46,891,429</td>
</tr>
<tr>
<td><strong>Storage Power</strong></td>
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<td>279,476,512</td>
<td></td>
<td>279,476,512</td>
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<tr>
<td><strong>SWP All Other</strong></td>
<td></td>
<td>16,740,326</td>
<td>184,788,293</td>
<td>279,476,512</td>
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<td>221,276,525</td>
</tr>
<tr>
<td><strong>Other Storage</strong></td>
<td></td>
<td>13,561,607</td>
<td>42,557,828</td>
<td>16,706,220</td>
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<td>72,825,654</td>
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<td><strong>Subtotal: Storage</strong></td>
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<td>4,295,343</td>
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<td>CRA</td>
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<td><strong>Subtotal: Water Quality</strong></td>
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<tr>
<td><strong>Demand Management</strong></td>
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</tr>
<tr>
<td><strong>Hydroelectric</strong></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Total Costs Classified</strong></td>
<td>$ 106,306,182</td>
<td>$ 806,294,933</td>
<td>$ 137,110,474</td>
<td>$ 343,696,643</td>
<td>(9,783,722)</td>
<td>$ 1,383,624,509</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
About 58 percent of the revenue requirement ($806 million) is classified as “fixed commodity.” These fixed capital and operating costs are incurred by Metropolitan to meet annual average service needs and are typically recovered by a combination of fixed charges and volumetric rates. Fixed capital costs classified to the “Standby” category total about $137 million and account for about 10 percent of the revenue requirements. Standby service costs are commonly recovered by a fixed charge allocated on a reasonable representation of a customer’s need for standby service. The variable commodity costs for power on the conveyance and aqueduct systems, and power, chemicals and solids handling at the treatment plants change with the amount of water delivered to the member agencies. These costs are classified as variable commodity costs, total about $343 million, and account for about 25 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

2 Rates and Charges

Schedule 8 provides a cross-reference between the classified service function costs and their allocation to the rate design elements. The specifics of each rate design element are discussed in detail in the following section. Schedule 9 summarizes the rates and charges that would be effective on January 1, 2013 in order to collect all costs from rates and charges in fiscal year 2012/13, with the use of $10 million draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, and Tier 2 purchases.
### Schedule 8. Classified Service Function Revenue Requirements (by rate design element)

<table>
<thead>
<tr>
<th>Service Function by Classification Category</th>
<th>Rate Design Elements</th>
<th>Supply Rates</th>
<th>System Access Rate</th>
<th>Water Stewardship Rate</th>
<th>System Power Rate</th>
<th>Capacity Charge</th>
<th>Readiness-to-Serve Charge</th>
<th>Treatment Surcharge</th>
<th>Total Costs Allocated</th>
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<tr>
<td>Supply</td>
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<td>Supply</td>
<td>Fixed Demand</td>
<td>170,620,754</td>
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<td></td>
<td>Fixed Commodity</td>
<td>170,620,754</td>
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<td>Fixed Standby</td>
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<td>Variable Commodity</td>
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<tr>
<td></td>
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<td>Subtotal: Supply</td>
<td>170,620,754</td>
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<td>170,620,754</td>
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<tr>
<td>Conveyance and Aqueduct</td>
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<td>Fixed Demand</td>
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<td>Fixed Commodity</td>
<td>279,146,613</td>
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<td>Fixed Standby</td>
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<td>Subtotal: Conveyance and Aqueduct</td>
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<td>313,727,457</td>
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<td>47,481,180</td>
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<td>(323,838)</td>
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<td>Subtotal: Storage</td>
<td>47,481,180</td>
<td>7,210,458</td>
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<td>54,691,638</td>
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<td></td>
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<td>Fixed Commodity</td>
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<td>383,903,523</td>
<td>67,538,935</td>
<td>313,727,457</td>
<td>-</td>
<td>806,294,933</td>
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<td></td>
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<td>Subtotal: Distribution</td>
<td>218,101,934</td>
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<td>383,903,523</td>
<td>67,538,935</td>
<td>313,727,457</td>
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<td></td>
<td>Variable Commodity</td>
<td>(323,838)</td>
<td>-</td>
<td>313,727,457</td>
<td>-</td>
<td>-</td>
<td>343,696,643</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Hydroelectric</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>217,778,096</td>
<td>374,119,801</td>
<td>67,538,935</td>
<td>313,727,457</td>
<td>-</td>
<td>1,383,624,509</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
Schedule 9. Rates and Charges Summary

<table>
<thead>
<tr>
<th></th>
<th>Effective January 1st</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 Supply Rate ($/AF)</td>
<td>$95</td>
<td>$149</td>
<td></td>
</tr>
<tr>
<td>Delta Supply Surcharge ($/AF)</td>
<td>$69</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Tier 2 Supply Rate ($/AF)</td>
<td>$290</td>
<td></td>
<td>$290</td>
</tr>
<tr>
<td>System Access Rate ($/AF)</td>
<td>$217</td>
<td></td>
<td>$228</td>
</tr>
<tr>
<td>Water Stewardship Rate ($/AF)</td>
<td>$43</td>
<td>$41</td>
<td></td>
</tr>
<tr>
<td>System Power Rate ($/AF)</td>
<td>$136</td>
<td>$190</td>
<td></td>
</tr>
<tr>
<td>Full Service Untreated Volumetric Cost ($/AF)</td>
<td>$560</td>
<td>$608</td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>$560</td>
<td></td>
<td>$608</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$686</td>
<td></td>
<td>$749</td>
</tr>
<tr>
<td>Replenishment Water Rate Untreated ($/AF)</td>
<td>$442</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Interim Agricultural Water Program Untreated ($/AF)</td>
<td>$537</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Treatment Surcharge ($/AF)</td>
<td>$234</td>
<td>$260</td>
<td></td>
</tr>
<tr>
<td>Full Service Treated Volumetric Cost ($/AF)</td>
<td>$794</td>
<td>$868</td>
<td></td>
</tr>
<tr>
<td>Tier 1</td>
<td>$794</td>
<td></td>
<td>$868</td>
</tr>
<tr>
<td>Tier 2</td>
<td>$920</td>
<td></td>
<td>$1,009</td>
</tr>
<tr>
<td>Treated Replenishment Water Rate ($/AF)</td>
<td>$651</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Treated Interim Agricultural Water Program ($/AF)</td>
<td>$765</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Readiness-to-Serve Charge ($M)</td>
<td>$146</td>
<td>$146</td>
<td></td>
</tr>
<tr>
<td>Capacity Charge ($/cfs)</td>
<td>$7,400</td>
<td>$6,600</td>
<td></td>
</tr>
</tbody>
</table>

* The Delta Supply Surcharge will be suspended after 2012.
** Under the current replenishment program proposal there would be no discounted replenishment rates after 2012.
*** The Interim Agricultural Water Program will be discontinued after 2012.
2.1 System Access Rate (SAR)

The SAR is a volumetric\(^3\) system-wide rate levied on each acre-foot of water that moves through the MWD system. All system users (member agency or third party) pay the SAR to use Metropolitan’s conveyance and distribution system. To meet the board stated objective to collect all costs in 2012/13, the SAR would increase from its current level of $217 per acre-foot to $228 per acre-foot. The SAR recovers the cost of providing conveyance and distribution capacity to meet average annual demands. Current estimates indicate that the SAR revenue requirement will be about $374 million in FY 2012/13, or 27 percent of the total revenue requirement.

2.2 Water Stewardship Rate (WSR)

The WSR would decrease from its current level of $43 per acre-foot to $41 per acre-foot. The WSR recovers the costs of providing financial incentives for existing and future investments in local resources including conservation and recycled water. These investments or incentive payments are identified as the “demand management” service function in the cost of service process. Demand management costs are classified as 100 percent fixed commodity costs and are estimated to be about $67 million in FY 2012/13, about 4 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

2.3 System Power Rate (SPR)

SPR would increase from $136 per acre-foot to $190 per acre-foot in 2013. The SPR is a volumetric rate that recovers the costs of pumping water to Southern California. The SPR recovers the cost of power for both the SWP and CRA. In FY 2012/13 the revenue requirement for the SPR is estimated to be about $314 million, about 23 percent of the total revenue requirement.

2.4 Treatment Surcharge

The treatment surcharge would increase from its current level of $234 per acre-foot to $260 per acre-foot to collect all treatment costs in 2012/13. The treatment surcharge is a system-wide volumetric rate set to recover the cost of providing treated water service. The treatment surcharge revenue requirement is expected to be about $244 million in FY 2012/13, almost 18 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan’s five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

2.5 Capacity Charge

The Capacity Charge would decrease from its current level of $7,400 per cubic-foot-second to $6,600 per cubic-foot-second of capacity during 2013. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2011 is used to levy the capacity charge effective January 1, 2013 through December 31, 2013. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

\(^3\) A volumetric rate is a charge applied to the actual amount of water delivered.
The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan’s system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2013 (as of December 2011) is included in Schedule 10.
Schedule 10. Capacity Charge (by member agency)

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>3-Year Peak</th>
<th>Calendar Year 2013 Capacity Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaheim</td>
<td>40.7</td>
<td>44.8</td>
<td>39.3</td>
<td>44.8</td>
<td>$295,680</td>
</tr>
<tr>
<td>Beverly Hills</td>
<td>31.0</td>
<td>31.2</td>
<td>31.5</td>
<td>31.5</td>
<td>$207,900</td>
</tr>
<tr>
<td>Burbank</td>
<td>21.6</td>
<td>22.3</td>
<td>21.4</td>
<td>22.3</td>
<td>$147,180</td>
</tr>
<tr>
<td>Calleguas</td>
<td>192.8</td>
<td>208.9</td>
<td>210.1</td>
<td>210.1</td>
<td>$1,386,660</td>
</tr>
<tr>
<td>Central Basin</td>
<td>94.7</td>
<td>74.2</td>
<td>79.2</td>
<td>94.7</td>
<td>$625,020</td>
</tr>
<tr>
<td>Compton</td>
<td>5.9</td>
<td>3.3</td>
<td>2.4</td>
<td>5.9</td>
<td>$39,940</td>
</tr>
<tr>
<td>Eastern</td>
<td>233.8</td>
<td>229.5</td>
<td>192.5</td>
<td>233.8</td>
<td>$1,543,080</td>
</tr>
<tr>
<td>Foothill</td>
<td>24.3</td>
<td>20.2</td>
<td>19.0</td>
<td>24.3</td>
<td>$160,380</td>
</tr>
<tr>
<td>Fullerton</td>
<td>37.4</td>
<td>32.2</td>
<td>27.4</td>
<td>37.4</td>
<td>$246,840</td>
</tr>
<tr>
<td>Glendale</td>
<td>56.0</td>
<td>49.6</td>
<td>49.0</td>
<td>56.0</td>
<td>$369,600</td>
</tr>
<tr>
<td>Inland Empire</td>
<td>106.1</td>
<td>124.2</td>
<td>138.0</td>
<td>138.0</td>
<td>$910,800</td>
</tr>
<tr>
<td>Las Virgenes</td>
<td>42.7</td>
<td>43.9</td>
<td>43.4</td>
<td>43.9</td>
<td>$289,740</td>
</tr>
<tr>
<td>Long Beach</td>
<td>67.2</td>
<td>61.2</td>
<td>51.5</td>
<td>67.2</td>
<td>$443,520</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>698.2</td>
<td>525.9</td>
<td>329.0</td>
<td>698.2</td>
<td>$4,608,120</td>
</tr>
<tr>
<td>MWDOC</td>
<td>489.5</td>
<td>425.5</td>
<td>382.7</td>
<td>489.5</td>
<td>$3,230,700</td>
</tr>
<tr>
<td>Pasadena</td>
<td>50.2</td>
<td>50.5</td>
<td>50.6</td>
<td>50.6</td>
<td>$333,960</td>
</tr>
<tr>
<td>San Diego</td>
<td>1,055.3</td>
<td>949.5</td>
<td>760.7</td>
<td>1,055.3</td>
<td>$6,964,980</td>
</tr>
<tr>
<td>San Fernando</td>
<td>-</td>
<td>4.1</td>
<td>1.6</td>
<td>4.1</td>
<td>$27,060</td>
</tr>
<tr>
<td>San Marino</td>
<td>3.5</td>
<td>4.2</td>
<td>1.3</td>
<td>4.2</td>
<td>$27,720</td>
</tr>
<tr>
<td>Santa Ana</td>
<td>16.4</td>
<td>20.0</td>
<td>20.0</td>
<td>20.0</td>
<td>$132,000</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>25.0</td>
<td>24.3</td>
<td>21.1</td>
<td>25.0</td>
<td>$165,000</td>
</tr>
<tr>
<td>Three Valleys</td>
<td>132.7</td>
<td>139.4</td>
<td>122.7</td>
<td>139.4</td>
<td>$920,040</td>
</tr>
<tr>
<td>Torrance</td>
<td>39.3</td>
<td>42.8</td>
<td>35.5</td>
<td>42.8</td>
<td>$282,480</td>
</tr>
<tr>
<td>Upper San Gabriel</td>
<td>27.6</td>
<td>22.9</td>
<td>20.4</td>
<td>27.6</td>
<td>$182,160</td>
</tr>
<tr>
<td>West Basin</td>
<td>221.3</td>
<td>221.2</td>
<td>214.6</td>
<td>221.3</td>
<td>$1,460,580</td>
</tr>
<tr>
<td>Western</td>
<td>214.4</td>
<td>199.5</td>
<td>179.7</td>
<td>214.4</td>
<td>$1,415,040</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,927.6</strong></td>
<td><strong>3,575.3</strong></td>
<td><strong>3,044.6</strong></td>
<td><strong>4,002.3</strong></td>
<td><strong>$26,415,180</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

2.6 Readiness-to-Serve Charge (RTS)

The costs of providing standby service, such as emergency storage, are recovered by the RTS. Metropolitan’s costs for providing emergency storage capacity within the system are estimated to be about $58 million in FY 2012/13. In addition, to simplify the rate design by reducing the number of separate charges, the demand and standby related costs identified for the conveyance and aqueduct service function, and standby costs for the distribution function, are also allocated to the RTS. These costs are estimated to be about $83 million in FY 2012/13. Currently the RTS recovers $146 million, an amount that represents a portion of the capital financing costs for facilities that serve existing users. The RTS would remain at its current level in calendar year 2013.
The RTS is allocated to the member agencies based on each agency’s proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency’s potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. Schedule 11 provides an estimate as of December 2011 of each agency’s total RTS obligation for calendar year 2013.

Schedule 11. Readiness-to-Serve Charge (by member agency)

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Rolling Ten-Year Average Firm Deliveries (Acre-Feet) FY2001/02 - FY2010/11</th>
<th>RTS Share</th>
<th>12 months @ $146 million per year (1/13-12/13)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anaheim</td>
<td>21,892</td>
<td>1.20%</td>
<td>$1,748,922</td>
</tr>
<tr>
<td>Beverly Hills</td>
<td>12,041</td>
<td>0.66%</td>
<td>961,903</td>
</tr>
<tr>
<td>Burbank</td>
<td>12,605</td>
<td>0.69%</td>
<td>1,006,985</td>
</tr>
<tr>
<td>Calleguas MWD</td>
<td>111,069</td>
<td>6.08%</td>
<td>8,873,166</td>
</tr>
<tr>
<td>Central Basin MWD</td>
<td>61,810</td>
<td>3.38%</td>
<td>4,937,906</td>
</tr>
<tr>
<td>Compton</td>
<td>2,832</td>
<td>0.15%</td>
<td>226,206</td>
</tr>
<tr>
<td>Eastern MWD</td>
<td>94,113</td>
<td>5.15%</td>
<td>7,518,552</td>
</tr>
<tr>
<td>Foothill MWD</td>
<td>11,169</td>
<td>0.61%</td>
<td>892,264</td>
</tr>
<tr>
<td>Fullerton</td>
<td>10,225</td>
<td>0.56%</td>
<td>816,833</td>
</tr>
<tr>
<td>Glendale</td>
<td>21,707</td>
<td>1.19%</td>
<td>1,734,142</td>
</tr>
<tr>
<td>Inland Empire Utilities Agency</td>
<td>61,330</td>
<td>3.36%</td>
<td>4,899,616</td>
</tr>
<tr>
<td>Las Virgenes MWD</td>
<td>22,730</td>
<td>1.24%</td>
<td>1,815,901</td>
</tr>
<tr>
<td>Long Beach</td>
<td>35,737</td>
<td>1.96%</td>
<td>2,854,961</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>302,313</td>
<td>16.54%</td>
<td>24,151,463</td>
</tr>
<tr>
<td>Municipal Water District of Orange County</td>
<td>227,364</td>
<td>12.44%</td>
<td>18,163,856</td>
</tr>
<tr>
<td>Pasadena</td>
<td>22,799</td>
<td>1.25%</td>
<td>1,821,405</td>
</tr>
<tr>
<td>San Diego County Water Authority</td>
<td>449,537</td>
<td>24.60%</td>
<td>35,913,080</td>
</tr>
<tr>
<td>San Fernando</td>
<td>125</td>
<td>0.01%</td>
<td>9,946</td>
</tr>
<tr>
<td>San Marino</td>
<td>972</td>
<td>0.05%</td>
<td>77,612</td>
</tr>
<tr>
<td>Santa Ana</td>
<td>13,464</td>
<td>0.74%</td>
<td>1,075,617</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>12,284</td>
<td>0.67%</td>
<td>981,316</td>
</tr>
<tr>
<td>Three Valleys MWD</td>
<td>70,981</td>
<td>3.88%</td>
<td>5,670,568</td>
</tr>
<tr>
<td>Torrance</td>
<td>19,931</td>
<td>1.09%</td>
<td>1,592,227</td>
</tr>
<tr>
<td>Upper San Gabriel Valley MWD</td>
<td>19,031</td>
<td>1.04%</td>
<td>1,520,335</td>
</tr>
<tr>
<td>West Basin MWD</td>
<td>135,862</td>
<td>7.43%</td>
<td>10,853,878</td>
</tr>
<tr>
<td>Western MWD</td>
<td>73,619</td>
<td>4.03%</td>
<td>5,881,339</td>
</tr>
<tr>
<td>MWD Total</td>
<td>1,827,536</td>
<td>100.00%</td>
<td>$146,000,000</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.

2.7 Purchase Order

The potential extension of the Purchase Order is part of the Long Range Finance Plan workgroup discussions. A final decision is expected in 2012.
2.8 **Tier 2 supply rate**

The Tier 2 Supply Rate reflects Metropolitan’s cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. Because of the uncertainty about supply and critically dry conditions, Metropolitan will have to purchase water transfers in 2012/13, at a cost of as much as or more than $290 per acre-foot. The Tier 2 Supply Rate would remain at its current level of $290 per acre-foot.

The total revenue requirement for the supply service function is about $218 million in FY 2012/13. At an expected average sales level of 1.7 million acre-feet (MAF) it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate. The remaining supply costs are recovered by the Tier 1 Supply Rate and by the replenishment rate discussed below.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. Based on the outcome of the Long Range Finance Plan in 2012, a detailed table with Tier 1 limits will be provided to the Board in 2012.

2.9 **Tier 1 supply rate**

The Tier 1 Supply Rate would be reduced from its current level of $164 per acre-foot to $149 per acre-foot. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about 1.7 MAF it is estimated that Metropolitan will sell about 1.51 MAF at the Tier 1 Supply Rate in 2012/13.

2.10 **Replenishment water rates**

The board is reviewing options for a new replenishment program. If adopted, the new replenishment program would replace the existing replenishment service program and the existing replenishment rate would be discontinued.

3 **Sales**

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 million acre-feet per year, ranging from a high of around 2.5 million acre-feet in 1989/90 to a low of about 1.5 million acre-feet in 1997/98. In 2011/12 water sales are projected to be around 1.7 million acre-feet. Water sales in 2012/13 are expected to be about 1.7 million acre-feet.
4 Proof of Revenue

Based on expected sales of 1.7 MAF the expected revenues would be about $45 million higher than the total revenue requirement, if the rates and charges were in effect the entire test year period. The cost-of-service allocation assuming a full twelve months of revenue is used to allocate costs among the various rate elements, but should not be interpreted as over- or under-collection during a given fiscal year. However, because the recommended rates do not take effect until January 1, 2013, the expected revenues for 2012/13 will be about $10 million (one percent) less than the total revenue requirement in 2012/13. The total revenue requirement includes a $6-million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the required draw from reserves is almost $3 million in 2012/13.
### Schedule 12. FY 2012/13 Proof of Revenue if Rates Effective for Full Test Year ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Revenues if Rates Effective July 1st</th>
<th>Revenue Requirements</th>
<th>Difference</th>
<th>% Over (Under) Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>225.8</td>
<td>217.8</td>
<td>8.0</td>
<td>4%</td>
</tr>
<tr>
<td>System Access Rate</td>
<td>386.2</td>
<td>374.1</td>
<td>12.1</td>
<td>3%</td>
</tr>
<tr>
<td>Water Stewardship Rate</td>
<td>69.5</td>
<td>67.5</td>
<td>1.9</td>
<td>3%</td>
</tr>
<tr>
<td>System Power Rate</td>
<td>321.9</td>
<td>313.7</td>
<td>8.1</td>
<td>3%</td>
</tr>
<tr>
<td>Treatment Surcharge</td>
<td>252.9</td>
<td>244.4</td>
<td>8.5</td>
<td>3%</td>
</tr>
<tr>
<td>Readiness-to-serve Charge</td>
<td>146.0</td>
<td>140.8</td>
<td>5.2</td>
<td>4%</td>
</tr>
<tr>
<td>Capacity Charge</td>
<td>26.3</td>
<td>25.3</td>
<td>1.0</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,428.5</strong></td>
<td><strong>1,383.6</strong></td>
<td><strong>44.9</strong></td>
<td><strong>3%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

### Schedule 13. FY 2012/13 Proof of Revenue if Rates Effective January 1 ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Revenues if Rates Effective Jan 1</th>
<th>Revenue Requirements</th>
<th>Difference</th>
<th>% Over (Under) Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>238.2</td>
<td>217.8</td>
<td>20.5</td>
<td>9%</td>
</tr>
<tr>
<td>System Access Rate</td>
<td>376.1</td>
<td>374.1</td>
<td>2.0</td>
<td>1%</td>
</tr>
<tr>
<td>Water Stewardship Rate</td>
<td>71.3</td>
<td>67.5</td>
<td>3.7</td>
<td>6%</td>
</tr>
<tr>
<td>System Power Rate</td>
<td>272.4</td>
<td>313.7</td>
<td>(41.4)</td>
<td>-13%</td>
</tr>
<tr>
<td>Treatment Surcharge</td>
<td>239.2</td>
<td>244.4</td>
<td>(5.2)</td>
<td>-2%</td>
</tr>
<tr>
<td>Readiness-to-serve Charge</td>
<td>146.0</td>
<td>140.8</td>
<td>5.2</td>
<td>4%</td>
</tr>
<tr>
<td>Capacity Charge</td>
<td>30.8</td>
<td>25.3</td>
<td>5.5</td>
<td>22%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,374.0</strong></td>
<td><strong>1,383.6</strong></td>
<td><strong>(9.6)</strong></td>
<td><strong>-1%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding
Metropolitan Water District of Southern California

Fiscal Year 2013/14 Cost of Service

December 2011
Table of Contents

1 Cost of Service .................................................................................................................. 4
  1.1 Cost of Service Process .............................................................................................. 4
  1.2 Revenue Requirements .............................................................................................. 6
  1.3 Service Function Costs .............................................................................................. 9
    1.3.1 Functional Allocation Bases .............................................................................. 10
      (a) Direct assignment ............................................................................................... 12
      (b) Work-In-Progress; Net Book Value Plus Work-In-Progress .......................... 12
      (c) Prorating in proportion to other allocations ....................................................... 13
      (d) Manager analyses ............................................................................................. 14
    1.4 Classified Costs ....................................................................................................... 17

2 Rates and Charges ............................................................................................................. 23
  2.1 System Access Rate (SAR) ....................................................................................... 25
  2.2 Water Stewardship Rate (WSR) .............................................................................. 25
  2.3 System Power Rate (SPR) ....................................................................................... 26
  2.4 Treatment Surcharge ............................................................................................... 26
  2.5 Capacity Charge ........................................................................................................ 26
  2.6 Readiness-to-Serve Charge ..................................................................................... 26
  2.7 Purchase Order ......................................................................................................... 27
  2.8 Tier 2 supply rate ..................................................................................................... 27
  2.9 Tier 1 supply rate ..................................................................................................... 27
  2.10 Replenishment water rates ...................................................................................... 28

3 Sales .................................................................................................................................. 28

4 Proof of Revenue .............................................................................................................. 28
List of Schedules and Tables

Schedule 1. Revenue Requirements (by budget line item) 8
Schedule 2. Summary of Functional Allocations by Type of Allocation Basis 11
Schedule 3. Net Book Value and Work in Progress Allocation Base 13
Schedule 4. Revenue Requirement (by service function) 15
Schedule 5. Service Function Revenue Requirements (by budget line item) 16
Schedule 6. Classification Percentages 20
Schedule 7. Service Function Revenue Requirements (by classification category) 22
Schedule 8. Classified Service Function Revenue Requirements (by rate design element) 24
Schedule 9. Rates and Charges Summary 25
Schedule 10. FY 2013/14 Proof of Revenue if Rates Effective for Full Test Year ($ millions) 29
Schedule 11. FY 2013/14 Proof of Revenue if Rates Effective January 1 ($ millions) 29
1 Cost of Service

Prior to discussing the specific rates and charges that make up the rate structure, it is important to understand the cost of service process that supports the rates and charges. The purpose of the cost of service process is to: (1) identify which costs should be recovered through rates and charges; (2) organize Metropolitan’s costs into service functions; and (3) classify service function costs on the basis for which the cost was incurred. The purpose of sorting Metropolitan’s costs in a manner that reflects the type of service provided (e.g., supply vs. conveyance), the characteristics of the cost (e.g., fixed or variable) and the reason why the cost was incurred (e.g., to meet peak or average demand) is to create logical cost of service “building blocks”. The building blocks can then be arranged to design rates and charges with a reasonable nexus between costs and benefits.

1.1 Cost of Service Process

The general cost of service process involves the four basic steps outlined below.

Step 1 - Development Of Revenue Requirements

In the revenue requirement step, the costs that Metropolitan must recover through rates and charges, after consideration of revenue offsets, are identified. The cash needs approach, an accepted industry practice for government-owned utilities, has historically been used in identifying Metropolitan’s revenue requirements and was applied for the purposes of this study. Under the cash needs approach, revenue requirements include operating costs and annual requirements for meeting financed capital items (debt service, funding of replacement and refurbishment from operating revenues, etc.).

Step 2 – Identification Of Service Function Costs

In the functional allocation step, revenue requirements are allocated to different categories based on the operational functions served by each cost. The functional categories are identified in such a way as to allow the development of logical allocation bases. The functional categories used in the cost of service process include:

- Supply
- Conveyance and Aqueduct
- Storage
- Treatment
- Distribution
- Demand Management
- Administrative and General
- Hydroelectric

In order to provide more finite functional allocation, many of these functional categories are subdivided into more detailed sub-functions in the cost of service process. For example, costs for the Supply and Conveyance and Aqueduct functions are further subdivided into the sub-functions State Water Project (SWP), Colorado River Aqueduct (CRA), and Other. Similarly, costs in the Storage function are broken down into the sub-functions Emergency Storage, Drought Carryover Storage, and Regulatory Storage.
Step 3 - Classification Of Costs

In the cost classification step, functionalized costs are separated into categories according to their causes and behavioral characteristics. Proper cost classification is critical in developing a rate structure that recovers costs in a manner consistent with the causes and behaviors of those costs. Under American Water Works Association (AWWA) guidelines, cost classification may be done using either the Base/Extra-Capacity approach or the Commodity/Demand approach. In the simplest sense, these approaches offer alternative means of distinguishing between utility costs incurred to meet average or base demands and costs incurred to meet peak demands. The Commodity/Demand approach was modified for its application to Metropolitan’s rate structure by adding a separate cost classification for costs related to providing standby service. Analysis of system operating data indicated that a modified Commodity/Demand approach was most appropriate for developing Metropolitan’s cost of service classification bases.

Step 4 - Allocation Of Costs To Rate Design Elements

The allocation of costs to the rate design elements depends on the purpose for which the cost was incurred and the manner in which the member agencies use the Metropolitan system. For example, costs incurred to meet average system demands are typically recovered by dollar per acre-foot rates and are allocated based on the volume of water purchased by each agency. Rates that are levied on the amount or volume of water delivered are commonly referred to as volumetric rates as the customer’s costs vary with the volume of water purchased. Costs incurred to meet peak demands (referred to in this report as demand costs) are recovered through a peaking charge (the Capacity Charge) and are allocated to agencies based on their peak demand behavior. Costs incurred to provide standby service in the event of an emergency are referred to here as standby costs. Differentiating between costs for average usage and peak usage is just one example of how the cost of service process allows for the design of rates and charges that improves overall customer equity and efficiency. Figure 1 summarizes the cost of service process.
1.2 Revenue Requirements

The estimated revenue requirements presented in this report are for FY 2013/14. Throughout the report, FY 2013/14 is used as the “test year” to demonstrate the application of the cost of service process. Schedule 1 summarizes the FY 2013/14 revenue requirement by the major budget line items used in Metropolitan’s budgeting process. Current estimates indicate Metropolitan’s annual cash expenditures (including capital financing costs, but not construction outlays financed with bond proceeds) will total approximately $1.58 billion in FY 2013/14.

The rates and charges do not have to cover this entire amount. Metropolitan generates a significant amount of revenue from interest income, hydroelectric power sales and miscellaneous income. These internally generated revenues are referred to as revenue offsets and are expected to generate about $40 million in FY 2013/14. It is expected that Metropolitan will also generate about $81 million in ad valorem property tax revenues and annexation charges. Property tax revenues are used to pay for a portion of Metropolitan’s general obligation bond debt service, and a portion of Metropolitan’s obligation to pay for debt service on bonds issued to fund the State Water Project. The total revenue offsets for FY 2013/14 are estimated to be around $121 million. Therefore, the revenue required from rates and charges is the difference between the total costs and the revenue offsets, or $1.461 billion. Given an effective date of January 1, 2014, the rates and charges recommended in this report, combined with rates and charges effective through December 31, 2013 will generate a total of $1.458 billion in 2013/14. The shortfall of $3 million will be covered through withdrawals from the Water Rate Stabilization Fund during 2013/14.

All of Metropolitan’s costs fall under the broad categories of Departmental Costs or General District Requirements. Departmental Costs include budgeted items identified with specific organizational groups. General District Requirements consist of requirements associated with the Colorado River
Aqueduct, State Water Project, the capital financing costs associated with the Capital Investment Program (CIP), and Water Management Programs. General District Requirements also include reserve fund transfers required by bond covenants and Metropolitan’s Administrative Code.

When considered in total, General District Requirements make up approximately 72 percent of the absolute value of the allocated costs. The largest component of the revenue requirement relates to SWP expenditures, which make up approximately 33 percent of Metropolitan’s FY 2013/14 revenue requirements. Metropolitan’s SWP contract requires Metropolitan to pay its allocated share of the capital, minimum operations, maintenance, power and replacement costs incurred to develop and convey its water supply entitlement, irrespective of the quantity of water Metropolitan takes delivery of in any given year. Metropolitan’s capital financing program is the second largest component of the revenue requirement, constituting approximately 28 percent of the revenue requirement. Departmental O&M costs make up 21 percent of the total revenue requirement in FY 2013/14. Water System Operations is the largest single component of the Departmental Costs and accounts for 12 percent of the revenue requirements. Water System Operations responsibilities include operating and maintaining Metropolitan’s pumping, storage, treatment, and hydroelectric facilities, as well as the Colorado River Aqueduct and other conveyance and supply facilities.
Schedule 1. Revenue Requirements (by budget line item)

<table>
<thead>
<tr>
<th>Departmental Operations &amp; Maintenance</th>
<th>Fiscal Year Ending 2014</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office of the General Manager &amp; Human Resources</td>
<td>$20,318,700</td>
<td>1.2%</td>
</tr>
<tr>
<td>External Affairs</td>
<td>15,998,100</td>
<td>0.9%</td>
</tr>
<tr>
<td>Water System Operations</td>
<td>210,991,000</td>
<td>12.4%</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>6,781,500</td>
<td>0.4%</td>
</tr>
<tr>
<td>Corporate Resources</td>
<td>66,966,300</td>
<td>3.9%</td>
</tr>
<tr>
<td>Real Property Development &amp; Mgmt</td>
<td>5,288,300</td>
<td>0.3%</td>
</tr>
<tr>
<td>Water Resource Management</td>
<td>15,197,200</td>
<td>0.9%</td>
</tr>
<tr>
<td>Ethics Department</td>
<td>459,200</td>
<td>0.0%</td>
</tr>
<tr>
<td>General Counsel</td>
<td>11,564,600</td>
<td>0.7%</td>
</tr>
<tr>
<td>Audit Department</td>
<td>2,123,800</td>
<td>0.1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>355,688,700</strong></td>
<td><strong>20.9%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>General District Requirements</th>
<th>Fiscal Year Ending 2014</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Water Project</td>
<td>563,752,923</td>
<td>33.1%</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>24,926,279</td>
<td>1.5%</td>
</tr>
<tr>
<td>Supply Program Costs paid from operating revenues</td>
<td>44,883,518</td>
<td>2.6%</td>
</tr>
<tr>
<td>Water Management Programs</td>
<td>53,624,040</td>
<td>3.1%</td>
</tr>
<tr>
<td>Capital Financing Program</td>
<td>477,330,874</td>
<td>28.0%</td>
</tr>
<tr>
<td>Other O&amp;M</td>
<td>38,129,600</td>
<td>2.2%</td>
</tr>
<tr>
<td>Increase (Decrease) in Required Reserves</td>
<td>24,200,000</td>
<td>1.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,226,847,234</strong></td>
<td><strong>72.0%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue Offsets</th>
<th>Fiscal Year Ending 2014</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>(121,527,134)</strong></td>
<td><strong>7.1%</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Revenue Requirements</th>
<th>Fiscal Year Ending 2014</th>
<th>% of Revenue Requirements (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>$1,461,008,799</strong></td>
<td></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

(1) Given as a percentage of the absolute values of total dollars allocated.
Totals may not foot due to rounding
1.3 Service Function Costs

Several major service functions result in the delivery of water to Metropolitan’s member agencies. These include the supply itself, the conveyance capacity and energy used to move the supply, storage of water, distribution of supplies within Metropolitan’s system, and treatment of these supplies. Metropolitan’s rate structure recovers the majority of the cost of providing these functions through rates and charges.

The functional categories developed for Metropolitan’s cost of service process are consistent with the AWWA rate setting guidelines, a standard chart of accounts for utilities developed by the National Association of Regulatory Commissioners (NARUC), and the National Council of Governmental Accounting. Because all water utilities are not identical, the rate structure reflects Metropolitan’s unique physical, financial, and institutional characteristics.

A key goal of functional allocation is to maximize the degree to which rates and charges reflect the costs of providing different types of service. For functional allocation to be of maximum benefit, two criteria must be kept in mind when establishing functional categories.

- The categories should correlate charges for different types of service with the costs of providing those different types of service; and
- Each function should include reasonable allocation bases by which costs may be allocated.

Each of the functions developed for the cost of service process is described below.

- **Supply.** This function includes costs for those SWP and CRA facilities and programs that relate to maintaining and developing supplies to meet the member agencies’ demands. For example, Metropolitan’s supply related costs include investments in the Conservation Agreement with the Imperial Irrigation District and the Palo Verde Irrigation District (PVID) Program from the Colorado River supply programs. The SWP programs include transfer programs such as Kern Delta, Program, Semitropic Water Storage Program, Yuba Accord Program, and the Arvin-Edison Water Storage Program. Costs for in-basin programs within Metropolitan’s service area, such as Proposition 13 are also included.

- **Conveyance and Aqueduct.** This function includes the capital, operations, maintenance, and overhead costs for SWP and CRA facilities that convey water through Metropolitan’s internal distribution system. Variable power costs for the SWP and CRA are also considered to be Conveyance and Aqueduct costs but are separately reported under a “power” sub-function. Conveyance and Aqueduct facilities can be distinguished from Metropolitan’s other facilities primarily by the fact that they do not typically include direct connections to the member agencies. For purposes of this study, the Inland Feeder Project functions as an extension of the SWP East Branch and is therefore considered a Conveyance and Aqueduct facility as well.

- **Storage.** Storage costs include the capital financing, operating, maintenance, and overhead costs for Diamond Valley Lake, Lake Mathews, Lake Skinner, and five smaller regulatory reservoirs within the distribution system. Metropolitan’s larger storage facilities are operated to provide: (1) emergency storage in the event of an earthquake or similar system outage; (2) drought storage that produces additional supplies during times of shortage; and (3) regulatory storage to balance system demands and supplies and provide for operating flexibility. To reasonably allocate the costs of storage capacity among member agencies, the
storage service function is categorized into sub-functions of emergency, drought, and regulatory storage.

- **Treatment.** This function includes capital financing, operating, maintenance, and overhead costs for Metropolitan’s five treatment plants and is considered separately from other costs so that treated water service may be priced separately.

- **Distribution.** This function includes capital financing, operating, maintenance, and overhead costs for the “in-basin” feeders, canals, pipelines, laterals, and other appurtenant works. The “in-basin” facilities are distinguished from Conveyance and Aqueduct facilities at the point of connection to the SWP, Lake Mathews, and other major turnouts along the CRA facilities.

- **Demand Management.** A separate demand management service function has been used to clearly identify the cost of Metropolitan’s investments in local resources like conservation, recycling, and desalination.

- **Administrative and General (A&G).** These costs occur in each of the Groups’ departmental budgets and reflect overhead costs that cannot be directly functionalized. The cost-of-service process allocates A&G costs to the service functions based on the labor costs of non-A&G dollars allocated to each function.

- **Hydroelectric.** Hydroelectric costs include the capital financing, operating, maintenance, and overhead costs incurred to operate the 16 small hydroelectric plants located throughout the water distribution system.

### 1.3.1 Functional Allocation Bases

The functional allocation bases are used to allocate a cost to the various service functions. The primary functional allocation bases used in the cost-of-service process are listed below.

- Direct assignment
- Net Book Value plus Work-In-Progress
- Prorating in proportion to other allocations
- Manager analysis

Schedule 2 summarizes the amounts of total cost allocated using each of the above types of allocation bases.
Schedule 2. Summary of Functional Allocations by Type of Allocation Basis

<table>
<thead>
<tr>
<th>Primary Functional Allocation Bases</th>
<th>Estimated for FY 2014</th>
<th>% of Allocated Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Assignment</td>
<td>$1,041,744,227</td>
<td>61.1%</td>
</tr>
<tr>
<td>Work in Progress/Net Book Value</td>
<td>$518,649,374</td>
<td>30.4%</td>
</tr>
<tr>
<td>Prorating</td>
<td>$63,006,348</td>
<td>3.7%</td>
</tr>
<tr>
<td>Manager Analysis</td>
<td>$35,779,600</td>
<td>2.1%</td>
</tr>
<tr>
<td>Other</td>
<td>$44,883,518</td>
<td>2.6%</td>
</tr>
<tr>
<td>Total Dollars Allocated</td>
<td>$1,704,063,068</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Portion of Above Allocations Relating to:

<table>
<thead>
<tr>
<th>Portion of Above Allocations Relating to</th>
<th>Estimated for FY 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue Requirements before Offsets</td>
<td>1,582,535,934</td>
</tr>
<tr>
<td>Revenue Offsets</td>
<td>121,527,134</td>
</tr>
<tr>
<td>Total Dollars Allocated</td>
<td>$1,704,063,068</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding
Each of the primary allocation bases is discussed in detail in the remainder of this section. Discussion of each allocation basis includes examples of costs allocated using that particular basis.

(a) Direct assignment

Direct assignment makes use of a clear and direct connection between a revenue requirement and the function being served by that revenue requirement. Directly assigned costs typically include: Costs associated with specific treatment plants, purely administrative costs, and certain distribution and conveyance departmental costs. Examples of costs that are directly assigned to specific functional categories are given below.

* Water System Operations Group departmental costs for treatment plants are directly assigned to treatment.
* Transmission charges for State Water Contract are directly assigned to conveyance SWP.

(b) Work-In-Progress; Net Book Value Plus Work-In-Progress

Capital financing costs, including debt service and funding replacements and refurbishments from operating revenues, comprise about 28 percent of Metropolitan’s annual revenue requirements. One approach would be to allocate payments on each debt issue in direct proportion to specific project expenditures made using bond proceeds. But, this approach would result in a high degree of volatility in relative capital cost allocations from year to year. The approach used in this analysis is one widely used in water industry cost of service studies. Capital and debt-related costs (including repair and replacement costs paid from current revenues) are allocated on the basis of the relative net book values of fixed assets within each functional category. This approach produces capital cost allocations that are consistent with the functional distribution of assets. Also, since the allocation basis is tied to fixed asset records rather than debt payment records, the resulting allocations are more reflective of the true useful lives of assets. Use of net book values as an allocation basis provides an improved matching of functional costs with asset lives. A listing of fixed asset net book values summarized by asset function is shown in Schedule 3.
Schedule 3. Net Book Value and Work in Progress Allocation Base

<table>
<thead>
<tr>
<th>Functional Categories</th>
<th>NBV for FY 2014</th>
<th>% of Total NBV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source of Supply</td>
<td>$22,855,983</td>
<td>0.3%</td>
</tr>
<tr>
<td>Conveyance &amp; Aqueduct</td>
<td>1,849,143,743</td>
<td>20.2%</td>
</tr>
<tr>
<td>Storage</td>
<td>2,236,593,975</td>
<td>24.5%</td>
</tr>
<tr>
<td>Treatment</td>
<td>3,279,376,388</td>
<td>35.9%</td>
</tr>
<tr>
<td>Distribution</td>
<td>1,324,730,492</td>
<td>14.5%</td>
</tr>
<tr>
<td>Administrative &amp; General</td>
<td>317,241,039</td>
<td>3.5%</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>112,451,435</td>
<td>1.2%</td>
</tr>
<tr>
<td><strong>Total Fixed Assets Net Book Value</strong></td>
<td><strong>$9,142,393,053</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

In most instances, the cost-of-service process uses net book value plus work-in-progress to develop allocation bases for debt and capital costs. For organizational units handling current construction activity, however, allocations are based on work-in-progress alone. For these organizational units, exclusion of net book value from the allocation basis is done because the costs being allocated relate directly to work in progress not yet reflected in the completed assets records.

Examples of revenue requirements allocated using these net book value and work-in-progress allocations are shown below.

* Revenue Bond Debt Service: *allocated using Work In Progress plus Net Book Value.*
* Annual deposit of operating revenue to replacement and refurbishment fund: *allocated using Work In Progress plus Net Book Value.*

To calculate the relative percentage of fixed assets in each functional category, Metropolitan staff conducted a detailed analysis of historical accounting records and built a database of fixed asset accounts that contains records for all facilities currently in service and under construction. Each facility was sorted into the major service function that best represented the facilities primary purpose and was then further categorized into the appropriate sub-functions described earlier.

(c) Prorating in proportion to other allocations

Utility cost of service studies frequently contain line items for which it would be difficult to identify an allocation basis specific to that line item. In these cases, the most logical allocation basis is often a prorata blend of allocation results calculated for other revenue requirements in the same departmental group, or general category. Reasonable prorata allocations are based on a logical nexus between a cost and the purpose which it serves. For example: Human Resources Section costs are allocated using all labor costs, since Human Resources spends its time and resources attending to the labor force.
(d) Manager analyses

The functional interrelationships of some organizational units are so complex and/or dynamic that reliable allocation bases can only be developed with extensive input from the organization’s managers. In these cases, managers use their firsthand knowledge of the organization’s internal operations to generate a functional analysis of departmental costs. An example of revenue requirements allocated based on manager analyses is: Water System Operations Group: Operations Planning Unit.

A summary of the functional allocation results is shown in Schedules 4 and 5. Schedule 4 provides a breakdown of the revenue requirement for FY 2013/14 into the major service functions and sub-functions prior to the redistribution of administrative and general costs. Schedule 5 serves as a cross-reference summarizing how the budget line items are distributed among the service functions. The largest functional component of Metropolitan’s revenue requirement is the Conveyance and Aqueduct function, which constitutes approximately 41 percent of the allocated revenue requirement.
<table>
<thead>
<tr>
<th>Functional Categories</th>
<th>Fiscal Year Ending 2014</th>
<th>% of Allocated Dollars (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>$36,971,823</td>
<td>2.5%</td>
</tr>
<tr>
<td>SWP</td>
<td>108,983,937</td>
<td>7.4%</td>
</tr>
<tr>
<td>Other Supply</td>
<td>10,744,171</td>
<td>0.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>156,699,932</td>
<td>10.6%</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA Power (net of sales)</td>
<td>34,718,934</td>
<td>2.3%</td>
</tr>
<tr>
<td>CRA All Other</td>
<td>45,433,359</td>
<td>3.1%</td>
</tr>
<tr>
<td>SWP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWP Power</td>
<td>230,741,829</td>
<td>15.6%</td>
</tr>
<tr>
<td>SWP All Other</td>
<td>212,715,867</td>
<td>14.4%</td>
</tr>
<tr>
<td>Other Conveyance &amp; Aqueduct</td>
<td>79,311,888</td>
<td>5.4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>602,921,876</td>
<td>40.7%</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage Costs Other Than Power</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>61,016,031</td>
<td>4.1%</td>
</tr>
<tr>
<td>Drought</td>
<td>49,668,375</td>
<td>3.4%</td>
</tr>
<tr>
<td>Regulatory</td>
<td>15,652,846</td>
<td>1.1%</td>
</tr>
<tr>
<td>Wadsworth plant pumping/generation</td>
<td>(505,271)</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>125,831,981</td>
<td>8.6%</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jensen</td>
<td>47,460,371</td>
<td>3.2%</td>
</tr>
<tr>
<td>Weymouth</td>
<td>52,770,848</td>
<td>3.6%</td>
</tr>
<tr>
<td>Diemer</td>
<td>58,750,207</td>
<td>4.0%</td>
</tr>
<tr>
<td>Mills</td>
<td>34,302,398</td>
<td>2.3%</td>
</tr>
<tr>
<td>Skinner</td>
<td>71,278,776</td>
<td>4.8%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>264,562,599</td>
<td>17.9%</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution</td>
<td>132,472,705</td>
<td>8.9%</td>
</tr>
<tr>
<td>Demand Management</td>
<td>61,751,357</td>
<td>4.2%</td>
</tr>
<tr>
<td>Hydroelectric</td>
<td>(9,660,187)</td>
<td>0.7%</td>
</tr>
<tr>
<td>Administrative &amp; General</td>
<td>126,428,537</td>
<td>8.5%</td>
</tr>
<tr>
<td><strong>Total Functional Allocations:</strong></td>
<td>$1,461,008,799</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

(1) Given as a percentage of the absolute values of total dollars allocated.
Totalts may not foot due to rounding
### Schedule 5. Service Function Revenue Requirements (by budget line item)

<table>
<thead>
<tr>
<th>Source of Supply</th>
<th>Conveyance &amp; Aqueduct</th>
<th>Storage</th>
<th>Treatment</th>
<th>Distribution</th>
<th>Demand Management</th>
<th>Hydro Electric</th>
<th>Administrative &amp; General</th>
<th>Total $ Allocated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Departmental Operations &amp; Maintenance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Office of the General Manager &amp; Human Resources</td>
<td>$1,000,399</td>
<td>$7,752,208</td>
<td>$591,220</td>
<td>$3,386,660</td>
<td>$2,308,977</td>
<td>$198,850</td>
<td>$181,952</td>
<td>$4,898,434</td>
</tr>
<tr>
<td>External Affairs</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2,968,200</td>
<td>-</td>
<td>13,029,900</td>
</tr>
<tr>
<td>Water System Operations</td>
<td>12,925,414</td>
<td>36,212,956</td>
<td>3,447,068</td>
<td>96,781,777</td>
<td>56,410,059</td>
<td>8,745</td>
<td>4,249,447</td>
<td>955,534</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Real Property Development &amp; Mgmt</td>
<td>-</td>
<td>-</td>
<td>5,288,300</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water Resource Management</td>
<td>10,386,182</td>
<td>5,671</td>
<td>-</td>
<td>240,698</td>
<td>1,204,198</td>
<td>3,360,251</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Ethics Department</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>General Counsel</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>Audit Department</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Departmental O&amp;M</strong></td>
<td>26,339,312</td>
<td>52,526,756</td>
<td>16,984,786</td>
<td>115,834,507</td>
<td>68,231,403</td>
<td>6,925,706</td>
<td>5,120,238</td>
<td>63,725,991</td>
</tr>
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<td><strong>General District Requirements</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>State Water Project</td>
<td>84,978,587</td>
<td>478,774,336</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>-</td>
<td>24,926,279</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Water Transfers and Storage Programs</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Demand Management</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>53,624,040</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Capital Financing Program</td>
<td>1,136,036</td>
<td>90,922,827</td>
<td>110,250,132</td>
<td>162,865,294</td>
<td>90,790,370</td>
<td>-</td>
<td>5,636,496</td>
<td>15,729,728</td>
</tr>
<tr>
<td>Other Operating Costs</td>
<td>697,678</td>
<td>1,137,255</td>
<td>412,316</td>
<td>2,361,856</td>
<td>1,610,260</td>
<td>1,727,778</td>
<td>126,894</td>
<td>30,055,542</td>
</tr>
<tr>
<td>Increase (Decrease) in Required Reserves</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total General District Requirements</strong></td>
<td>131,695,819</td>
<td>595,760,697</td>
<td>110,662,449</td>
<td>165,227,150</td>
<td>92,400,651</td>
<td>55,351,818</td>
<td>5,763,380</td>
<td>69,985,271</td>
</tr>
<tr>
<td><strong>Net Revenue Requirements</strong></td>
<td>$156,699,932</td>
<td>$602,921,876</td>
<td>$125,831,981</td>
<td>$264,562,599</td>
<td>$132,472,705</td>
<td>$61,751,357</td>
<td>$9,660,187</td>
<td>$126,428,537</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding
1.4 **Classified Costs**

In the cost classification step, functionalized costs are further categorized based on the causes and behavioral characteristics of these costs. An important part of the classification process is identifying which costs are incurred to meet average demands vs. peak demands and which costs are incurred to provide standby service. As with the functional allocation process, the proposed classification process is consistent with AWWA guidelines, but has been tailored to meet Metropolitan’s specific operational structure and service environment.

In the cost of service process, cost classification is done using a hybrid of two methods discussed in the AWWA M1 Manual, Principles of Water Rates, Fees and Charges. These two methods are the Commodity/Demand method and the Base/Extra Capacity method.

The Commodity/Demand method allocates costs that vary with the amount of water produced to the commodity category with all other costs associated with water production allocated to the demand category. In the Base/Extra Capacity method, costs related to average demand conditions are allocated to the base category and capacity costs associated with meeting above average demand conditions are allocated to the extra capacity category.

The approach used to classify Metropolitan’s costs differs from the Base/Extra Capacity method by the fact that costs are separated into a variable category and a fixed category. The Base/Extra Capacity method does not separate these costs into two categories but rather combines them into one category referred to as base costs. The approach used to classify Metropolitan’s costs differs from the Commodity/Demand method in the fact that demand costs are separated into fixed commodity and fixed demand costs. The Commodity/Demand method would not make this distinction, but would combine these costs into the demand category. By using the hybrid method, costs are disaggregated to a lower level of detail, providing greater visibility to costs. Under the hybrid classification method, functional cost categories are reallocated into demand, commodity, or standby categories, which are discussed below. Classification of costs into these categories depends on an analysis of system capacity as well as actual system operating data.

Classification categories used in the analysis include:

- Fixed demand costs
- Fixed commodity costs
- Fixed standby costs
- Variable commodity costs
- Hydroelectric costs

Demand costs are incurred to meet peak demands. Only the direct capital financing costs were included in the demand classification category. A portion of capital financing costs was included in the demand cost category because in order to meet peak demands additional physical capacity is designed into the system and, therefore, additional capital costs are incurred. Commodity costs are generally associated with average system demands. Variable commodity costs include costs of chemicals, most power costs, and other cost components that increase or decrease in relation to the volume of water supplied. Fixed commodity costs include fixed operations and maintenance and capital financing costs that are not related to accommodating peak demands or standby service.
Standby service costs relate to Metropolitan’s role in ensuring system reliability during emergencies such as an earthquake or an outage of a major facility like the Colorado River Aqueduct. The two principal components of the standby costs were identified as the emergency storage capacity within the system and the standby capacity within the State Water Project conveyance system.

An additional component used in Metropolitan’s cost classification process is the hydroelectric component. While not a part of most water utilities’ cost classification procedures, the hydroelectric classification component is necessary to segregate revenue requirements carried from the hydroelectric function established in the functional allocation process. Hydroelectric revenue requirements are later embedded in the distribution function. Any net revenues generated by the hydroelectric operations offset the distribution costs and reduce the System Access Rate. All users of the distribution system benefit proportionately from the revenue offset provided by the sale of hydroelectric energy.

Schedule 6 provides the classification percentages used to distribute the service function costs into demand, commodity and standby service classification categories. All of the supply costs are classified as fixed commodity costs. Because these particular supply costs have been incurred to provide an amount of annual reliable system yield and not to provide peak demand delivery capability or standby service, they are reasonably treated as fixed commodity costs.

Costs for the Conveyance and Aqueduct (C&A) service function are classified into demand, commodity, and standby categories. Because the capital costs for C&A were incurred to meet all three classification categories, an analysis of C&A capacity usage for the three years ending June 2014 was used to determine that 52 percent of the available conveyance capacity has been used to meet member agency demands on an average annual basis. A system peak factor1 of 1.4 was applied to the average annual usage to determine that 22 percent of available capacity is used to meet peak monthly deliveries to the member agencies. The remaining portion of C&A, around 26 percent, is used for standby. The same classification percentages are applied to the CRA, SWP, and Other (Inland Feeder) Conveyance and Aqueduct sub-functions. The classification shares reflect the system average use of conveyance capacity and not the usage of individual facilities. All of the Conveyance and Aqueduct energy costs for pumping water to Southern California are classified as variable commodity costs and, therefore, are not shown in Schedule 6 because they carry through the classification step.

Storage service function costs for emergency, drought and regulatory storage are also distributed to the classification categories based on the type of service provided. Emergency storage costs are classified as 100 percent standby related. Emergency storage is a prime example of a cost that Metropolitan incurs to ensure the reliability of deliveries to the member agencies. In effect, through the emergency storage capacity in the system, Metropolitan is “standing by” to provide service in the event of a catastrophe such as a major earthquake that disrupts regional conveyance capacity for an extended period of time. Drought carryover storage serves to provide reliable supplies by carrying over surplus supplies from periods of above normal precipitation and snow pack to drought periods when supplies decrease. Drought storage creates supply and is one component of the portfolio of resources that result in a reliable amount of annual system supplies. As a result, drought storage is classified as a fixed commodity cost, in the same manner as Metropolitan’s supply costs. Regulatory storage within the Metropolitan system provides operational flexibility in meeting peak demands and

---

1 Peak monthly deliveries to the member agencies average about 42 percent more than the average monthly deliveries.
flow requirements, essentially increasing the physical distribution capacity. Therefore, regulatory storage is classified in the same manner as distribution costs.

Distribution service function costs were classified using daily flow data for the three calendar years ending December 2014. During this period, the average annual volume of deliveries to the member agencies used 42 percent of the peak distribution capacity. The difference between the three-year average non-coincident peak and the commodity flows divided by the system capacity, or 38 percent of the distribution capacity, was used to meet peak day demands in excess of average annual flows. Although the Metropolitan distribution system has a great deal of operational flexibility, the total amount of distribution capacity was limited to the peak non-coincident² 24-hour daily flow of all the member agencies. The remaining 20 percent of distribution capacity is associated with standby service.

As presented in Schedule 6, treatment service function costs were also classified using daily flow data of deliveries to the member agencies for the three years ending December 2014. Total treated water capacity of 4,204 cfs, the total design capacity of all the treatment plants, was used in the calculation. Schedule 7 summarizes the service function revenue requirements by classification category. Administrative and general costs have been allocated to the classification categories by service function based on the ratio of classified non-A&G service function costs to total non-A&G service function costs.

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² The term “non-coincident” means that the peak day flow for each agency may or may not coincide with the peak day system flow. Both non-coincident and coincident approaches to measuring peak demands are used in rate design approaches. A non-coincident approach is used in the rate design to capture the different operating characteristics of the member agencies (e.g., the distribution system is designed to meet peak demands in different load areas within the System that have non-coincident demands due to each member agencies unique operating characteristics).
### Schedule 6. Classification Percentages

<table>
<thead>
<tr>
<th>Function</th>
<th>Classification Percentages</th>
<th>Total % Classified</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Supply costs classified as commodity</td>
</tr>
<tr>
<td>State Water Project</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Supply costs classified as commodity</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td>Demand (peaking) percentage represents application of system monthly peak factor of 1.4 to average monthly flow. Commodity percentage represents average flows. Remainder of capacity is for standby (expected growth). SWP and CRA are treated the same due to application of system wide uniform price.</td>
</tr>
<tr>
<td>State Water Project</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>52% 22% 26% 100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency</td>
<td>0% 0% 100% 100%</td>
<td>100%</td>
<td>Standby service (recovered by RTS)</td>
</tr>
<tr>
<td>Drought</td>
<td>100% 0% 0% 100%</td>
<td>100%</td>
<td>Recovered by Supply Rates</td>
</tr>
<tr>
<td>Regulatory</td>
<td>42% 37% 20% 100%</td>
<td>100%</td>
<td>See distribution (below)</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>32% 36% 32% 100%</td>
<td>100%</td>
<td>Demand percentage represents amount of system treatment capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total capacity. The same classification is applied to all five treatment plants due to the use of a uniform system wide treatment surcharge.</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>42% 37% 20% 100%</td>
<td>100%</td>
<td>Demand percentage represents amount of system distribution capacity used to meet peak day flows in excess of average. Commodity percentage represents amount of capacity used to meet average flows. Standby percentage is estimated as remaining total system capacity. The same classification is applied to all distribution facilities due to the use of a system wide uniform system access rate.</td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding.
A summary of cost classification results is shown in Schedule 7. The classification of the service function costs results in about 9 percent, or $131 million of the total revenue requirements, being allocated to the demand classification category. This amount represents a reasonable estimate of the annual fixed capital financing costs incurred to meet peak demands (plus the allocated administrative and general costs). A portion of Metropolitan’s property tax revenue is allocated to C&A fixed demand costs and offsets the amount that is recovered through rates. The taxes are used to pay for the general obligation bond debt service allocated to the C&A costs.
### Schedule 7. Service Function Revenue Requirements (by classification category)

<table>
<thead>
<tr>
<th>Functional Categories (by sub-Function)</th>
<th>Fixed Demand</th>
<th>Commodity</th>
<th>Standby</th>
<th>Variable Commodity</th>
<th>Hydroelectric</th>
<th>Total Classified</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source of Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>$</td>
<td>$ 41,284,351</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 41,284,351</td>
</tr>
<tr>
<td>SWP</td>
<td>$</td>
<td>$ 121,696,219</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 121,696,219</td>
</tr>
<tr>
<td>Other Supply</td>
<td>$</td>
<td>$ 11,997,410</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 11,997,410</td>
</tr>
<tr>
<td><strong>Subtotal: Source of Supply</strong></td>
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<td>$ 174,977,980</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 174,977,980</td>
</tr>
<tr>
<td><strong>Conveyance &amp; Aqueduct</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CRA</td>
<td>$</td>
<td>$ 11,265,365</td>
<td>$</td>
<td>$ 25,857,990</td>
<td>$</td>
<td>$ 37,123,355</td>
</tr>
<tr>
<td>CRA All Other</td>
<td>$</td>
<td>$ 24,032,499</td>
<td>$ 2,941,460</td>
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<td>$</td>
<td>$ 67,971,458</td>
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<tr>
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<td>$ 242,242,704</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 242,242,704</td>
</tr>
<tr>
<td>SWP All Other</td>
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<td>$</td>
<td>$</td>
<td>$ 217,029,654</td>
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<tr>
<td>Other Conveyance &amp; Aqueduct</td>
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<td>$ 50,003,637</td>
<td>$ 20,434,098</td>
<td>$</td>
<td>$</td>
<td>$ 130,437,735</td>
</tr>
<tr>
<td><strong>Subtotal: Conveyance &amp; Aqueduct</strong></td>
<td>$</td>
<td>$ 301,188,382</td>
<td>$ 45,559,281</td>
<td>$ 268,100,694</td>
<td>$</td>
<td>$ 652,594,541</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>$</td>
<td>$ 65,614,980</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$ 65,614,980</td>
</tr>
<tr>
<td>Storage Costs Other Than Power</td>
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<td>$</td>
<td>$</td>
<td>$ 55,461,874</td>
</tr>
<tr>
<td>Emergency</td>
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<td>$ 8,648,797</td>
<td>$ 2,974,091</td>
<td>$</td>
<td>$</td>
<td>$ 11,622,888</td>
</tr>
<tr>
<td>Regulatory</td>
<td>$</td>
<td>$ 50,003,637</td>
<td>$ 20,434,098</td>
<td>$</td>
<td>$</td>
<td>$ 130,437,735</td>
</tr>
<tr>
<td><strong>Subtotal: Storage</strong></td>
<td>$</td>
<td>$ 137,643,089</td>
<td>$ (530,455)</td>
<td>$ (530,455)</td>
<td>$</td>
<td>$ 137,643,089</td>
</tr>
<tr>
<td><strong>Water Quality</strong></td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>CRA</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>SWP</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>Other</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Subtotal: Water Quality</strong></td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td><strong>Treatment</strong></td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
<tr>
<td>62,118,130</td>
<td>$</td>
<td>$ 155,173,080</td>
<td>$ 39,834,410</td>
<td>$ 31,710,719</td>
<td>$</td>
<td>$ 288,836,340</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
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<td><strong>Hydroelectric</strong></td>
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<td>$</td>
<td>$ (8,137,866)</td>
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<td>$ (8,137,866)</td>
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<td>$ 130,909,178</td>
<td>$ 871,080,197</td>
<td>$ 167,876,332</td>
<td>$ 299,280,958</td>
<td>$ (8,137,866)</td>
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</table>

Totals may not foot due to rounding
About 60 percent of the revenue requirement ($871 million) is classified as “fixed commodity.” These fixed capital and operating costs are incurred by Metropolitan to meet annual average service needs and are typically recovered by a combination of fixed charges and volumetric rates. Fixed capital costs classified to the “Standby” category total about $168 million and account for about 11 percent of the revenue requirements. Standby service costs are commonly recovered by a fixed charge allocated on a reasonable representation of a customer’s need for standby service. The variable commodity costs for power on the conveyance and aqueduct systems, and power, chemicals and solids handling at the treatment plants change with the amount of water delivered to the member agencies. These costs are classified as variable commodity costs, total about $299 million, and account for about 20 percent of the total revenue requirement. Because of the variable nature of these costs, it is appropriate to recover them through volumetric rates.

2 Rates and Charges

Schedule 8 provides a cross-reference between the classified service function costs and their allocation to the rate design elements. The specifics of each rate design element are discussed in detail in the following section. Schedule 9 summarizes the rates and charges that would be effective on January 1, 2014 in order to collect all costs from rates and charges in fiscal year 2013/14, with the use of $3 million draws from reserve funds. Average costs by member agency will vary depending upon an agency’s RTS allocation, capacity charge and relative proportions of treated and untreated Tier 1, and Tier 2 purchases.
### Schedule 8. Classified Service Function Revenue Requirements (by rate design element)

<table>
<thead>
<tr>
<th>Service Function by Classification Category</th>
<th>Supply Rates</th>
<th>System Access Rate</th>
<th>Water Stewardship Rate</th>
<th>System Power Rate</th>
<th>Capacity Charge</th>
<th>Readiness-to-Serve Charge</th>
<th>Treatment Surcharge</th>
<th>Total Costs Allocated</th>
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<td>174,977,980</td>
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<td>174,977,980</td>
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<td>Conveyance and Aqueduct</td>
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Totals may not foot due to rounding.
Schedule 9. Rates and Charges Summary

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<th>2013</th>
<th>2014</th>
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<td>Interim Agricultural Water Program Untreated ($/AF)</td>
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* The Delta Supply Surcharge will be suspended after 2012.
** Under the current replenishment program proposal there would be no discounted replenishment rates after 2012.
*** The Interim Agricultural Water Program will be discontinued after 2012.

2.1 System Access Rate (SAR)

The SAR is a volumetric\(^3\) system-wide rate levied on each acre-foot of water that moves through the MWD system. All system users (member agency or third party) pay the SAR to use Metropolitan’s conveyance and distribution system. To meet the board stated objective to collect all costs in 2013/14, the SAR would increase to $247 per acre-foot. The SAR recovers the cost of providing conveyance and distribution capacity to meet average annual demands. Current estimates indicate that the SAR revenue requirement will be about $408 million in FY 2012/13, or 28 percent of the total revenue requirement.

2.2 Water Stewardship Rate (WSR)

The WSR would increase to $42 per acre-foot. The WSR recovers the costs of providing financial incentives for existing and future investments in local resources including conservation and recycled water. These investments or incentive payments are identified as the “demand management” service function in the cost of service process. Demand management costs are classified as 100 percent fixed commodity costs and are estimated to be about $69 million in FY 2013/14, about 5 percent of the revenue requirement. The WSR is a volumetric rate levied on each acre-foot of water that moves

\(^3\) A volumetric rate is a charge applied to the actual amount of water delivered.
through the Metropolitan system. All system users (member agency or third parties) will pay the same proportional costs for existing and future conservation and recycling investments.

2.3 System Power Rate (SPR)
SPR would decrease to $164 per acre-foot in 2014. The SPR is a volumetric rate that recovers the costs of pumping water to Southern California. The SPR recovers the cost of power for both the SWP and CRA. In FY 2013/14 the revenue requirement for the SPR is estimated to be about $268 million, about 18 percent of the total revenue requirement.

2.4 Treatment Surcharge
The treatment surcharge would increase to $302 per acre-foot to collect all treatment costs in 2013/14. The treatment surcharge is a system-wide volumetric rate set to recover the cost of providing treated water service. The treatment surcharge revenue requirement is expected to be about $288 million in FY 2013/14, almost 20 percent of the total revenue requirement. The treatment surcharge recovers all costs associated with providing treated water service, including commodity, demand and standby related costs. Significant capital improvements at Metropolitan’s five treatment plants, such as the Ozone Retrofit Program, Skinner Filtration Plant Expansion Project, and improvement programs at all five treatment plants result in additional capital financing costs being allocated to the treatment surcharge.

2.5 Capacity Charge
The Capacity Charge would increase to $8,900 per cubic-foot-second of capacity during 2014. The capacity charge is levied on the maximum summer day demand placed on the system between May 1 and September 30 for a three-calendar year period. The three-year period ending December 31, 2012 is used to levy the capacity charge effective January 1, 2014 through December 31, 2014. Demands measured for the purposes of billing the capacity charge include all firm demand and agricultural demand, including wheeling service and exchanges. Replenishment service is not included in the measurement of peak day demand for purposes of billing the capacity charge.

The capacity charge is intended to pay for the cost of peaking capacity on Metropolitan’s system, while providing an incentive for local agencies to decrease their use of the Metropolitan system to meet peak day demands and to shift demands into lower use time periods particularly October through April. Over time, a member agency will benefit from local supply investments and operational strategies that reduce its peak day demand on the system in the form of a lower total capacity charge. The estimated capacity charge to be paid by each member agency in calendar year 2014 will be provided to the Board in April 2013.

2.6 Readiness-to-Serve Charge
The costs of providing standby service, such as emergency storage, are recovered by the RTS. Metropolitan’s costs for providing emergency storage capacity within the system are estimated to be about $69 million in FY 2013/14. In addition, to simplify the rate design by reducing the number of separate charges, the demand and standby related costs identified for the conveyance and aqueduct
service function, and standby costs for the distribution function, are also allocated to the RTS. These costs are estimated to be about $97 million in FY 2013/14. The RTS would increase to $169 million in calendar year 2014.

The RTS is allocated to the member agencies based on each agency’s proportional share of a ten-year rolling average of all firm deliveries (including water transfers and exchanges that use Metropolitan system capacity). The ten-year rolling average will not include replenishment service and interim agricultural deliveries because these deliveries will be the first to be curtailed in the event of an emergency. A ten-year rolling average leads to a relatively stable RTS allocation that reasonably represents an agency’s potential long-term need for standby service under different demand conditions. Member agencies that so choose may have a portion of their total RTS obligation offset by standby charge collections levied by Metropolitan on behalf of the member agency. The detailed schedule with an estimate of each agency’s RTS obligation for calendar year 2014 will be provided to the Board in April 2013.

2.7 Purchase Order

The new Purchase Order is part of the discussions in the Long Range Finance Plan Workgroup, and a decision is expected in 2012. The 2014 Purchase Order Commitment quantity and the Tier 1 Annual Limit for all member agencies will be provided to the Board in April 2013.

2.8 Tier 2 supply rate

The Tier 2 Supply Rate reflects Metropolitan’s cost of developing long-term firm supplies. The Tier 2 Supply Rate encourages the member agencies and their customers to maintain existing local supplies and develop cost-effective local supply resources and conservation. The Tier 2 Supply Rate also recovers a greater proportion of the cost of developing additional supplies from member agencies that have increasing demands on the Metropolitan system. The Tier 2 Supply Rate would remain at its current level of $290 per acre-foot.

The total revenue requirement for the supply service function is about $230 million in FY 2013/14. At an expected average sales level of 1.7 million acre-feet it is estimated that no acre-feet will be sold at the Tier 2 Supply Rate.

The two-tier pricing approach is closely linked to the Purchase Order and a base level of demand. The Purchase Order is part of the Long Range Finance Plan forum and a decision is expected in 2012.

2.9 Tier 1 supply rate

The Tier 1 Supply Rate would be increased to $157 per acre-foot in 2014. The Tier 1 Supply Rate recovers the majority of the supply revenue requirement. The Tier 1 Supply Rate is simply calculated as the amount of the total supply revenue requirement that is not recovered by the Tier 2 Supply Rate divided by the estimated amount of Tier 1 water sales. At an expected demand level of about
1.7 MAF, it is estimated that Metropolitan will sell about 1.5 MAF at the Tier 1 Supply Rate in 2013/14.

### 2.10 Replenishment water rates

The board is reviewing options for a new replenishment program. If adopted, the new replenishment program would replace the existing replenishment service program and the existing replenishment rate would be discontinued.

### 3 Sales

Staff estimates of water sales used for developing the rate recommendation were based on current member agency demands and information and an expectation that demands will trend to levels expected under normal weather conditions. Since 1989/90, total sales have averaged about 2.00 MAF per year, ranging from a high of around 2.5 MAF in 1989/90 to a low of about 1.5 MAF in 1997/98. In 2013/14, water sales are projected to be around 1.7 MAF.

### 4 Proof of Revenue

Based on expected sales of 1.7 MAF the expected revenues would be about $34 million higher than the total revenue requirement, if the rates and charges were in effect the entire test year period. The cost-of-service allocation assuming a full twelve months of revenue is used to allocate costs among the various rate elements, but should not be interpreted as over- or under-collection during a given fiscal year. However, because the recommended rates do not take effect until January 1, 2014, the expected revenues for 2013/14 will be about $3 million less than the total revenue requirement in 2013/14. The total revenue requirement includes a $3-million increase in the required reserves for the Revenue Remainder Fund. Accounting for this adjustment, the required draw from reserves is almost zero in 2013/14.
Schedule 10. FY 2013/14 Proof of Revenue if Rates Effective for Full Test Year ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Revenues if Rates Effective July 1st</th>
<th>Revenue Requirements</th>
<th>Difference</th>
<th>% Over (Under) Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>235.9</td>
<td>229.9</td>
<td>6.0</td>
<td>3%</td>
</tr>
<tr>
<td>System Access Rate</td>
<td>417.0</td>
<td>408.4</td>
<td>8.6</td>
<td>2%</td>
</tr>
<tr>
<td>Water Stewardship Rate</td>
<td>70.9</td>
<td>69.0</td>
<td>1.9</td>
<td>3%</td>
</tr>
<tr>
<td>System Power Rate</td>
<td>276.8</td>
<td>268.1</td>
<td>8.7</td>
<td>3%</td>
</tr>
<tr>
<td>Treatment Surcharge</td>
<td>293.8</td>
<td>288.8</td>
<td>4.9</td>
<td>3%</td>
</tr>
<tr>
<td>Readiness-to-serve Charge</td>
<td>169.0</td>
<td>165.8</td>
<td>3.2</td>
<td>2%</td>
</tr>
<tr>
<td>Capacity Charge</td>
<td>31.8</td>
<td>31.0</td>
<td>0.8</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,495.2</strong></td>
<td><strong>1,461.0</strong></td>
<td><strong>34.2</strong></td>
<td><strong>2%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding

Schedule 11. FY 2013/14 Proof of Revenue if Rates Effective January 1 ($ millions)

<table>
<thead>
<tr>
<th></th>
<th>Revenues if Rates Effective Jan 1</th>
<th>Revenue Requirements</th>
<th>Difference</th>
<th>% Over (Under) Collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>229.4</td>
<td>229.9</td>
<td>(0.5)</td>
<td>0%</td>
</tr>
<tr>
<td>System Access Rate</td>
<td>399.8</td>
<td>408.4</td>
<td>(8.6)</td>
<td>-2%</td>
</tr>
<tr>
<td>Water Stewardship Rate</td>
<td>70.0</td>
<td>69.0</td>
<td>1.0</td>
<td>2%</td>
</tr>
<tr>
<td>System Power Rate</td>
<td>300.3</td>
<td>268.1</td>
<td>32.2</td>
<td>12%</td>
</tr>
<tr>
<td>Treatment Surcharge</td>
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<td>288.8</td>
<td>(17.0)</td>
<td>-6%</td>
</tr>
<tr>
<td>Readiness-to-serve Charge</td>
<td>157.5</td>
<td>165.8</td>
<td>(8.3)</td>
<td>-5%</td>
</tr>
<tr>
<td>Capacity Charge</td>
<td>29.1</td>
<td>31.0</td>
<td>(2.0)</td>
<td>-6%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,457.9</strong></td>
<td><strong>1,461.0</strong></td>
<td><strong>(3.1)</strong></td>
<td><strong>0%</strong></td>
</tr>
</tbody>
</table>

Totals may not foot due to rounding
January 18, 2012

Attention: Imported Water Committee

Review of Metropolitan Water District’s (MWD) Regional Urban Water Management Plan and MWD member agencies’ urban water management plans. (Information)

Purpose
This report forwards a Water Authority-commissioned report comparing MWD demand projections included in its Regional Urban Water Management Plan (RUWMP) and those reported in MWD member agencies’ Urban Water Management Plans (UWMP).

Discussion
The MWD board approved its most recent RUWMP in November 2010, after it sought and gained State legislative approval to delay the required adoption and filing date with the Department of Water Resources (DWR) to July 1 and August 1, 2011, respectively. MWD had sought to delay the report filing date (normally due on December 31 of every 5th year) because the passage of SB X7-7 included a mandate that required retail agencies to reduce potable water demand by 20 percent by 2020. The delay was needed to afford DWR time to develop allowable 20 x 2020 compliance methodologies and for agencies to then incorporate their selected methodology into their UWMPs. Because MWD’s RUWMP was adopted well before its member agencies had finalized their UWMP’s, there is a question on how well MWD’s RUWMP is integrated with the member agencies’ UWMPs, including development of local supplies, forecasts of the retail agencies’ projected demands, and their projected demands onto MWD.

Earlier this year, the Water Authority retained the services of Gordon Hess and Associates, Inc., (GHA), to summarize major elements of each MWD member agency’s UWMP and to compare the aggregate of those plans to MWD’s RUWMP. The GHA report provides an overview of data obtained from each MWD member agency’s UWMP, including current and projected water supply and demand information, and population (See Appendix A of GHA report for individual MWD member agency UWMP summaries). The report also presents the cumulative demand on MWD as stated in member agencies’ UWMPs and compares that to MWD’s RUWMP forecasts under normal, single dry year and multiple dry years (See figures 9 through 11 of GHA report). The GHA report is not intended to be a comprehensive summary of each MWD member agency’s UWMP, nor does it include an analysis of many other UWMPs filed by water agencies (that are not MWD member agencies) including cities, utilities and agencies throughout MWD service area. Many of these agencies have plans to develop local water supplies in order to reduce demand on imported water that may not be captured in MWD member agencies’ UWMPs.

In compiling the data, GHA notes that MWD’s 2010 RUWMP excluded a number of planned local projects, even though the same types of projects were included in MWD’s 2005 RUWMP. For example, MWD included up to 150,000 acre-feet per year of projected seawater desalination in its 2005 RUWMP, but no seawater desalination was accounted for in its 2010 RUWMP.
demand projections. One of these projects is the Carlsbad seawater desalination project, a fully permitted project capable of producing 56,000 acre-feet of local supplies annually. If MWD were to include local projects such as Carlsbad projects that have been permitted, the projected demand would be lower than forecasted under its 2010 RUWMP. The projected demand would drop further if potential projects identified in member agencies UWMPs were to be included. Many of these potential projects may have become more cost-competitive as a result of MWD rate increases, the GHA report notes. See figures 12 through 14 in the GHA report for projected demands on MWD, and how they would decrease when planned projects, and planned and potential projects are considered.

The GHA report observed forecasted future member agencies’ demands on its imported water have decreased significantly in each RUWMP update between 2000 and 2010. This may due to slower growth, conservation, significantly higher water rates and local water supply development, the reported commented. The report also notes that because of the decreased forecasted demand, the 2010 RUWMP identified supply “surpluses” under all existing supply and demand scenarios that MWD examined (see Tables 9, 10, and Figures 4 through 6 of GHA report).

When comparing data shown in MWD’s RUWMP and those reported in member agencies’ UWMPs, MWD projects a greater agencies’ firm demand on MWD in average years than its member agencies project in their UWMPs. The report shows that MWD’s RUWMP projections would otherwise be the same had MWD considered all of its member agencies’ planned projects such as the Carlsbad desalination project as previously cited. Once those projects are included, the MWD and member agencies’ forecasted firm demands in average years are more similar.

During the worst case single dry-year scenario, MWD member agencies’ projected firm demands on MWD are slightly higher than MWD’s RUWMP. GHA explains that anomaly by pointing out that member agencies use a different worse single dry-year that MWD and that the dry year demands used by member agencies may not occur concurrently. This explanation supports the finding in multiple dry-years that the trend of cumulative member agency projections are consistent with the average year finding – less than MWD’s projection, as member agencies’ multiple year’s data may coincide more frequently than single dry-year’s.

The GHA report also notes that because UWMPs are not required to show wet-year demands, no comparison was made for wet-year data. MWD does not rely on water in storage in average years; it does in single dry and multiple dry years. Past trends show MWD demand decreases significantly during wet years. Coupled with MWD’s projected water rates, the GHA report notes that MWD is capable of storing adequate water in wet and even average years for use in single dry or multiple dry years. However, the report cautions that MWD and member agencies would benefit from a detailed analysis of expected availability of water for put and take in storage to ascertain water that would be available in dry years to take.

While the GHA report scope is limited to summarizing major elements of MWD member agencies’ UWMPs and comparing data from that analysis against MWD’s RUWMP, some of the findings in GHA report raise a number of issues that require further analysis:
1. MWD’s own 2010 RUWMP shows it has sufficient existing supplies to meet projected demands under all planning scenarios evaluated (single dry, multi dry and average). Has MWD identified any risks associated with the continued availability of these supplies? If not, what analysis has been done to support the Integrated Resources Plan’s recommendations for continued investment of billions of dollars in order to develop additional supplies?

2. Since MWD relies on water in storage to meet demands under dry scenarios, does MWD have an analysis showing the expected frequency and quantity of availability of water for put during the wet and average years? What is the take capability of water in storage during dry years? MWD stated during replenishment discussions last year that some of its storage investments were too expensive or otherwise unusable. Will MWD conduct an analysis of its storage portfolio so that the need for additional and current storage can be identified?

3. What is MWD’s fill strategy to ensure water would be available in dry years? Has MWD budgeted funds to utilize its own storage when water supplies are available?

4. Given the Delta discussions, and MWD’s existing supply capability, what is a right-size Delta fix that would meet MWD’s projected needs?

5. Lastly, how is MWD meeting the legislative requirements and intent set forth under SB 60 of 1999? How can it be said that there is increased dependence on conservation and local water supplies when MWD’s 2010 RUWMP shows it already has adequate supplies to meet projected demands – but it continues to plan to spend billions of ratepayer dollars on new water supplies?

These questions are not new – all have been asked by the Water Authority’s MWD delegates – the GHA report gives a solid foundation to raise them again and to demand a response which has not yet been forthcoming. The Water Authority staff will work with the MWD delegates to continue requesting answers to these questions at MWD.

Prepared by: Amy Chen, MWD Program Chief
Reviewed by: Dennis A. Cushman, Assistant General Manager

Attachment 1: GHA Report
Comparison of MWD Demand Projections, MWD Member Agency UWMPs and Local Water Supply Development Plans

Prepared for:
San Diego County Water Authority

Prepared by:
Gordon Hess and Associates, Inc.
December 2011
## Table of Contents

1.0  Overview  
2.0  Scope of Report  
3.0  Urban Water Management Planning Act  
4.0  MWD’s Regional Urban Water Management Plans – Past and Present  
5.0  MWD Demands According to MWD’s RUWMP  
6.0  MWD Demands According to Member Agency UWMPs  
7.0  Comparison of MWD Demands Projected by MWD and its Member Agencies  
8.0  Findings  

**Appendix A- Summary of Member Agency Urban Water Management Plans**

- City of Anaheim  
- City of Beverly Hills  
- City of Burbank  
- Calleguas MWD  
- Central Basin MWD  
- City of Compton  
- Eastern MWD  
- Foothill MWD  
- City of Fullerton  
- City of Glendale  
- Inland Empire Utilities Agency  
- Las Virgenes MWD  
- City of Long Beach  
- City of Los Angeles  
- Municipal Water District of Orange County  
- City of Pasadena  
- San Diego County Water Authority  
- City of San Fernando  
- City of San Marino  
- City of Santa Ana  
- City of Santa Monica  
- Three Valleys MWD  
- City of Torrance  
- Upper San Gabriel Valley MWD  


Appendix B- Member Agency Data from Urban Water Management Plans

- City of Anaheim
- City of Beverly Hills
- City of Burbank
- Calleguas MWD
- Central Basin MWD
- City of Compton
- Eastern MWD
- Foothill MWD
- City of Fullerton
- City of Glendale
- Inland Empire Utilities Agency
- Las Virgenes MWD
- City of Long Beach
- City of Los Angeles
- Municipal Water District of Orange County
- City of Pasadena
- San Diego County Water Authority
- City of San Fernando
- City of San Marino
- City of Santa Ana
- City of Santa Monica
- Three Valleys MWD
- City of Torrance
- Upper San Gabriel Valley MWD
- West Basin MWD
- Western MWD
- Cumulative Totals
1.0 Overview

Every urban water supplier (supplier), as defined, is required by the California Urban Water Management Planning Act to update its Urban Water Management Plan (UWMP) and submit a complete version to the California Department of Water Resources (DWR) every five years. Each supplier is required to file its 2010 plan with DWR by August 1, 2011. The urban water management plan is intended to serve as a long-term planning tool for the supplier to ensure adequate water supplies are available for the city, water district or region it serves.

The Metropolitan Water District of Southern California (MWD) is a regional provider of imported water to all or portions of six southern California counties, including Ventura, Los Angeles, Orange, San Bernardino, Riverside and San Diego. MWD is a water wholesaler with no retail customers and provides treated and untreated water to its member agencies. MWD consists of 26 member agencies, including 14 cities, 11 municipal water districts, and one county water authority. MWD's 26 member agencies deliver to their customers a combination of local groundwater, surface water, recycled water, and imported water purchased from MWD or other sources. Roughly half of the water used in MWD's service area is purchased directly or indirectly from MWD, and therefore MWD plays an important role in ensuring coordinated planning to meet existing and future demand for water in Southern California.

MWD prepared and approved its Regional Urban Water Management Plan (RUWMP) in November 2010, approximately nine months before it was due to be filed with DWR and prior to its member agencies finalizing or approving their UWMPs. Although member agencies advise MWD in April of each year how much water they anticipate they will need during the next five years, and MWD works with its member agencies to forecast future water demands (RUWMP at page 1-7), MWD's RUWMP and the member agencies' UWMPs are not formally or functionally integrated. MWD did not seek the consent of its member agencies to include planning elements in its RUWMP that might reduce demand on MWD water supplies. Rather, MWD limited its RWUMP discussion to activities by its member agencies that relate to one of MWD's own water demand or supply management programs (RUWMP at page 1-5). For this reason, assumptions of overall future demands at the member agency level differ from what MWD has assumed in its RUWMP. Additionally, assumptions by the member agencies regarding the reliability of existing local supplies in both normal and dry years differ from MWD assumptions. These differences can, and do, lead to different projected demands on MWD by MWD, on one hand, and by its member agencies and retail water suppliers, on the other.

2.0 Scope of Report

The San Diego County Water Authority retained the services of Gordon Hess and Associates, Inc. (GHA, Inc.), to summarize major elements of each MWD member agency UWMP and compare the aggregate of those plans to MWD's RUWMP. GHA Inc. provides clients with consulting services related to policy, cost, and water rate impacts of infrastructure and water supply development. Its principal, Gordon Hess, P.E. (ghess@ghawater.com), has more than 35 years of public and private sector experience in integrated water resources planning, design and construction of water infrastructure, and formulating local, regional and federal water policies.
This report provides an overview of data obtained from each MWD member agency UWMP, including current water demand, supply sources, and population. In addition, each member agency's UWMP projected future demand, population, and supply sources are presented along with per capita water use and targets. This report is not intended to be a comprehensive summary of each member agency's UWMP, but rather, an overview and comparison of certain key information relative to future water demands on MWD. Notably, this report does not include an analysis of the many other UWMPs filed by public water suppliers including cities, utilities and agencies throughout Southern California, many of which have plans to develop local water supplies in order to reduce demand on imported water. See, generally, http://www.water.ca.gov/urbanwatermanagement/2010uwmps/.

In addition to providing a summary of MWD's and its member agencies' UWMP supply and demand projections, the cumulative demand on MWD as included in the member agency plans is presented and compared to MWD's RUWMP forecast of MWD demand for normal, single dry year, and multiple dry years.\(^1\) In a few cases, the member agency UWMP compares member agency forecasts of MWD demand to what MWD assumed for individual agency MWD demand. However, MWD's RUWMP does not provide a breakdown among individual member agencies as to demands on MWD.

All UWMPs evaluated contain detailed information regarding conservation efforts that are, or will be undertaken to accomplish SBX7-7 conservation targets for 2015 and 2020. This analysis does not summarize these efforts by MWD and its member agencies. For detailed information regarding the plans of agencies to meet conservation goals, please refer to the individual UWMPs.

3.0 **UWMP Planning Act**

The California Urban Water Management Planning Act requires all urban water suppliers in the state to prepare UWMPs and update them every five years. DWR provided a *Guidebook to Assist Urban Water Suppliers to Prepare a 2010 UWMP* for preparation of the plans. Since plans were last prepared in 2005, amendments were made to the UWMP Act, including:

- Water Code Section 10631.1 requires a plan by retail water suppliers to include water use projections for single- and multi-family residential housing needed for lower income and affordable households, to assist with compliance with the existing requirement under Section 65589.7 of the Government Code, that suppliers grant a priority for the provision of service to housing units affordable to lower income households.

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\(^1\) While this analysis provides information derived from individual and cumulative member agency UWMP forecasts and compares that to what is contained in MWD's plan, this report is not an evaluation of the adequacy of the member agency UWMPs, nor does it verify whether member agencies' targets or calculations for meeting SBX7-7 per capita water use goals are correct or appropriate. Each member agency has, or will submit its UWMP to DWR as required by law, and it is assumed that DWR will review the plans and note any further information that may be required to comply with applicable UWMP requirements.
• Water Code Section 10621(b) clarifies that every urban water supplier preparing a plan must give at least 60 days advanced notice to any city or county prior to the public hearing on the plan within which the supplier provides water supplies to allow for consultation on the proposed plan.

• Water Code Section 10631(j) deems water suppliers that are members of the California Urban Water Conservation Council (CUWCC) and comply with the Memorandum of Understanding (MOU), as it may be amended, to be in compliance with the requirement to describe the supplier’s water demand management measures in its UWMP.

• Water Code Section 10631.7 required DWR, in consultation with the CUWCC, to convene a technical panel, no later than January 1, 2009, to provide information and recommendations to DWR and the Legislature on new demand management measures, technologies, and approaches. The panel and DWR were to report to the Legislature on their findings no later than January 1, 2010 and every five years thereafter;

• Water Code Section 10633(d) clarifies that the “indirect potable reuse” of recycled water should be described and quantified in the plan, including a determination regarding the technical and economic feasibility of serving those uses.

• Water Code Section 10644(c) requires DWR to recognize exemplary efforts by water suppliers by obligating DWR to identify and report to the technical panel, described above, and “exemplary elements” of individual water suppliers’ plans, meaning any water demand management measures adopted and implemented by specific urban water suppliers that achieve water savings significantly above the levels required to meet the conditions for state grant or loan funding.

• Water Code Section 10631.5 was amended to address conditions of eligibility for grants or loans from DWR. DWR will consider whether the urban water supplier has submitted an updated plan when determining eligibility for funds made available pursuant to any program administered by the Department.

In addition to changes in the Act, the state Legislature passed Senate Bill 7 as part of the Seventh Extraordinary Session, referred to as SBX7-7, on November 10, 2009, which became effective February 3, 2010. This new law was the water conservation component of the Delta legislation package, and seeks to achieve a 20 percent statewide reduction in urban per capita water use in California by December 31, 2020. The law requires each urban retail water supplier to develop urban water use targets to help meet the 20 percent goal by 2020, and an interim water reduction target by 2015.

Urban retail water suppliers must include in their 2010 plans the following information from the bill’s target setting process: (1) baseline daily per capita water use; (2) urban water use target; (3) interim water use target; (4) compliance daily per capita water use, including technical bases and supporting data for those determinations. An urban retail water supplier may update its 2020 urban water use target in its 2015 urban water management plan. (Water Code Section 10608.20.) Wholesale water suppliers must include in their 2010 Plans an assessment of their present and proposed future measures, programs and policies to help retail agencies achieve their water use reduction targets.
Additionally, Water Code Sections 10910 through 10914 and Government Code Sections 65867.5, 66455.3, and 66473.7 (commonly referred to as SB 610 and SB 221) amended state law effective January 1, 2002 to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires that the water purveyor of the public water system prepare a water supply assessment to be included in the environmental documentation of certain large proposed projects. SB 221 requires affirmative written verification from the water purveyor of the public water system that sufficient water supplies are available for certain large residential subdivisions of property prior to approval of a tentative map. Most plans contain documentation on the existing and planned water supplies being developed by the water provider that can be used in preparing the water supply assessments and written verifications required under state law. Specific documentation on MWD supplies can be found in its RUWMP.

4.0  MWD’s Regional Urban Water Management Plans – Past and Present

MWD is a water wholesaler with no retail customers, providing treated and untreated water directly to its 26 member agencies. For some member agencies, MWD supplies all the water provided by the agency within its service area, while others obtain varying amounts of water from MWD to supplement their local and other imported supplies. MWD provides between 45 and 60 percent of the municipal, industrial, and agricultural water used in its service area.

After the drought of 1987-1992, MWD faced changed conditions and the need to develop a long-term water resources strategy to fulfill the agency’s stated mission of providing reliable water supplies to its service area. An integrated resources planning process was undertaken and MWD’s first Integrated Resources Plan (IRP) was adopted in 1996. The plan recognized that MWD’s role increasingly should be focused on coordinating its planning activities with those of its member agencies and the other retail water suppliers they serve (RUWMP at page 2-2). The plan also recognized that the region’s future water supply reliability would increasingly depend on striking a balance between demand management and supply augmentation by MWD, its member agencies and other public water suppliers. The resulting IRP strategy attempted to balance demand management, imported supply augmentation and local supply development. In dry years, MWD was counting on conservation, local supplies, withdrawal from storage, and water transfers to augment available imported water supplies. From this plan, MWD developed a RUWMP in 2000. The plan estimated average year, single dry year, and multiple dry year demands on MWD to the year 2020 as follows:

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1.90</td>
<td>1.95</td>
<td>2.08</td>
<td>2.30</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>1.91</td>
<td>1.97</td>
<td>2.09</td>
<td>2.32</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.20</td>
<td>2.25</td>
<td>2.36</td>
<td>2.57</td>
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</table>
The 2000 plan estimated groundwater replenishment as follows:

<table>
<thead>
<tr>
<th>Groundwater Replenishment Demand, MAF/Yr</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>0.16</td>
<td>0.16</td>
<td>0.17</td>
<td>0.18</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
<td>0.19</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>0.17</td>
<td>0.17</td>
<td>0.17</td>
<td>0.18</td>
</tr>
</tbody>
</table>

From this, the net firm demand on MWD can be determined by subtracting groundwater replenishment demand from the MWD total demand:

<table>
<thead>
<tr>
<th>Net Firm MWD Demand, MAF/Yr</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1.74</td>
<td>1.79</td>
<td>1.91</td>
<td>2.12</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>1.74</td>
<td>1.80</td>
<td>1.91</td>
<td>2.13</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.04</td>
<td>2.08</td>
<td>2.19</td>
<td>2.39</td>
</tr>
</tbody>
</table>

In 2004, the MWD Board adopted an updated IRP. Legislation concerning population growth and water supply called for further planning considerations. The IRP Update had three objectives: (1) Review the goals and achievements of the 1996 IRP; (2) Identify the changed conditions for water resource development; and (3) Update resource development targets through 2025 (RUWMP at page 2-2). The 2004 IRP process also updated the long-term plan to account for the new water planning legislation. MWD’s RUWMP states that, “the updated plan contained resource development targets through 2025, which reflected changed conditions; particularly increased conservation savings, planned increases in local supplies and uncertainties” (RUWMP at page 2-2). The “uncertainties” noted by MWD were “the level of population and economic growth which directly drive water demands, water quality regulations, new chemicals found to be unhealthful, endangered species affecting sources of supplies, and periodic and new changes in climate and hydrology” (RUWMP at pages 2-2 – 2-3). To address these uncertainties, MWD added a 10 percent “planning buffer” of additional water supply to be developed. Estimated MWD demands from the 2004 update were used as the basis for MWD 2005 Urban Water Management Plan. The plan estimated average year, single dry year, and multiple dry years demands on MWD to the year 2030 as follows:

<table>
<thead>
<tr>
<th>Total MWD Demand, MAF/Yr</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
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<tbody>
<tr>
<td>Average Year</td>
<td>2.262</td>
<td>2.191</td>
<td>2.234</td>
<td>2.341</td>
<td>2.460</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>2.523</td>
<td>2.414</td>
<td>2.457</td>
<td>2.565</td>
<td>2.671</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.570</td>
<td>2.499</td>
<td>2.515</td>
<td>2.635</td>
<td>2.761</td>
</tr>
</tbody>
</table>
For the 2005 plan, firm demand on MWD was shown as follows:

<table>
<thead>
<tr>
<th>Firm MWD Demand, MAF/Yr</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>2.063</td>
<td>1.985</td>
<td>2.029</td>
<td>2.141</td>
<td>2.269</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>2.348</td>
<td>2.234</td>
<td>2.275</td>
<td>2.388</td>
<td>2.511</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.420</td>
<td>2.341</td>
<td>2.355</td>
<td>2.479</td>
<td>2.609</td>
</tr>
</tbody>
</table>

MWD again updated its IRP in 2010. MWD described the basic objectives of the 2010 IRP update as follows: “1. Review the achievements of the 1996 IRP and the 2004 Update; 2. Identify changing conditions affecting water resource management (attention will be given to emerging factors and considerations, such as the current drought, climate change, energy use, and changes in Delta pumping operations); and 3. Update resource development targets through 2030 (discussion will focus on adaptation to future uncertainties, and potential alternatives for further diversifying Metropolitan’s water resource portfolio and increasing supply reliability in the face of changing circumstances” (RUWMP at page 2-3).

MWD’s 2010 RUWMP was derived from the 2010 IRP update, and again estimated average year, single dry year, and multiple dry years demands on MWD as follows:

**Total Demand:**

<table>
<thead>
<tr>
<th>Total MWD Demand, MAF/Yr</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1.928</td>
<td>1.763</td>
<td>1.808</td>
<td>1.874</td>
<td>1.931</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>2.094</td>
<td>1.993</td>
<td>2.025</td>
<td>2.080</td>
<td>2.146</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.154</td>
<td>2.049</td>
<td>2.106</td>
<td>2.163</td>
<td>2.224</td>
</tr>
</tbody>
</table>

**Firm Demand:**

<table>
<thead>
<tr>
<th>Firm MWD Demand, MAF/Yr</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1.826</td>
<td>1.660</td>
<td>1.705</td>
<td>1.769</td>
<td>1.826</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>1.991</td>
<td>1.889</td>
<td>1.921</td>
<td>1.974</td>
<td>2.039</td>
</tr>
<tr>
<td>Multiple Dry Years</td>
<td>2.056</td>
<td>1.947</td>
<td>2.003</td>
<td>2.059</td>
<td>2.119</td>
</tr>
</tbody>
</table>

As can be seen in the figures below, each MWD Regional Urban Water Management, from 2000 to 2010, resulted in decreased projections of firm demands on MWD.
Figure 1

Comparison of Current and Past UWMP's
MWD Average Firm Demands

Figure 2

Comparison of Current and Past UWMP's
MWD Single Dry Year Firm Demands
5.0 MWD Demands According to MWD’s RUWMP

MWD’s 26 member agencies deliver to their customers a combination of local groundwater, local surface water, recycled water, and imported water purchased from MWD and other sources. Some MWD member agencies provide retail water service, while others provide water to the local area as wholesalers (see RUWMP, Table 1-2 at page 1-8, reproduced below). For some member agencies, MWD supplies all the water used within that agency's service area, while others obtain varying amounts of imported water from MWD to supplement local supplies. This local supply comes from local wells, local surface water, recycling and desalination. Two agencies import water from sources other than MWD: The City of Los Angeles brings imported water from the eastern Sierra Nevada mountains through its Los Angeles Aqueduct; and the San Diego County Water Authority (SDCWA) imports conserved water from the Imperial Irrigation District and the All-American and Coachella Canal lining projects through MWD's Colorado River Aqueduct and other MWD facilities. Member agencies also have water conservation programs that reduce demand on MWD imported water supplies.

<table>
<thead>
<tr>
<th>County and Member Agency</th>
<th>Type of Water Service</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Los Angeles County</strong></td>
<td></td>
</tr>
<tr>
<td>Beverly Hills, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Burbank, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Central Basin Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Compton, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Foothill Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Glendale, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Las Virgenes Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Long Beach, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Los Angeles, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Pasadena, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>San Fernando, City</td>
<td>Retail</td>
</tr>
<tr>
<td>San Marino, City</td>
<td>Retail</td>
</tr>
<tr>
<td>Santa Monica, City</td>
<td>Retail</td>
</tr>
<tr>
<td>Three Valleys Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Torrance, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Upper San Gabriel Valley Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td>West Basin Municipal Water District</td>
<td>Wholesale</td>
</tr>
<tr>
<td><strong>Orange County</strong></td>
<td></td>
</tr>
<tr>
<td>Anaheim, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Fullerton, City of</td>
<td>Retail</td>
</tr>
<tr>
<td>Municipal Water District of Orange County</td>
<td>Wholesale</td>
</tr>
<tr>
<td>Santa Ana, City of</td>
<td>Retail</td>
</tr>
<tr>
<td><strong>Riverside County</strong></td>
<td></td>
</tr>
<tr>
<td>Eastern Municipal Water District</td>
<td>Retail and Wholesale</td>
</tr>
</tbody>
</table>
### Retail and Wholesale

<table>
<thead>
<tr>
<th>Western Municipal Water District</th>
<th>Retail and Wholesale</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>San Bernardino County</strong></td>
<td>Wholesale</td>
</tr>
<tr>
<td>Inland Empire Utilities Agency</td>
<td></td>
</tr>
<tr>
<td><strong>San Diego County</strong></td>
<td>Wholesale</td>
</tr>
<tr>
<td>San Diego County Water Authority</td>
<td></td>
</tr>
<tr>
<td><strong>Ventura County</strong></td>
<td>Wholesale</td>
</tr>
<tr>
<td>Calleguas Municipal Water District</td>
<td></td>
</tr>
</tbody>
</table>

Approximately 250 retail water suppliers including cities, utilities and water agencies directly serve water ratepayers throughout MWD’s service area. MWD’s member agencies collectively serve 152 cities and 89 unincorporated communities (RUWMP, Table 1-3 at page 1-9). As noted earlier, this report does not analyze or address the UWMPs filed by all of these retail water suppliers. However, it may be noted generally that many retail water suppliers have plans to develop local water supplies in order to reduce demand on imported water. Further, the plans of some retail agencies appear to be inconsistent with the plans of MWD member agencies. Some agencies, such as the Water Replenishment District of Southern California, that are not required to prepare and file an UWMP also have plans to reduce future purchases of imported water.
Each of the MWD member agencies prepared a 2010 UWMP. Like MWD's RUWMP, wholesale member agencies' UWMPs are used as a planning tool to provide retail water suppliers guidance as to the demand and availability of water supplies. All member agencies stated that they coordinated with MWD in the preparation of UWMPs; however, not all agencies used the same supply and demand estimates that were the basis of the MWD RUWMP. In many cases, wholesale member agencies had separate models that estimated future demands, or received and used information provided by their own retail agencies. In some cases, such as Calleguas MWD, differences between MWD's RUWMP forecast of demands on MWD for the agency are compared to the agency's own forecast of demands. Each agency summary in Appendix A provides an overview of the member agency and how the member agency forecast its demands. Appendix B provides specific data from the member agency plans and cumulative totals for supplies and demands contained in the plans.
There are also differences between what a member agency assumes in its forecast of local supply development and what local supply development MWD assumes in its RUWMP. Examples of these differences include both the quantity of available existing supplies, such as Los Angeles Aqueduct flows during normal, dry and multiple dry year conditions and the planning assumptions of availability of future supplies. The San Diego County Water Authority, Long Beach, and West Basin MWD all include seawater desalination in their future available supplies, but MWD does not account in its 2010 RUWMP for any seawater desalination in its estimate of member agency local water supplies. This is in contrast to MWD’s 2005 RUWMP, when it included in its planning 150,000 acre-feet of seawater desalination as future available local water supplies.

All MWD member agencies prepared UWMP’s in accordance with DWR guidelines for plans. Each plan included discussion of demographics, available water supplies and quality, regional and local water supply programs, low income household water use, overall water supply and demands, demand management, reliability planning and emergency contingency planning. Most agencies cited and depended upon MWD’s RUWMP, particularly MWD’s Tables 2-9, 2-10, and 2-11 (as shown on pages 12, 13, and 14) as the basis for their conclusions that sufficient (or even surplus) imported water supplies exist to meet their future imported water demands. These MWD tables show what MWD estimates as its surplus supply in average, single dry year, and multiple dry years with the "Capability of Current Program" as follows:

<table>
<thead>
<tr>
<th>Supply Condition</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1,479,000</td>
<td>1,877,000</td>
<td>2,104,000</td>
<td>1,898,000</td>
<td>1,708,000</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>286,000</td>
<td>620,000</td>
<td>776,000</td>
<td>569,000</td>
<td>371,000</td>
</tr>
<tr>
<td>Multiple Dry Year</td>
<td>12,000</td>
<td>229,000</td>
<td>237,000</td>
<td>120,000</td>
<td>16,000</td>
</tr>
</tbody>
</table>

MWD’s projections of surplus supplies under all planning scenarios and years are not stated to be dependent upon implementation of interim or permanent Bay-Delta conveyance projects. MWD also estimated how much its surplus supply would increase should programs under development be added to its supply. These programs include adding additional in-region storage programs, programs on the California Aqueduct (Bay-Delta conveyance improvements), and additional Colorado River supplies. The Colorado River Aqueduct (CRA) is assumed to be full (1.25 MAF) under both the current program and "Programs Under Development" scenarios.

<table>
<thead>
<tr>
<th>Supply Condition</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>2,067,000</td>
<td>2,566,000</td>
<td>3,155,000</td>
<td>2,949,000</td>
<td>2,759,000</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>1,048,000</td>
<td>1,482,000</td>
<td>1,812,000</td>
<td>1,605,000</td>
<td>1,407,000</td>
</tr>
<tr>
<td>Multiple Dry Year</td>
<td>416,000</td>
<td>782,000</td>
<td>970,000</td>
<td>875,000</td>
<td>771,000</td>
</tr>
</tbody>
</table>
Figure 4- MWD's Table 2-9 from the 2010 RUWMP

Table 2-9
Single Dry-Year
Supply Capability\(^1\) and Projected Demands
Repeat of 1977 Hydrology
\(^{\text{(acre-feet per year)}}\)

<table>
<thead>
<tr>
<th>Forecast Year</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Programs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>685,000</td>
<td>931,000</td>
<td>1,076,000</td>
<td>964,000</td>
<td>830,000</td>
</tr>
<tr>
<td>California Aqueduct(^2)</td>
<td>522,000</td>
<td>601,000</td>
<td>651,000</td>
<td>609,000</td>
<td>610,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply(^3)</td>
<td>1,416,000</td>
<td>1,824,000</td>
<td>1,669,000</td>
<td>1,419,000</td>
<td>1,419,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit(^4)</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Capability of Current Programs</td>
<td>2,457,000</td>
<td>2,782,000</td>
<td>2,977,000</td>
<td>2,823,000</td>
<td>2,690,000</td>
</tr>
<tr>
<td>Demands</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Demands of Metropolitan</td>
<td>1,991,000</td>
<td>1,889,000</td>
<td>1,921,000</td>
<td>1,974,000</td>
<td>2,039,000</td>
</tr>
<tr>
<td>IID-SDCWA Transfers and Canal Linings</td>
<td>180,000</td>
<td>273,000</td>
<td>280,000</td>
<td>280,000</td>
<td>280,000</td>
</tr>
<tr>
<td>Total Demands on Metropolitan(^5)</td>
<td>2,171,000</td>
<td>2,162,000</td>
<td>2,201,000</td>
<td>2,254,000</td>
<td>2,319,000</td>
</tr>
<tr>
<td>Surplus</td>
<td>286,000</td>
<td>620,000</td>
<td>776,000</td>
<td>569,000</td>
<td>371,000</td>
</tr>
<tr>
<td>Programs Under Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>206,000</td>
<td>306,000</td>
<td>336,000</td>
<td>336,000</td>
<td>336,000</td>
</tr>
<tr>
<td>California Aqueduct</td>
<td>556,000</td>
<td>556,000</td>
<td>700,000</td>
<td>700,000</td>
<td>700,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply(^3)</td>
<td>187,000</td>
<td>187,000</td>
<td>187,000</td>
<td>182,000</td>
<td>182,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit(^4)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Capability of Proposed Programs</td>
<td>762,000</td>
<td>862,000</td>
<td>1,036,000</td>
<td>1,036,000</td>
<td>1,036,000</td>
</tr>
<tr>
<td>Potential Surplus</td>
<td>1,048,000</td>
<td>1,482,000</td>
<td>1,812,000</td>
<td>1,605,000</td>
<td>1,407,000</td>
</tr>
</tbody>
</table>

\(^1\) Represents Supply Capability for resource programs under listed year type.
\(^2\) California Aqueduct includes Central Valley transfers and storage programs supplies conveyed by the aqueduct.
\(^3\) Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.
\(^4\) Maximum CRA deliveries limited to 1.26 MAF including IID-SDCWA transfers and canal linings.
\(^5\) Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.
## Table 2-10

**Multiple Dry-Year**

Supply Capability\(^1\) and Projected Demands

Repeat of 1990-1992 Hydrology

(acre-feet per year)

<table>
<thead>
<tr>
<th>Forecast Year</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>246,000</td>
<td>373,000</td>
<td>435,000</td>
<td>398,000</td>
<td>353,000</td>
</tr>
<tr>
<td>California Aqueduct(^2)</td>
<td>752,000</td>
<td>794,000</td>
<td>835,000</td>
<td>811,000</td>
<td>812,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply(^3)</td>
<td>1,318,000</td>
<td>1,600,000</td>
<td>1,417,000</td>
<td>1,416,000</td>
<td>1,416,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit(^4)</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td><strong>Capability of Current Programs</strong></td>
<td>2,248,000</td>
<td>2,417,000</td>
<td>2,520,000</td>
<td>2,459,000</td>
<td>2,415,000</td>
</tr>
<tr>
<td><strong>Demands</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Demands of Metropolitan</td>
<td>2,056,000</td>
<td>1,947,000</td>
<td>2,003,000</td>
<td>2,059,000</td>
<td>2,119,000</td>
</tr>
<tr>
<td>IID-SDCWA Transfers and Canal Linings</td>
<td>180,000</td>
<td>241,000</td>
<td>280,000</td>
<td>280,000</td>
<td>280,000</td>
</tr>
<tr>
<td><strong>Total Demands on Metropolitan(^5)</strong></td>
<td>2,236,000</td>
<td>2,188,000</td>
<td>2,283,000</td>
<td>2,339,000</td>
<td>2,399,000</td>
</tr>
<tr>
<td><strong>Surplus</strong></td>
<td>12,000</td>
<td>229,000</td>
<td>237,000</td>
<td>120,000</td>
<td>16,000</td>
</tr>
<tr>
<td><strong>Programs Under Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>162,000</td>
<td>280,000</td>
<td>314,000</td>
<td>336,000</td>
<td>336,000</td>
</tr>
<tr>
<td>California Aqueduct</td>
<td>242,000</td>
<td>273,000</td>
<td>419,000</td>
<td>419,000</td>
<td>419,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply(^3)</td>
<td>187,000</td>
<td>187,000</td>
<td>187,000</td>
<td>182,000</td>
<td>182,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit(^4)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Capability of Proposed Programs</strong></td>
<td>404,000</td>
<td>553,000</td>
<td>733,000</td>
<td>755,000</td>
<td>755,000</td>
</tr>
<tr>
<td><strong>Potential Surplus</strong></td>
<td>416,000</td>
<td>762,000</td>
<td>970,000</td>
<td>875,000</td>
<td>771,000</td>
</tr>
</tbody>
</table>

\(^1\) Represents Supply Capability for resource programs under listed year type.

\(^2\) California Aqueduct includes Central Valley transfers and storage program supplies conveyed by the aqueduct.

\(^3\) Colorado River Aqueduct includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.

\(^4\) Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfers and canal linings.

\(^5\) Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.
### Table 2-11

**Average Year Supply Capability** and Projected Demands
Average of 1922-2004 Hydrologies
(acre-feet per year)

<table>
<thead>
<tr>
<th>Forecast Year</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Current Programs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>685,000</td>
<td>931,000</td>
<td>1,076,000</td>
<td>964,000</td>
<td>830,000</td>
</tr>
<tr>
<td>California Aqueduct&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1,550,000</td>
<td>1,629,000</td>
<td>1,763,000</td>
<td>1,733,000</td>
<td>1,734,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply&lt;sup&gt;3&lt;/sup&gt;</td>
<td>1,507,000</td>
<td>1,529,000</td>
<td>1,472,000</td>
<td>1,432,000</td>
<td>1,429,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit&lt;sup&gt;5&lt;/sup&gt;</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
<td>1,250,000</td>
</tr>
<tr>
<td><strong>Capability of Current Programs</strong></td>
<td>3,485,000</td>
<td>3,810,000</td>
<td>4,089,000</td>
<td>3,947,000</td>
<td>3,814,000</td>
</tr>
<tr>
<td><strong>Demands</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Demands of Metropolitan</td>
<td>1,826,000</td>
<td>1,660,000</td>
<td>1,705,000</td>
<td>1,769,000</td>
<td>1,826,000</td>
</tr>
<tr>
<td>IID-SDCWA Transfers and Canal Linings</td>
<td>180,000</td>
<td>273,000</td>
<td>280,000</td>
<td>280,000</td>
<td>280,000</td>
</tr>
<tr>
<td><strong>Total Demands on Metropolitan&lt;sup&gt;4&lt;/sup&gt;</strong></td>
<td>2,006,000</td>
<td>1,933,000</td>
<td>1,985,000</td>
<td>2,049,000</td>
<td>2,106,000</td>
</tr>
<tr>
<td><strong>Surplus</strong></td>
<td>1,479,000</td>
<td>1,877,000</td>
<td>2,104,000</td>
<td>1,898,000</td>
<td>1,708,000</td>
</tr>
<tr>
<td><strong>Programs Under Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-Region Storage and Programs</td>
<td>206,000</td>
<td>306,000</td>
<td>336,000</td>
<td>336,000</td>
<td>336,000</td>
</tr>
<tr>
<td>California Aqueduct</td>
<td>382,000</td>
<td>383,000</td>
<td>715,000</td>
<td>715,000</td>
<td>715,000</td>
</tr>
<tr>
<td>Colorado River Aqueduct</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colorado River Aqueduct Supply&lt;sup&gt;3&lt;/sup&gt;</td>
<td>187,000</td>
<td>187,000</td>
<td>187,000</td>
<td>182,000</td>
<td>182,000</td>
</tr>
<tr>
<td>Aqueduct Capacity Limit&lt;sup&gt;5&lt;/sup&gt;</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Colorado River Aqueduct Capability</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Capability of Proposed Programs</strong></td>
<td>588,000</td>
<td>689,000</td>
<td>1,051,000</td>
<td>1,051,000</td>
<td>1,051,000</td>
</tr>
<tr>
<td><strong>Potential Surplus</strong></td>
<td>2,047,000</td>
<td>2,566,000</td>
<td>3,155,000</td>
<td>2,949,000</td>
<td>2,759,000</td>
</tr>
</tbody>
</table>

<sup>1</sup> Represents Supply Capacity for resource programs under listed year type.
<sup>2</sup> California Aqueduct Includes Central Valley transfers and storage program supplies conveyed by the aqueduct.
<sup>3</sup> Colorado River Aqueduct Includes water management programs, IID-SDCWA transfers and canal linings conveyed by the aqueduct.
<sup>4</sup> Maximum CRA deliveries limited to 1.25 MAF including IID-SDCWA transfers and canal linings.
<sup>5</sup> Firm demands are adjusted to include IID-SDCWA transfers and canal linings. These supplies are calculated as local supply, but need to be shown for the purposes of CRA capacity limit calculations without double counting.
6.0 MWD Demands According to Member Agencies' UWMPs

While most MWD member agencies used a fairly consistent format in their UWMPs, each plan has differences in how data or projections are reported. Most plans show supply and demand projections for 2015 to 2035 in five year increments for normal and single dry years, the multiple (three-year) dry year scenarios are not necessarily three dry years ending in 2015, 2020, 2025, 2030, or 2035. In these cases and for the purpose of being able to cumulate data from all MWD agencies, the third year of the three year sequence is shown, and if this third year does not end on 2015, 2020, etc., then the supply and demand figures shown in the summaries are the third year of the dry year sequence closest to year 2015, 2020, etc. In cases where the member agency UWMP goes to the year 2030 rather than the year 2035, 2030 figures are also shown in 2035.

The MWD member agencies’ summaries shown in Appendix A include population, overall water demands and water supply. Overall demand includes firm demands, non-firm demands such as demand for replenishment supplies and recycled water demand for direct use (does not include recycled water used for replenishment purposes). Some agencies, such as Foothill Municipal Water District, provide imported water to its customers (sub-agencies), but did not report in the UWMP use of other local supplies by these sub-agencies. It is for this reason that the accumulation of Total Water Use among each of the MWD member agency UWMPs include most, but not necessarily all of the local supplies used with the MWD service area. However, the accumulations of all MWD supply and demand among the member agencies’ UWMPs does include all MWD demands from the members, subject to any assumptions as noted on each summary.

The MWD member agencies are not consistent in the way they account for available MWD (or local) supplies. Some agencies "balance" supply and demand, i.e. the total supply available equals the total demand, even if the agency has additional supplies available. Others, such as Central Basin MWD assumes that its Tier 1 purchase commitment will be available under each supply scenario and this serves as the basis for its estimated MWD demand. Other agencies estimate available MWD demands by applying the percentage of MWD surplus supplies noted in MWD’s Tables 2-9, 2-10, or 2-11 towards their estimated MWD demand, thus assuming that MWD will have more than enough supplies to meet their estimated demands. In these cases, supply and demand are not "balanced" as the UWMP reports supply exceeding demands.

The following table shows the cumulative firm MWD demands as reported in the member agency UWMP’s for years 2015 to 2035 for Average year, Single Dry Year, and Multiple Dry Year conditions:

<table>
<thead>
<tr>
<th>Supply Condition</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Year</td>
<td>1,717,165</td>
<td>1,561,752</td>
<td>1,612,426</td>
<td>1,690,852</td>
<td>1,750,335</td>
</tr>
<tr>
<td>Single Dry Year</td>
<td>2,119,650</td>
<td>1,947,778</td>
<td>2,006,438</td>
<td>2,096,558</td>
<td>2,156,846</td>
</tr>
<tr>
<td>Multiple Dry Year</td>
<td>1,931,006</td>
<td>1,906,190</td>
<td>1,935,301</td>
<td>1,991,160</td>
<td>2,206,004</td>
</tr>
</tbody>
</table>
Average year demands represent those demands that member agencies expect to place on MWD when existing local supplies are available, planned new supplies are on-line, and accounting for expected population and demand increases after planned conservation efforts are achieved to meet SBX7-7 requirements. Some agencies expect to implement additional conservation measures that would lower expected MWD demands further. As expected, single dry year (worst case) demands on MWD are higher than average year demands, due to less availability of local supplies. The third year of a three year multiple dry year sequence is slightly less than the single dry year worst case, as public awareness and conservation efforts are increased. The UWMPs do not include MWD demands for a wet year, or multiple wet year sequence, however it would be expected that under such conditions local supplies would be more abundant, overall demands could be reduced slightly, and MWD firm demands would be significantly lower than under average year conditions.

Below, are average year and a comparison of average and dry year demands for each member agency for the year 2020, as reported in the UWMP’s:

Figure 7
As shown, most agencies' UWMP dry year demands on MWD are greater than average year demands. However, the degree of dry year peaking (ratio of dry year demand to average year) on MWD varies greatly, from up to 224% for the City of Los Angeles to zero for the City of Santa Monica. The volume of water required to meet dry year peaking also varies greatly, from up to 240,980 acre-feet for the City of Los Angeles to a decrease of 31,024 for Inland Empire Utilities Agency. In the case of Inland Empire Utilities Agency, its UWMP calls for increased pumping from groundwater basins to reduce imported water demands (the reduction is shown as a negative number). In the case of the San Diego County Water Authority, the above represents only purchases of MWD supplies and not transportation services.

Each MWD member agency reports local supplies that it expects will be available in future years. While MWD’s RUWMP includes local supplies in its forecasts, certain significant differences were identified between the supplies MWD assumed to be available and the supplies the MWD member agencies assumed in their plans. These supplies, if included in MWD’s RUWMP, would further reduce MWD projected demands from its member agencies:
<table>
<thead>
<tr>
<th>Local Supply</th>
<th>Included in Member Agency UWMP Future Supply</th>
<th>Included in MWD's RUWMP as a Local Supply</th>
<th>Annual Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long Beach- Seawater Desalination</td>
<td>Yes</td>
<td>No</td>
<td>5,000 AF beginning in 2025</td>
</tr>
<tr>
<td>SDCWA- Seawater Desalination</td>
<td>Yes</td>
<td>No</td>
<td>56,000 AF beginning in 2020</td>
</tr>
<tr>
<td>West Basin- Seawater Desalination</td>
<td>Yes</td>
<td>No</td>
<td>21,500 AF beginning in 2020</td>
</tr>
<tr>
<td>Los Angeles Aqueduct- Difference in Supply Assumptions</td>
<td>Yes</td>
<td>No</td>
<td>28,000 AF in 2015 decreasing to 14,000 AF in 2035 for average years; In single dry year LADWP's RUWMP estimates 17,480 to 19,060 AF less than MWD's RUWMP. In multiple dry years LADWP's UWMP estimates 27,700 to 42,770 AF more than MWD's RUWMP</td>
</tr>
<tr>
<td>LADWP Water Transfers</td>
<td>Yes</td>
<td>No</td>
<td>40,000 AF Beginning in 2015</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>136,500 to 150,500 AF/Yr. for average years. 99,620 to 104,200 AF/Yr for dry years and 150,320 to 165,270 AF/Yr in multiple dry years</td>
</tr>
</tbody>
</table>

In addition to the above, two MWD member agencies (Calleguas MWD and the City of Burbank) specifically detail how MWD's RUWMP projections are higher than their own UWMP projections. In the case of Calleguas MWD, its assumptions for future local supply is greater than what MWD considered in its RUWMP. In the case of the City of Burbank, its UWMP states that "Burbank's projections in this plan go beyond the minimum conservation required even though MWD is planning for somewhat higher demands." These specific differences result in a further estimated decrease in MWD demands of 5,750 to 18,683 acre-feet per year for Calleguas MWD and 1,350 acre-feet per year for the City of Burbank, depending on the year and hydrologic scenario.
Additional potential local water supply development was identified in the member agency UWMP’s that if implemented, would further reduce both MWD’s forecasted demand and member agency projections of their demand on MWD. These local supplies include:

<table>
<thead>
<tr>
<th>Local Supply</th>
<th>Included in Member Agency UWMP as Potential Supply</th>
<th>Included in Member Agency UWMP or MWD RUWMP Demand Forecast</th>
<th>Annual Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>LADWP Storm water Capture and Replenishment</td>
<td>Yes</td>
<td>No</td>
<td>2,000 AF in 2015 and expanding to 25,000 AF by 2035</td>
</tr>
<tr>
<td>Water Replenishment District GRIP Project (Central Basin MWD)</td>
<td>Yes, as a CBMWD Project</td>
<td>No</td>
<td>21,000 AF</td>
</tr>
<tr>
<td>Foothill MWD Water Reclamation</td>
<td>Yes</td>
<td>No</td>
<td>1,280 AF Beginning in 2020</td>
</tr>
<tr>
<td>MWDOC Seawater Desalination- Huntington Beach</td>
<td>Yes</td>
<td>No</td>
<td>56,000 AF Beginning in 2020</td>
</tr>
<tr>
<td>MWDOC Seawater Desalination- San Juan Capistrano</td>
<td>Yes</td>
<td>No</td>
<td>16,000 AF Beginning in 2020</td>
</tr>
<tr>
<td>MWDOC- Irvine Ranch WD Strand Ranch- Dry Year Yield</td>
<td>Yes</td>
<td>No</td>
<td>16,666 AF in dry years</td>
</tr>
<tr>
<td>Three Valleys MWD- Additional Project</td>
<td>Yes</td>
<td>No</td>
<td>28,000 AF Beginning in 2020</td>
</tr>
<tr>
<td>Calleguas MWD- Additional Conservation</td>
<td>Yes</td>
<td>No</td>
<td>22,250 AF beginning in 2020</td>
</tr>
<tr>
<td>City of Torrance- Expanded Recycle Water and Goldsworthy Desalter</td>
<td>Yes</td>
<td>No</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>186,200 AF/Yr.</td>
</tr>
</tbody>
</table>
7.0 Comparison of MWD Demands Projected by MWD and its Member Agencies

A comparison of MWD's RUWMP forecast of its demands from member agencies shows that MWD's forecasts are higher in the average and multiple dry year scenarios than the cumulative forecasts made by its member agencies and lower in the single dry year scenario:

Figure 9

![Agencies' UWMP Demand on MWD vs. MWD's UWMP Forecast](image)

Figure 10

![Agencies' UWMP Demand on MWD vs. MWD's UWMP Demand](image)
As noted above, MWD's 2005 RUWMP included 150,000 acre-feet per year of seawater desalination, but no seawater desalination was included in MWD's 2010 RUWMP projections as a local supply. One of these projects is a fully permitted project for the development of 56,000 acre-feet of local water supply annually. Had MWD included current member agency plans for seawater desalination in its RUWMP forecasts, its average year demands would be similar to the cumulative forecasts contained in the member agencies UWMPs. Had MWD included other identified local supplies, such as LADWP's planned water transfers and flows in the Los Angeles Aqueduct that are consistent with LADWP's UWMP, MWD's RUWMP average year demands would have been even lower than the member agencies cumulative demands.

Further reductions in MWD demand would occur if the "potential projects" identified in the member agencies UWMP's are implemented. These projects have become more cost-competitive as a result of MWD rate increases.
8.0  Findings

From MWD’s 2000 RUWMP through its 2010 RUWMP, overall projected demand, and overall projected demands on MWD have decreased significantly due to conservation, significantly higher water rates and local water supply development over levels previously planned by MWD. Decreased demand generally and decreased demand specifically on MWD supplies has resulted in a "surplus" of supply during all existing supply capability and demand scenarios examined in MWD's RUWMP.

MWD projects greater firm demand in average years than its member agencies project in their UWMP's. This difference is due mainly to the fact that MWD did not consider member agency plans for significant projects such as the SDCWA, West Basin, and Long Beach seawater desalination projects and Los Angeles' planned water transfers. There is no explanation why MWD’s 2005 RUWMP included 150,000 acre-feet per year of seawater desalination but did not include these supplies in its 2010 plan.

During the worst case single dry year scenario, MWD's member agency projections of MWD firm demand are slightly more than what MWD's RUWMP indicates. However, this may be explained by the fact that each member agency's single dry year demand may not occur concurrently. Each member has different demand patterns and uses, availability of local supplies, and in some cases weather characteristics that could impact demand on MWD. Therefore, peak single dry year demand may not necessarily occur in the same year for all 26 member agencies. Further, any difference could also be reduced, or eliminated, if member agencies implement some or all of the "potential projects" that are listed in their UWMPs.
For multiple dry years, the analysis shows that cumulative member agency projections (third year) are consistent with the average year in that the total projected MWD firm demand is less than MWD's projection for the multiple dry year scenario. In the multiple dry year scenario, some agencies report expected demand in each of the three "multiple" dry years, while others report only an annual figure for each year of the projected sequence.

Projected future MWD demands for all three scenarios would be reduced further by potential projects listed in the member agency UWMPs. Since UWMPs are not required to calculate wet year demands, no data is available to determine what impact wet years will have on MWD, but past trends show that MWD demands can decrease significantly during these periods. The fact that MWD member agencies are planning on purchasing less water in the future, on average, than MWD anticipates during normal (and likely wet) periods is likely to place upward pressure on MWD water rates over the longer term. Additional sales, if any, by MWD during a single dry year worst case scenario would be short lived and likely be offset by additional costs, thus having little impact on long term water rate trends when compared to impacts of lower sales during average or wet years.

Dry year peaking poses a significant planning issue for MWD and occurs to some extent in most of its member agencies. The volume of dry year peaking projected by MWD will have substantial economic impacts and require water rate increases associated with carrying additional water supplies, storage and capacity available to meet existing and future dry year peaking demands.

Tables 2-9, 2-10, and 2-11 in MWD's RUWMP state that the capability of MWD’s existing programs can provide sufficient supplies to meet MWD demands in all years and all demand scenarios evaluated. Most of MWD’s member agencies' UWMPs cite these tables and use them as the basis for concluding they have sufficient water supplies currently (and in many cases, surplus supplies) and will have sufficient water supplies in the future. Despite this surplus and dramatically reduced demand projections, MWD continues to pursue additional programs to increase its water supplies even further. The combination of reduced demands and increased spending on new water supply programs will continue to drive up the cost of MWD water.

Management of storage accounts plays a key role in both normal and dry years conditions, however, it is not possible to derive from MWD’s RUWMP what assumptions it has made concerning the availability of water to put into storage or take during dry year conditions. MWD and its member agencies would benefit from a more detailed analysis of the expected availability of water for put and take into storage.

MWD's RUWMP also includes programs under development that will provide additional "potential surplus" supplies in the average, single dry, and multiple dry year scenarios. These programs include an interim Bay Delta measure, estimated to increase MWD's dry year supplies up to 487,000 acre-feet by 2015, and a more extensive Bay Delta solution that would increase its supply up to 628,000 acre-feet by 2025 (RUWMP Table A.3-7 at pages A.3-48 to A.3-52). These programs will result in substantial overdevelopment of water supplies for Southern California unless other projects under development by MWD, its member agencies and other water suppliers in Southern California are reduced or eliminated.
Further modeling should be done to factor in the anticipated timing and availability of Bay Delta supplies including an analysis of projects which may be deferred or eliminated in order to avoid stranded costs.

The cumulative total of water supplies being developed under the category of "Programs Under Development" for multiple dry years is as high 755,000 acre-feet, and for single dry years and average years as high as 1,036,000 and 1,051,000 acre-feet, respectively. This is exclusive of supplies not included in MWD's RUWMP being developed by member agencies and other retail water suppliers not analyzed as part of this report.

If MWD's future water sales are lower than it projects, further, unnecessary upward pressure will be placed on water rates. As MWD updates its long range finance plan and rate projections, MWD should again review the timing and emphasis of program expenditures. Given all of the changed circumstances, including reduced demands, escalating water rates and the economic downturn, MWD may wish to revisit its IRP and RUWMP now in order to enhance coordination with the plans of its member agencies and the other retail water suppliers that serve Southern California.
Appendix A

Summary of Member Agency Urban Water Management Plans
City of Anaheim

Overview

The City of Anaheim provides water to residents and businesses throughout its 49.3 square mile service area. The City receives water from two main sources: the Orange County Groundwater Basin, which is managed by the Orange County Water District and imported water from MWD. Groundwater is pumped from active wells located within the City and imported water is delivered through seven treated water connections and one untreated water connection from MWD.

Anaheim's 2010 UWMP lists its current population at 364,921 and project population to increase to 432,949 in the year 2035, an increase of 18.6%. Total Demand from the UWMP is expected to increase 16.1% over the same period, from 66,929 acre-feet in 2010 to 77,700 acre-feet in 2035. This increased demand will be met by both increased groundwater pumping and deliveries from MWD.

Existing and Projected Future Water Supply and Demand

Anaheim's demand projections were determined by an examination of its past water consumption by type of use or by customer classification and information provided by the Center for Demographic Research at California State University Fullerton.
Conservation and Per Capita Water Use

Anaheim is a member of an Orange County 20x2020 Regional Alliance, which is an effort to create flexibility in meeting the per capita water use reduction targets required under SBX7-7. The Regional Alliance selected as its calculation method the first DWR option, which require a simple 20% reduction from the baseline by 2020 and 10 percent reduction by 2015. The City's baseline was calculated at 201.6 GPCD. Its 2015 and 2020 targets are 181.4 and 161.2 GPCD, respectively. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Anaheim
Per Capita Water Use- Actual and Projected, GPCPD

Water Supply Reliability

Anaheim’s plan indicates that future supplies are sufficient to meet its anticipated demands. The plan relies on MWD's RUWMP as the basis for this conclusion and includes MWD's RUWMP Tables 2-11, 2-19, and 2-10 which list a potential surplus of supply in all years examined in its plan.

The plan includes a discussion of groundwater and its management within the basin. It discusses the OCWD Groundwater Replenishment System, put into operation in 2008, that provides a seawater barrier through injection wells and groundwater recharge for the City. According to the plan, Anaheim's groundwater production is expected to increase about 7 percent, or about 3,100 acre-feet. The City currently does not provide recycled water, but plans to provide up to 255 acre-feet per year beginning in 2015.

Anaheim's plan states that it intends to reduce its demand through aggressive water use efficiency programs. It also states that it has entered into an agreement to purchase GWRS water for use at the Canyon Power Plant, within its service area and includes these efforts in its demand assumptions. The plan lists desalination opportunities within MWDOC's service area, but the City does not plan to participate. The plan states that it could indirectly benefit from construction of a desalination plant because of the regional benefit that may be achieved.
**City of Beverly Hills**

**Overview**

The City of Beverly Hills, located in Los Angeles County and surrounded by the City of Los Angeles, provides water to city residents within its 5.69 square mile city limits and also to a portion of the City of West Hollywood. Water is obtained from two main sources: groundwater from four groundwater wells that pump water from the Hollywood Sub basin and treated water from MWD's Weymouth Treatment Plant through the Santa Monica Feeder. All of the City's raw groundwater is treated at the City's Reverse Osmosis Treatment Plant.

Beverly Hills' 2010 RUWP lists its water service area population at about 45,000 and projects a 5.75% increase to 47,587 by the year 2035. Total Demand from the UWMP is expected to increase 5.1% over the same period, from 11,562 acre-feet in 2010 to 12,153 acre-feet in 2035. It plans to keep pumping in the basin fairly constant to help prevent overdraft and stay within its pumping rights, thus this increased demand will be met by increased deliveries from MWD.

**Existing and Projected Future Water Supply and Demand**

Beverly Hills' demand projections were determined by an examination of its past water consumption by type of use or by customer classification, future development and redevelopment. The City is considered to be "built-out" but as population increases slightly and water conservation measures continue to be implemented, the plan states that the City should experience moderate increases in its water consumption following an overall drop in water use from 2010 to 2020 due to SBX7-7 requirements.
**Conservation and Per Capita Water Use**

Beverly Hills' per capita water use baseline is 277 and 284 GPCD depending on whether a 5 or 10 year baseline is used. Its Method 1 targets are 256 and 228 GPCPD for 2015 and 2020, respectively. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![City of Beverly Hills Per Capita Water Use- Actual and Projected, GPCPD](image)

**Water Supply Reliability**

Beverly Hills' UWMP indicates that future supplies are sufficient to meet its anticipated demands. According to its UWMP, available supplies exceed demand in all demand scenarios evaluated, based on MWD's RUWMP conclusion that it can meet all demands in all scenarios.

The plan states that the City "projects water demands within its service areas to remain fairly constant over the next 20 years due to minimal growth combined with water use efficiency measures. Due to this fact, the City does not have current plans for additional water supply projects other than regular maintenance and upgrades to its existing well, storage reservoirs and distribution pipelines." The plan does, however, mention that MWD is implementing water supply alternative strategies and lists several of these.
City of Burbank

Overview

The City of Burbank is located approximately 12 miles north of downtown Los Angeles. The City covers 17 square miles of the eastern end of the San Fernando Valley. The City of Los Angeles lies to the north and west, and the City of Glendale to the south and east. Burbank's 2010 RUWP lists its current population at 108,469 and projects populations to increase 24.5% to 132,877 in the year 2035. Total normal year demand from the UWMP is expected to increase 17.6% over the same period. This increased demand will be met by a combination of increase recycled water use and groundwater pumping, and increased demand from MWD.

Existing and Projected Future Water Supply and Demand

According to its UWMP, Burbank's water use reached the required 20x2020 levels in 2010, although it notes that 2010 had mild weather which may have contributed to this reduction. Its FY 2011/12 financial plan projects five years of water sales which are less than its interim 2015 per capita target. Using available population projections, water use in the subsequent years to 2035 are estimated using the same GPCD rates as planned for 2015.
**Conservation and Per Capita Water Use**

Burbank evaluated its required SBX7-7 requirements using Method 1 and determine its per capita target to be 156 GPCD. The plan notes its interim target for 2015 to be 175 GPCD and notes that current usage is already below this target. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Burbank

Per Capita Water Use- Actual and Projected, GPCPD

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**Water Supply Reliability**

Burbank’s UWMP shows that future supplies are sufficient to meet its anticipated demands. In the past, Burbank's groundwater supplies were reduced as a result of water quality issue caused by a number of factors including industrial releases. Together with others, Burbank embarked on a program to clean up groundwater supplies and make additional use of these supplies. The City is also implementing a storm water capture and infiltration program that will increase availability of groundwater supplies.

The plan notes that MWD estimates for Burbank's 2015 demand to be 27% greater than Burbank's 2015 estimate. According to the plan, MWD did not count future conservation from additional agency efforts to meet 20x2020 goals.

Burbank identified water exchanges, transfers and desalination as possible ways to develop additional supplies. While they do not have plans to do so, the UWMP plan states the City is supportive of these efforts by MWD or other entities. The City is looking at a chromium removal pilot study, expanded water recycling, and more aggressive conservation measures to provide additional supply or reduce demand further.
Calleguas MWD

Overview

The Calleguas Municipal Water District, located in southern Ventura County, is a wholesaler water agency that distributes water to 19 local purveyors. Approximately three-quarters of Ventura County residents depend on CMWD for all or part of their water. The water supplied by CMWD represents approximately 73 percent of the total municipal and industrial water demand within its service area.

CMWD’s 2010 RUWP lists its current population at 632,399 and projects populations to increase to 730,788 in the year 2035, an increase of 15.6%. Total Demand from the UWMP is expected to increase 17.6% over the same period, from 171,776 acre-feet in 2010 to 202,160 acre-feet in 2035.

Existing and Projected Future Water Supply and Demand

CMWD’s UWMP notes that its projections for local supplies are substantially higher than the projections developed by MWD. The plan notes that "The lower local supply projections by MWD are related to MWD’s policy not to include future local supply projects until funding allocations, engineering, environmental approvals, and permitting requirements are substantially complete. CMWD purveyors, however, typically include future local supplies in their projections upon completions of feasibility studies." This difference tends to decrease the amount of imported water that CMWD states it needs from MWD, whose estimates are about 15,000 to nearly 19,000 acre-feet higher (12 to 13 percent). For calculation purposes in the UWMP, Calleguas uses the local supply figures provided by its purveyors.
**Conservation and Per Capita Water Use**

The Plan notes that MWD prepared a paper in 2009 titled "Estimating the Water Savings Achieved with 20 percent by 2020 Compliance at the Member Agency Level." Using method 1, the percent reduction target would be 167 GPCD. While each purveyor's target may be different, the plan compared whether CMWD's projected water supplies and uses would satisfy this overall target level. The plan found that it would not, and states that "a combination of additional recycled water projects or conservation beyond that included in current projections will be required to meet the 2020 targets." The plan states that CMWD and MWD intend to provide support for retail agencies efforts through technical assistance and continued financial assistance to the CMWD wholesale agency assistance program. According to the plan, a combination of additional increased recycled water use or additional conservation equal to 14.8% percent of total water use may be needed. For 2020, this amounts to a 27,925 acre-foot reduction in use. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Calleguas MWD Per Capita Water Use- Actual and Projected, GPCPD](image)

**Water Supply Reliability**

CMWD's UWMP indicated that future supplies are sufficient to meet its anticipated demands, even though it may need to reduce demands further to be in compliance with SBX7-7. CMWD's plan relies on MWD's RUWMP as the basis for this conclusion. Because MWD estimates that CMWD's demands for imported water are greater than the CMWD estimate (due to MWD's assumption regarding local supplies) and that MWD anticipated meeting imported water demands in all supply and demand conditions, CMWD's plan shows a surplus of supply between 5 and 16%, depending on the hydrologic condition and planning year.
Besides increasing local water through the planning horizon with brackish water desalination, conjunctive use and increased water reclamation, the CMWD plan briefly discusses DWR strategies to improve the reliability of supplies from the Bay-Delta, MWD strategies on both the SWP and Colorado River and its own strategies to increase conjunctive use, water treatment and salinity management. The plan states that the district benefits from water transfers through MWD, but does not plan to pursue these on its own.
Central Basin MWD

Overview

The Central Basin Municipal Water District is located in southeast Los Angeles County and encompasses approximately 227 square miles including 24 cities and several unincorporated areas. Its current population of 1,654,866 is expected to increase 9.4% by the year 2035 to 1,809,737 persons. At the same time, water use is expected to increase by 16.6% from 244,393 acre-feet in 2010 to 285,040 acre-feet in 2035. The 2035 figure includes replenishment deliveries. When replenishment deliveries are excluded, the overall increased use of water is 8.0%. Demand on MWD is expected to remain fairly constant during this period, with the exception of the 21,000 acre-feet per year of non-firm supplies that were not available in 2010. Aside from these non-firm supplies, increased demands will be met by recycled water and increased pumping of groundwater supplies from 2010 levels.

Existing and Projected Future Water Supply and Demand

CBMWD's plan states that future demand forecasts were the result of historical water use analysis, population growth, commercial and residential development, all used in combination with the MWD-MAIN forecasting model. The UWMP demands are as follows:

Central Basin MWD
Normal Year vs. Dry Year Demands, AFY
Conservation and Per Capita Water Use

CBMWD's UWMP states that per capita usage will remain relatively flat at 135 GPCD over the planning period. The plan discusses the South Coast hydrological region's target for 2015 as 154 GPCD and 2020 target of 137 GPCD. Since CBMWD has already reached 135 GPCD, the plan assumes it is in compliance with the SBX7-7 targets. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Central Basin MWD Per Capita Water Use - Actual and Projected, GPCPD](chart)

Water Supply Reliability

CBMWD's reliability analysis assumes that its MWD Tier 1 supply allocation will be available during normal and single dry-year scenarios. CBMWD assumes that during the third year of a multiple dry year scenario, MWD supplies may be reduced 10 percent. It's reliability calculations reflect a slightly smaller decrease in MWD supplies (3.7%), but because of increased groundwater availability and recycled water, the plan still shows a surplus of available supplies during all hydrologic cases evaluated.

The plan includes a discussion of MWD supplies and efforts taken to improved reliability through its IRP. It also includes a discussion of pumping rights in the basin within its service area. The plan discusses Water Replenishment District's attempts to "define their agency as the public entity responsible for management of a conjunctive use program for the Central Groundwater Basin." It discusses the litigation that ensued and states that "Central Basin expects to roll out its Groundwater Storage Plan in early 2012." Presumably the UWMP does not include additional supplies that may be available to CBMWD from either WRD's efforts or CBMWD's future plans.

The plan states that it is the beneficiary of water transfers through MWD and that because of high costs and the fact that CBMWD is "a land locked" agency without direct access to the ocean, it is highly unlikely that it will build such a facility, but states that seawater desalination may provide water resources to others.
City of Compton

Overview

The City of Compton is located approximately six miles north of downtown Long Beach covering approximately 10.2 square miles. The Compton Municipal Water District retails water to approximately 80 percent of the City and private water companies provide service to the remaining residents. Water is obtained from two main main sources: the Central Groundwater Basin and imported water from MWD. Groundwater is pumped from active wells located within the City and imported water is delivered through treated water connections from MWD.

Compton's 2010 RUWP lists its current population at 81,963 and projects populations to increase to 93,336 in the year 2030, an increase of 13.9%. Total Demand from the UWMP is expected to increase 7.6% over the same period, from 8,929 acre-feet in 2010 to 10,455 acre-feet in 2030. As its rights to pump water from the groundwater basin are fixed, this increased demand will be met by increased deliveries from MWD.

Existing and Projected Future Water Supply and Demand

Compton's demand projections were determined by an examination of its past water consumption by type of use or by customer classification. Water losses, estimated at 20% in 2010 were also included in overall projections.
Conservation and Per Capita Water Use

Compton's per capita water use is currently around 100 GPCPD and is therefore already meeting SBX7-7 requirements. Its base usage was calculated as 106 GPCPD and the City used Option 3, which is to achieve 95% of the applicable state hydrologic region target to determine its 2015 and 2020 target of 142 GPCPD. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Compton
Per Capita Water Use - Actual and Projected, GPCPD

Water Supply Reliability

Compton's UWMP indicates that future supplies are sufficient to meet its anticipated demands. While its UWMP Tables 5.4.5 and 5.4.6 show demand exceeding supply by up to 15 percent in dry and multiple dry years, the plan states that Central Basin and MWD can provide additional surplus supplies to the City to meet demands, when necessary. While these supplies may be available, the plan states that the City "is still committed to water conservation in single dry and multiple dry years to help preserve precious water reserves and supplies."

The plan states that the City does not distribute recycled water in its service area at this time, and has no plans to do so in the future. It states that this is because of "alternate priorities by the recycled water wholesaler within the service areas, the Central Basin Municipal Water District (CBMWD), and a lack of funds available." The plan identifies one potential customer with a demand of 42 acre-feet per year. The plan states that it receives benefits from MWD's water transfers and desalination programs but it has no plans to pursue such options on its own.
Eastern MWD

Overview

The Eastern Municipal Water District is located in western Riverside County, approximately 75 miles east of Los Angeles. The 555 square mile service area includes seven incorporated cities in addition to unincorporated areas of the County of Riverside. Eastern provides both water and sewer services to many, but not all of the areas it serves. It also provides wholesale water to three separate cities, two water companies, and two water districts including the Rancho California Water District. The population within EMWD's boundaries is 695,923 and is forecast to grow by 59.7% to 1,111,729 by the year 2035. Water use is expected to increase by 80.7% over the same period, from 159,408 acre-feet in 2010 to 288,100 acre-feet in 2035. Because 2010 was a year when MWD supplies were limited and water demands were lower than previous years, the increase in demand versus projected increase in population is somewhat distorted. According to its UWMP, the majority of this increase in water use is expected to be met by MWD, with increases in recycled water production offset by decreases in groundwater pumping.

Existing and Projected Future Water Supply and Demand

Eastern's demand projections"were developed using projections provided by the Riverside County Center for demographic research." According to the plan," EMWD retail demand projections include the water savings needed to meet the Water Conservation Bill of 2007 requirements." The plan notes that the area is currently experiencing a slowdown in new development, but the area is only about 40 percent built out. EMWD tracks new developments using a special database. The UWMP demands are as follows:

Eastern MWD
Normal Year vs. Dry Year, AFY
**Conservation and Per Capita Water Use**

Eastern's UWMP includes calculations to meet SBX7-7 requirements. Its calculated baseline usage is 212 GPCD and method 2 is used to determine its 2105 target of 197.98 GPCD and 2020 target of 183.96 GPCD. To reduce its demands it plans to increase recycled water use and develop various conservation programs. The targets apply to the retail service areas; the wholesales areas may have different targets. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

**Eastern MWD**

**Per Capita Water Use- Actual and Projected, GPCPD**

![Graph showing per capita water use](image)

**Water Supply Reliability**

Eastern's UWMP shows its water supplies as sufficient to meet its demands under all conditions evaluated. According to the plan, "The majority of EMWD's current and projected water supplies are imported through the MWD. In its 2010 RUWMP, MWD concluded that with the storage and transfers programs developed, MWD will have a reliable source of water to serve its member agencies' needs through 2035 during normal, historic single-dry and historic multiple-dry years. Unprecedented shortage will be addressed through the water supply allocation plan."

The plan states that Eastern's planned local supplies will supplement imported supplies and improve reliability for Eastern and the region. Eastern plans to expand a desalination program to desalt brackish water. The plan states that another desalter could be warranted, in addition to an indirect potable reuse project. These additional supplies are not included in supply projections. The plan also states that EMWD is proposing a targeted 30 percent reduction in outdoor demand and a 10 percent reduction in indoor demand by 2035. Presumably these reductions are not included in the demand projections. Eastern states that it is investigating opportunities for independent transfers and exchanges, but states that it cannot quantify these at this time.
Foothill MWD

Overview

The Foothill Municipal Water District is a wholesale agency that provides imported water to retail agencies located in the foothills of the San Gabriel Mountains in Los Angeles County. While FMWD is dependent on MWD for 100 percent of its water supply, most of its retail agencies have access to their own groundwater supplies. Currently, these agencies rely on about 60 percent of their supplies to come from FMWD.

The FMWD service area covers 21.66 square miles and overlies both the Raymond and Verdugo Groundwater Basins. FMWD’s 2010 RUWP lists its current population at 87,876 and projects populations to increase 16.1% to 102,003 in the year 2035. Total normal year imported demand listed the UWMP is expected to increase 25% over the same period, although this increase represents only the increase in imported water demands of the agencies that FMWD serves and not use of local supplies. The UWMP does not document or project local supply used within its service area.

Existing and Projected Future Water Supply and Demand

FMWD’s future MWD demands are the accumulation of its retailer’s estimated demands for imported water. Presumably this information came from the retailers as they would have the best local knowledge of historic water use trends, demographic, and land use trends within their boundaries. The UWMP demands and supply are as follows:

Foothill MWD
Normal Year vs. Dry Year Demands, AFY
Conservation and Per Capita Water Use

Foothill's UWMP states that each of its retail agencies that are required to comply with SBX7-7 requirements have chose to do so individually. Using population data contained in the plan and average and dry year UWMP imported water forecasts, the per capita imported use is projected as follows:

Foothill MWD
Per Capita Water Use- Actual and Projected, GPCPD

Water Supply Reliability

Foothill's UWMP indicates that future supplies are sufficient to meet its anticipated demands, but relies heavily on MWD's RUWMP as the basis for this conclusion. FMWD's plan includes MWD's RUWMP Tables 2-11, 2-19, and 2-10 which list a potential surplus of supply in all years examined in its plan.

FMWD's plan assumes the current level of use of reclaimed water throughout the planning period. The plan does note, however that FMWD has initiated a Local, Reliable Water Supply Program (LRWSP) to reduce dependence on imported water through development of recycled water as well as integrating storm water capture and recharge with recycled water and water conservation throughout its service area. If implemented, the plan could increase recycled water from the current estimate of 120 acre-feet per year to up to 1,400 acre-feet per year.
City of Fullerton

Overview

The City of Fullerton provides water to residents and businesses throughout its 22.3 square mile service area. The City receives water from two main sources: the Lower Santa Ana River Groundwater Basin, which is managed by the Orange County Water District and imported water from MWD. Groundwater is pumped from active wells located within the City and imported water is delivered through six treated water connections from MWD.

Fullerton's 2010 RUWP lists its current population at 138,600 and projects population to increase to 153,613 in the year 2035, an increase of 10.8%. Total Demand from the UWMP is expected to increase 17.7% over the same period, from 27,860 acre-feet in 2010 to 32,792 acre-feet in 2035. This increased demand will be met by both increased groundwater pumping and deliveries from MWD.

Existing and Projected Future Water Supply and Demand

Fullerton’s demand projections were determined by an examination of its past water consumption by type of use or by customer classification and information provided by the Center for Demographic Research at California State University Fullerton.

City of Fullerton
**Conservation and Per Capita Water Use**

Fullerton is a member of an Orange County 20x2020 Regional Alliance, which is an effort to create flexibility in meeting the per capita water use reduction targets required under SBX7-7. Fullerton and members of The Regional Alliance selected as its calculation method the first DWR option, which requires a simple 20% reduction from the baseline by 2020 and 10 percent by 2015. The City's targets for 2015 and 2020 are 199.9 and 177.7 GPCD, respectively. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![City of Fullerton Per Capita Water Use - Actual and Projected, GPCPD](image)

**Water Supply Reliability**

Fullerton's UWMP indicates that future supplies are sufficient to meet its anticipated demands. Fullerton's plan relies on MWD's RUWMP as the basis for this conclusion and includes MWD's RUWMP Tables 2-11, 2-19, and 2-10 which list a potential surplus of supply in all years examined in its plan.

The plan includes a discussion of groundwater and its management within the basin. It assumes the Basin Pumping Percentage will remain at 62% for the planning horizon. This percentage limits the amount of water Fullerton can pump to a percentage of its total use. Use of direct recycled water within Fullerton is expected to remain constant over the planning period, at 300 acre-feet per year. The plan states that Fullerton supports OCWD's effort to increase recycled water use though its recharge of the groundwater basins, but states that past efforts to explore other recycled water use is not cost effective or beneficial to Fullerton. It has no plans to use recycled water other than what is made available through groundwater recharge from OCWD. The plan lists potential desalination projects within Orange County and states that Fullerton has a non-binding letter of intent with Poseidon Resources for 2,500 acre-feet of supply from the proposed Huntington Beach Seawater Desalination Project, but does not include this project in its projections.
City of Glendale

Overview

The City of Glendale's Water and Power service area is located northeast of the City of Los Angeles and adjacent to both the City of Burbank on the west and the City of Pasadena on the east, encompassing a service area of 31.58 square miles. Glendale’s UWMP lists its current population at 210,293 and projects population to increase to 244,357 in the year 2035, an increase of 16.2% overall. Total normal year demand from the UWMP is expected to increase 10.9% over the same period, from 26,448 acre-feet in 2010 to 29,323 acre-feet in 2035. This demand increase is expected to be met by additional local water and MWD supply sources.

Glendale’s current water supplies include local groundwater from the San Fernando and Verdugo groundwater basins. Full use of these basins have been limited in recent years, due to water quality issues, however efforts to clean up contaminants and improve water quality and supply availability have allowed Glendale to increase production in recent years.

Existing and Projected Future Water Supply and Demand

Projections of water demand for Glendale were developed by examining historical water use by major category including single-family, multi-family, commercial, industrial, irrigation, and other. According the UWMP, "Water demand by category for the next 25 years was projected per the same percentage increase used in the supply calculations." UWMP projected future demands are as follows:

City of Glendale
Normal Year vs. Dry Year Demands

[Graph showing normal year vs. dry year demands for 2010, 2015, 2020, and 2035]

Legend:
- Reclaimed
- Other Local
- MWD
Conservation and Per Capita Water Use

Glendale evaluated its SBX7-7 requirements using Method 3 and determined its per capita target to be 137 GPCD and an interim target of 140.1 GPCD for 2015. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Glendale
Per Capita Water Use- Actual and Projected, GPCPD

Water Supply Reliability

Glendale's UWMP indicates that future supplies are sufficient to meet its anticipated demands. The plan relies on MWD's RUWMP as the basis for this conclusion with respect to imported water availability. According to the plan, "Glendale foresees very little change in available sources and amounts of water supply needed to meet water demands. In the next 25 years, we expect the same amount of supply from the San Fernando Basin. On the other hand, we will be utilizing the City's full water rights in the Verdugo Basin with the addition of new wells. Recycled water... will remain constant with very little addition." Imported water from MWD as stated in MWD's 2010 UWMP, "shows that the region can provide reliable water supplies under both the single driest year and the multiple dry year hydrologies."

The plan contains only a brief discussion of water transfers and desalination. Glendale may utilize short term transfers with neighboring agencies or cities. The plan states that it is supportive of MWD's efforts to secure out-of-region water transfers and (with other agencies') desalination.
Inland Empire Utilities Agency

Overview

The Inland Empire Utilities Agency provides a number of services within the western portion of San Bernardino County, including production of recycled water, sewage collection and treatment, distribution of imported and recycled water, desalination of groundwater supplies and disposal of industrial wastewater and brine. IEUA's service area encompasses approximately 242 square miles and serves an estimated population of 846,469. The population is expected to grow 38.9% by 2035. Water use within the service area for 2010 is reported as 243,664 acre-feet, and is expected to increase 28.9% to 314,136 acre-feet by 2035. This increased demand is expected to be met by a combination of increased recycled water use (32%), increased groundwater production (24%) and increased deliveries from MWD (44%).

Existing and Projected Future Water Supply and Demand

IEUA's UWMP compares its estimated total water use in the future with MWD projections derived from the MWD-MAIN model. According to the UWMP, overall IEUA member agency demand projections are very similar to MWD's projections, with IEUA's demands being approximately 1% higher than MWD's in the year 2035. The UWMP demands are as follows:

Inland Empire Utilities Agency
Normal Year vs. Dry Year Demands, AFY
Conservation and Per Capita Water Use

IEUA's UWMP includes calculations to meet SBX7-7 requirements, even though as an urban wholesale water supplier, is not required to do so. It calculated its baseline for the "IEUA territory" as 251 GPCD with 2015 and 2020 targets of 226 and 201 GPCD, respectively. The UWMP states that IEUA expects to meet or exceed both targets. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Inland Empire Utilities Agency Per Capita Water Use- Actual and Projected, GPCPD](image_url)

Water Supply Reliability

IEUA shows its water supplies to exceed its demands under all conditions evaluated. IEUA assumes in its projections that during dry and multiple dry years demands will be reduced by 10%. The plan states that with implementation of MWD's 2010 IRP, it will have the resources to supply IEUA customers with 100 percent of their imported water demands. The plan states that with IEUA's dry year yield program in effect, several of IEUA's member agencies will reduce their imported water demands, thus reducing demands on MWD. This reduction (to 62% of the normal demand) is reflected in the single and multiple dry years imported water projections. While the plan states overall demand projections by its members are consistent with the MWD MAIN overall projections, it does not state whether both MWD and IEUA account for reduced MWD demands in the dry and multi-dry year scenarios.

The plan discusses ways in which recycled water use will increase, how groundwater programs will increase dry year yield, and also how expansion of the Chino desalter will increase local supplies to IEUA agencies.
Las Virgenes MWD

Overview

Las Virgenes Municipal Water District is a retail water supplier in western Los Angeles County and comprises a 122 square mile area. The service areas includes the incorporated cities of Agoura Hills, Calabasas, Hidden Hills and Westlake Village as well as unincorporated portions of Los Angeles County.

LVMWD's 2010 RUWP lists its current population at 75,384 and projects populations to increase to 87,811 in the year 2035, an increase of 16.5%. Total normal water year demand from the UWMP is expected to increase 34.5% over the same period, from 24,721 acre-feet in 2010 to 33,252 acre-feet in 2035. Of this increase, approximately 53% is projected to be from increased recycled water use. LVMWD notes in its plan that 2010 demands are lower than its projected demand, citing temporary conditions including penalties, weather and recession.

Existing and Projected Future Water Supply and Demand

LVMWD uses SCAG populations as the basis for calculating future water demands. The plan states that historical per capita consumption rate was used in combination with the population projects to estimate future water demands. The plan states that this is the same method used in LVMWD's 2007 Integrated Water System Report.

Las Virgenes MWD
Normal Year vs. Dry Year Demands, AFY
**Conservation and Per Capita Water Use**

LVMWD selected as its calculation method the first DWR option, which requires a simple 20% reduction from the baseline by 2010 and 10 percent by 2015. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Per Capita Water Use Chart](image)

**Water Supply Reliability**

LVMWD’s UWMP indicated that future supplies are sufficient to meet its anticipated demands. LVMWD’s plan relies on MWD’s RUWMP as the basis for this conclusion. LVMWD’s plan assumes that since MWD’s plan lists a potential surplus of supply in normal, single dry year, and multiple dry years, the same percentage of potential surplus would be available to LVMWD for each of the years evaluated.

The plan includes a discussion of facilities LVMWD is planning to construct to enhance operations of its potable water system and expand its reclaimed water system. It also discusses a potential water transfer with Calleguas MWD to complete an intertie project to help fill its Las Virgenes reservoir. Presumably, this would not decrease overall MWD demands, as the water could likely come from MWD through Calleguas. Beyond the expansion of its reclaimed water system and use already included in its projections, no further potential reclaimed water or desalination projects are identified in the plan.
City of Long Beach

Overview

The City of Long Beach incorporates about 52 square miles in the southwest corner of the County of Los Angeles. Long Beach’s UWMP lists its current population at 462,257 and projects population to increase to 508,233 in the year 2035, an increase of 9.9% overall. Total normal year demand from the UWMP is expected to increase 11.8% over the same period, from 63,448 acre-feet in 2010 to 70,929 acre-feet in 2035. This demand increase is expected to be met by additional local water, including recycling and seawater desalination. These additional supplies are also expected to decrease MWD demands from 22,237 acre-feet in 2010 to 11,929 acre-feet in 2035.

Long Beach’s current water supplies include local groundwater from the West Coast Basin. According to the UWMP, Long Beach has a right to pump 32,692 acre-feet from the basin and has and will continue to fully utilize this supply.

Existing and Projected Future Water Supply and Demand

According to the plan, "Future water use projections were based on estimates developed in cooperation with MWDSC (which used input from LBWD and SCAG, feed that information into MWDSC’s econometric model), LBWD’s expectations for additional water conservation and the SBX7-7 urban water use target for LBWD." UWMP projected future demands are as follows:

City of Long Beach
Normal Year vs. Dry Year Demands, AFY

![Diagram showing normal vs. dry year demands from 2010 to 2035 for reclaimed, other local, and MWD supplies.]

- Reclaimed
- Other Local
- MWD
**Conservation and Per Capita Water Use**

Long Beach evaluated its SBX7-7 requirements using Method 1 and determined its per capita target to be 107 GPCD. The plan states that Long Beach did not account in its calculations for indirect potable reuse water that is used, in part, to charge the West Coast Basin. It reserved the right to use these supplies for calculation purposes in the future. This is because the City feels it can meet the water use target without having to account for this additional reclaimed water usage at this time. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![City of Long Beach Per Capita Water Use- Actual and Projected, GPCPD](image)

**Water Supply Reliability**

Long Beach's UWMP indicates that future supplies are sufficient to meet its anticipated demands. The plan relies, in part, on MWD's RUWMP as the basis for this conclusion with respect to imported water availability. The plan includes calculations of its preferential right from MWD and determines that even if MWD had only 1,500,000 acre-feet of supply, its 2.54% of preferential rights would provide 38,100 acre-feet of supply, and would sufficiently meet its current or future expected MWD demand of 22,237 and 11,929 acre-feet, respectively.

Long Beach is expanding its use of reclaimed water and has incorporated a seawater desalination plant that would provide up to 10,000 acre-feet of water, beginning in 2025. While the desalination plant's production was incorporated into Long Beach's future supplies, the plan states "If the desalination facility is not put into production LBWD will continue to purchase the same amount [as current] from MWDSC. This will have no impact of MWDSC's ability to supply reliable water to LBWD, due to the relatively minuscule amount of water involved compared to the total MWDSC supply, and for the reasons stated above [preferential right]in the discussion of imported water." Long Beach has no plans to pursue water transfers, and "will rely on MWDSC to make that determination and pursue transfers/exchanges."
City of Los Angeles

Overview

The City of Los Angeles Department of Water and Power (LADWP) provides water and power service to its 4,100,260 residents. The service area encompasses 472 square miles and residential development constitutes over 51 percent of the total land use within the City. LADWP's population is expected to grow 8.9% to 4,467,560 and water use is expected to increase 18.4%, from 545,962 acre-feet in 2010 to 646,432 acre-feet in 2035. Because 2010 was a dry year for LADWP local supplies, normal water year MWD supplies are expected to decrease from 262,538 acre-feet in 2010 to 193,027 acre-feet in 2035. However, Los Angeles has large swings in its MWD water demand depending on availability of water from its Los Angeles Aqueduct (LAA). In a single dry year LADWP estimates its 2035 demand on MWD to be 432,687 acre-feet, up 224% over it normal year demand for the same year. At the same time LAA supplies would have been reduced for a normal year of 244,000 acre-feet to 46,940 acre-feet.

LADWP also has groundwater water supplies currently providing about 77,000 acre-feet plus recycled supplies of 6,700 acre-feet.

Existing and Projected Future Water Supply and Demand

LADWP developed a statistical conservation model that correlates total monthly water use in the City with population, weather, the presence of mandatory water conservation, and economic recessions. The model can be used to predict what the water demand would be under actual weather conditions, population growth, and the economy. The model was calibrated with past conservation, population, and econometric data. Using this model LADWP forecast water use as follows:

City of Los Angeles
Normal Year vs. Dry Year Demands, AFY

- Reclaimed
- Other Local
- MWD

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal</th>
<th>Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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</tr>
<tr>
<td>2035</td>
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</tr>
</tbody>
</table>
**Conservation and Per Capita Water Use**

LADWP evaluated its SBX7-7 requirements using Method 3 and determined its per capita baseline to be 154 GPCD. LADWP’s interim target is 146 GPCD and the 2020 target is 138 GPCD. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Graph showing per capita water use](image)

**Water Supply Reliability**

LADWP’s UWMP indicates that future supplies are sufficient to meet its anticipated demands. The plan relies on MWD’s RUWMP as the basis for this conclusion with respect to imported water availability, but states that if imported water shortages should occur, then MWD’s Water Supply Allocation Plan would be implemented. The plan states that the WSAP was "designed to allocate supplies among its member agencies in a fair and efficient manner." It also states "whether LADWP can provide reliable water services to the residents of Los Angeles is highly dependent on MWD’s assurances of supply reliability. It further states that "the recent water supply shortage caused by dry weather and pumping restrictions in the Delta prompted the City to develop a more sustainable water supply portfolio."

LADWP plans to reduce its normal year purchases from MWD by half, from the five-year average of 52 percent of total demands between 2006 and 2010 to 24 percent by 2035. The dry year purchases would be nearly 63 percent. The reduction in normal year purchases would be accomplished by increasing recycled water use to 59,000 acre-feet (direct and indirect), annual water transfers of 40,000 acre-feet and increased groundwater usage to 110,000 acre-feet. The water transfers would be accomplished through an interconnection that LADWP is constructing between its LAA and the State water Project's
California Aqueduct. This connection will be owned by DWR and designated as an AVEK (Antelope Valley East Kern) interconnection. The plan states that MWD is involved in the agreement to provide consent for the transferred water to enter its service territory.

Under potential supplies, the plan states that storm water capture and reuse and groundwater replenishment could provide 25,000 acre-feet by 2035. LADWP's current water resources strategy does not include seawater desalination as a water supply.
Municipal Water District of Orange County

Overview

The Municipal Water District of Orange County is a regional water wholesaler and resource planning agency, managing all of Orange County's imported water supply with the exception of water imported to the cities of Anaheim, Fullerton, and Santa Ana. MWDOC serves imported water to 28 retail water agencies. MWDOC's 2010 RUWP lists its current population at 2,300,021 and projects populations to increase to 2,654,569 in the year 2035, an increase of 15.4%. Total Demand from the UWMP is expected to increase 17% over the same period, from 485,311 acre-feet in 2010 to 567,970 acre-feet in 2035.

Existing and Projected Future Water Supply and Demand

MWDOC requested that its member provide demand projections for the period 2015 to 2035, in five-year increments. The plan states that methodologies and assumptions underlying these projects vary from agency to agency, but all reflect the agencies knowledge of its service areas and "In most cases, the projections are correlated to the general plans prepared by the County of Orange or cities within MWDOC's service area."

MWDOC Normal Year vs. Dry Year Demands, AFY

Conservation and Per Capita Water Use

MWDOC, in collaboration with all of its retail agencies as well as the Cities of Anaheim, Fullerton, and Santa Ana, created an Orange County 20x2020 Regional Alliance in an effort to create flexibility in meeting the per capita water use reduction targets required under SBX7-7. The Regional Alliance
selected as its calculation method the first DWR option, which require a simple 20% reduction from the baseline by 2010 and 10 percent by 2015. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

MWDOC
Per Capita Water Use- Actual and Projected, GPCPD

![Water Use Graph]

**Water Supply Reliability**

MWDOC's UWMP indicates that future supplies are sufficient to meet its anticipated demands. MWDOC's plan relies on MWD's RUWMP as the basis for this conclusion. MWDOC's plan includes MWD's RUWMP Tables 2-11, 2-19, and 2-10 which list a potential surplus of supply in all years examined in its plan.

The plan includes a discussion of groundwater within MWDOC service area, including the Lower Santa Ana River Basin, San Juan Basin, La Habra Basin, Main San Gabriel, and other basins within its service area. Overall groundwater production within MWDOC service areas is projected to increase from 220,052 acre-feet in 2010 to 251,754 acre-feet in 2035. This increase includes 22,000 acre-feet of production from water quality improvement projects. From 2005 to 2009 groundwater pumping remained relatively flat, from 222,633 in 2005 to 226,967 acre-feet in 2009, with a high of 251,510 acre-feet in 2008. In January 2008 Orange County Water District's Groundwater Replenishment System (GRWS) came on line with a production capacity of up to 70 million gallons per day. The GRWS is designed to provide water to reduce seawater barrier intrusion and replenishment supplies to the basin.

MWDOC's plan lists a number of future water supply projects and programs that, if eventually implemented, might further reduce demands on MWD. Among these is Irvine Ranch Water District's (IRWD's) 50,000 acre-feet of storage capacity at the Strand Ranch in Kern County. This project could provide additional dry year supplies to IRWD. Two seawater desalination opportunities are also identified including a 50 MGD (56,000 acre-feet per year) plant in Huntington Beach and MWDOC's
proposal for a 15 MGD plant (16,000 acre-feet per year) in conjunction with Laguna Beach County Water District.
City of Pasadena

Overview

The City of Pasadena's Water and Power (PWP) service area is located within the northwest portion of the San Gabriel Valley in Los Angeles County, encompassing approximately 23 square miles, and is slightly larger than the legal boundary of the City of Pasadena. PWP's UWMP lists its current population at 175,957 and projects population to increase to 199,562 in the year 2035, an increase of 13.7% overall. Total normal year demand from the UWMP is expected to decrease 5.1% over the same period, from 38,460 acre-feet in 2010 to 36,510 acre-feet in 2035. Because local supplies are projected to increase slightly (recycled water) during this period, the projected decrease in use would be from MWD supplies.

PWP's current water supplies include local groundwater from the Raymond Basin, surface water diversions, and purchases of imported water. Declining groundwater level have reduced PWP's pumping in the basin, and surface water is now used to augment these supplies.

Existing and Projected Future Water Supply and Demand

Projections of water demand for Pasadena were developed as part of a recently completed Water Integrated Resources Plan based on historical water use factors, projected demographics, and passive water conservation. Demands were projected to increase from 2010 to 2035 without future active water conservation. With this conservation, the UWMP demands are as follows:

City of Pasadena
Normal Year vs. Dry Year Demands, AFY
Conservation and Per Capita Water Use

Pasadena evaluated its SBX7-7 requirements using Method 1 and determined its per capita target to be 168 GPCD and an interim target of 189 GPCD for 2015. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Pasadena
Per Capita Water Use - Actual and Projected, GPCPD

Water Supply Reliability

Pasadena’s UWMP indicates that future supplies are sufficient to meet its anticipated demands. The plan relies on MWD’s RUWMP as the basis for this conclusion with respect to imported water availability. Pasadena’s plan discusses how recycled water will be used in the future, eventually accounting for nearly 6 percent of demands. The plan contains a brief discussion of water transfers, but in the context of receiving water from adjoining agencies or leasing additional groundwater storage space in the Raymond Basin. With respect to desalinated water, the plan states there is the potential to develop a partnership with a regional agency to develop a facility and also mentions the San Diego County Water Authority’s Camp Pendleton projects as one such opportunity.
San Diego County Water Authority

Overview

The San Diego County Water Authority is a regional water wholesaler and resource planning agency, that provides imported water to the western part of San Diego County. The remaining portion of the county is not within SDCWA’s service area, nor does it receive imported water. SDCWA provides water to its 24 member agencies, supplying between 75 to 95 percent of the region's needs depending on weather conditions and yield from surface, recycled, and groundwater projects.

SDCWA’s 2010 RUWP lists its current population at 3.2 million and projects populations to increase to 3,906,718 in the year 2035, an increase of 22.1 percent. Total Demand from the UWMP is expected to increase 39% over the same period, from 566,443 acre-feet in 2010 to 785,685 acre-feet in 2035. Like many MWD agencies, 2010 demands were well below average due to drought and water use restrictions. Average demands for the period 2005-2010 was 648,030 acre-feet. Using this figure, increased demand to 2035 is expected to be about 20 percent.

Existing and Projected Future Water Supply and Demand

SDCWA service area demands include both agricultural and municipal uses. According to its UWMP, Municipal and Industrial (M&I) uses currently constitute about 80 to 85 percent of regional water consumption, with the remaining 15 to 20 percent being agricultural demands. In the future agricultural demand is expected to be less, and increase demands are anticipated to be in the M&I category.

M&I demands are forecast using an econometric water demand model call CWA-MAIN that has been calibrated for the region and uses various inputs regarding housing population and other significant factors provided by the San Diego Association of Governments (SANDAG). Agricultural demands are forecast using data from past trends, forecasted future efficiencies and crop and land use patterns. SDCWA incorporated anticipated climate change impacts into its forecast, which tend to suggest that the region have slight increases in demand over base conditions through 2035, but could be greater beyond this planning horizon.
Conservation and Per Capita Water Use

In its UWMP, SDCWA used urban water use targets that were calculated by each of its member agencies to determine the regional demand reductions required by SBX7-7 for inclusion in the plan. This was done in order to "clearly reflect retail compliance" with SBX7-7. For agencies that had already reach compliance, additional water use reductions were set to zero and the remaining use reductions were subtracted from the baseline derived from the CWA-MAIN model. No additional reductions are required after 2020, and SDCWA’s 2025 to 2035 GPCD targets were set at agencies’ 2020 GPCD targets. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:
Water Supply Reliability

SDCWA’s UWMP indicates that future supplies are sufficient to meet anticipated demands in normal and single dry years, but may be insufficient to meet its multiple dry years demands in certain instances. The potential shortages would be relatively mild and could occur by year 2015, be alleviated by the Carlsbad Desalination Project in 2016, and then begin to reoccur in by 2030 as demand and population increases. According to the plan, shortages could be up to 76,768 acre-feet (11 percent) in 2015 and up to 52,921 acre-feet (6 percent) in 2035. These potential shortages would be addressed through drought management actions.

The plan includes discussions of the SDCWA’s water transfer with the Imperial Irrigation District (existing supply being ramped up to 2020), conservation of water through the lining of the All-American Canal (existing supply) and other projections such as the Carlsbad Desalination project being developed by Poseidon Resources Corporation. The region has also planned to increase use of reclaimed water and brackish water, increase use of its local and out of region groundwater storage, and is looking at additional seawater desalination at Camp Pendleton in northern San Diego County.
City of San Fernando

Overview

The City of San Fernando is located in the San Fernando Valley northwest of downtown Los Angeles and is bounded on all sides by the City of Los Angeles. The City's total area is 2.42 square miles and overlies both the San Fernando and Sylmar groundwater basins.

San Fernando's 2010 RUWP lists its current population at 23,650 and projects populations to increase to 25,478 in the year 2035, an increase of 7.7%. Total normal year demand from the UWMP is expected to increase 14.3% over the same period, although this increase represents only 476 acre-feet because of the size of the City and its population. In 2010 San Fernando took no water from MWD, and projects only to use 476 acre-feet in 2035. San Fernando qualifies its projections of supply and demand, stating "[the tables for normal, dry year, and multiple dry years are] not intended to be an estimate of the City's actual groundwater production. The City may pump amounts different from its adjudicated right of 3,405 AFY based on leases to and from other agencies. The City may also overdraft up to 10% of this amount." The plan also states that actual demands are likely to be below the SBX7-7 limit of 136 GPCD in accordance with water efficiency trends in the City.

Existing and Projected Future Water Supply and Demand

San Fernando calculated its future demands based upon population forecast times 136 GPCD, which the UWMP states as less than its SBX7-7 target. Subject to the qualification shown above, the UWMP demands are as follows:
Conservation and Per Capita Water Use

San Fernando evaluated its required SBX7-7 requirements using both Method 1 and Method 3 and determined its per capita target to be 141.5 GPCD. For planning water demand, it used 136 GPCD, lower than what is required. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of San Fernando
Per Capita Water Use, Actual and Projected, GPCPD

Water Supply Reliability

San Fernando's UWMP indicates that future supplies are sufficient to meet its anticipated demands, but relies heavily on MWD's RUWMP as the basis for this conclusion. San Fernando's plan assumes that since MWD's plan lists a potential surplus of supply in normal, single dry year, and multiple dry years that the same percentage of potential surplus would be available to it for each of the years evaluated.

San Fernando's UWMP lists supplies exceeding demands in all cased evaluated. In any given year, the plan lists its local supplies as constant through a normal, single dry, and multiple dry year. MWD supplies, on the other hand vary during these various supply conditions, but still exceed the UWMP estimated demand.

San Fernando's UWMP discusses its plan to construct a denitrification plant at one of its wells. This may allow the City to increase slightly its groundwater pumping, but its purpose appears mainly intended to improve water quality and operational flexibility.
City of San Marino

Overview

The City of San Marino is located in the San Gabriel Valley, approximately 10 miles northeast of downtown Los Angeles. The City's total area is 3.77 square miles, with a population (2010) of 13,147.

San Marino is served water by California American Water Company, which prepared its 2010 Urban Water Management Plan. The plan includes the City of San Marino as part of California American's San Marino service area, which also encompasses customers in the City of Alhambra, Arcadia, El Monte, Pasadena, Rosemead, San Gabriel, East Pasadena, and East San Gabriel. California American serves a population of approximately 55,558 people with its San Marino service area.

The City of San Marino's population has remained steady over the past 10 years, growing only slightly from 12,945 to its current population. It is not expected that significant increases will occur in the future. With California American's San Marino service areas, population is expected to increase 11.8 percent, from 55,558 to 62,103 in 2030. Water deliveries by California American is expected to increase from 10,064 acre-feet in 2010 to 11,901 acre-feet in 2030, an increase of 18.2 percent.

Because the California American UWMP includes areas served in addition to the City of San Marino, and includes areas service by other MWD member agencies, the future water demand for the purposes of this report must be assumed. This assumption should not impact the accuracy of this report because of the fact that San Marino's population is relatively small and not expected to grow. For the purpose of this report, future demand on MWD is estimated to be the average of the past five years, as follows:

| MWD Deliveries (AF) to the City of San Marino |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 2006            | 1,208.6         | 2007            | 1,572.9         | 2008            | 895.1           | 2009            | 1,009.7         | 2010            | 583.8           | Average         | 1,054.0         |

| Assumed MWD Demand, Average, Dry, and Multiple Dry Years |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| 2015            | 1,054.0         | 2020            | 1,054.0         | 2025            | 1,054.0         | 2030            | 1,054.0         | 2035            | 1,054.0         |
**Water Supply Reliability**

California American's UWMP indicates that future supplies are sufficient to meet its anticipated demands but relies, in part, on MWD's RUWMP as the basis for this conclusion. The plan contains MWD's Tables 2-9, 10, and 11 that show MWD has surplus supplies in each scenario condition and year that it evaluated.
City of Santa Ana

Overview

The City of Santa Ana provides water to residents and businesses throughout its 27 square mile service area. The City receives water from two main sources: the Lower Santa Ana River Groundwater Basin, which is managed by the Orange County Water District and imported water from MWD. Groundwater is pumped from active wells located within the City and imported water is delivered through seven treated water connections from MWD.

Santa Ana's 2010 RUWP lists its current population at 358,136 and projects populations to increase to 382,591 in the year 2035, an increase of 6.8%. Total Demand from the UWMP is expected to increase 7.6% over the same period, from 46,800 acre-feet in 2010 to 50,400 acre-feet in 2035. This increased demand will be met by both increased groundwater pumping and deliveries from MWD.

Existing and Projected Future Water Supply and Demand

Santa Ana's demand projections were determined by an examination of its past water consumption by type of use or by customer classification and information provided the Center for Demographic Research at California State University Fullerton.

City of Santa Ana
Normal Year vs. Dry Year Demands, AFY

![Graph showing normal vs. dry year demands from 2010 to 2035 for different sources: Reclaimed, Other Local, MWD.](image-url)
Conservation and Per Capita Water Use

Santa Ana is a member of an Orange County 20x2020 Regional Alliance, which is an effort to create flexibility in meeting the per capita water use reduction targets required under SBX7-7. Most members of the Regional Alliance selected as its calculation method the first DWR option, which require a simple 20% reduction from the baseline by 2010 and 10 percent by 2015. With the assistance of MWDOC, the City chose option 3, which is to achieve 95% of the applicable state hydrologic region target. The City's targets for 2015 and 2020 are 118.5 and 108.9 GPCD, respectively. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

City of Santa Ana
Per Capita Water Use - Actual and Projected, GPCPD

Water Supply Reliability

Santa Ana's UWMP indicates that future supplies are sufficient to meet its anticipated demands. Anaheim's plan relies on MWD's RUWMP as the basis for this conclusion and includes MWD's RUWMP Tables 2-11, 2-19, and 2-10 which list a potential surplus of supply in all years examined in its plan.

The plan includes a discussion of groundwater and its management within the basin. It assumes the Basin Pumping Percentage will remain at 62% for the planning horizon. This percentage limits the amount of water the City can pump to a percentage of its total use. Use of direct recycled water within the City is expected to remain constant over the planning period, at 300 acre-feet per year. The plan states that the City supports OCWD's effort to increase recycled water use though its recharge of the groundwater basins. The plan lists potential desalination projects within Orange County, but does not include these projects in its projections.
City of Santa Monica

Overview

The City of Santa Monica’s service area is bordered by the Pacific ocean on the west, and the City of Los Angeles on the north, east and south. Santa Monica's 2010 RUWP lists its current population at 91,000 and projects virtually no growth, with a population of 92,124 in the year 2035. Total normal year demand reported in UWMP is expected to increase slightly, from 13,864 acre-feet in 2010 to 14,509 acre-feet in 2035. The majority of this demand increase is in recycled water. At the same time, MWD demand from Santa Monica is forecast to be zero, beginning in 2020 and throughout the remainder of the planning period. Increased groundwater production from the Santa Monica Basin accounts for this reduction in MWD demand. Santa Monica has a recycled dry weather urban runoff program that allow it to help eliminate contamination of Santa Monica Bay and capture and treat runoff for reuse in landscape irrigation and indoor plumbing.

Existing and Projected Future Water Supply and Demand

Santa Monica calculated its future demands based upon the population forecast times 140.6 GPCD. Subject to the qualification shown above, the UWMP demands are as follows:
**Conservation and Per Capita Water Use**

Santa Monica evaluated its required SBX7-7 requirements using both Method 1 and Method 3 and determined its per capita target to be 140.6 GPCD and used this figure for planning water demand. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

![Graph](image)

**Water Supply Reliability**

Santa Monica's UWMP indicates that future supplies are sufficient to meet its anticipated demands, but relies heavily on MWD's RUWMP as the basis for this conclusion. Santa Monica assumes that since MWD's plan lists a potential surplus of supply in normal, single dry year, and multiple dry years that the same percentage of potential surplus would be available to Santa Monica for each of the years evaluated.

Santa Monica's UWMP discusses the potential to expand recycled water use beyond what is contained in the plan, but does not quantify the additional water quantity that may be available from such expansions. Because Santa Monica already plans to eliminate normal and dry year MWD deliveries, additional expansion would have no impact on MWD. The UWMP also states that graywater use could increase, and that storm water capture and seawater desalination are not being considered for Santa Monica.
Three Valleys MWD

Overview

The Three Valleys MWD is a wholesale water provider to cities and water districts within the Pomona Valley, Walnut Valley, and eastern portion of the San Gabriel Valley in Los Angeles County. The district encompasses approximately 133.3 square miles and a current population of 573,799. The UWMP projects population to increase to 712,264 in the year 2035, an increase of 24.1% overall. Total normal year demand from the UWMP is expected to increase 20.8% over the same period, from 127,621 acre-feet in 2010 to 154,144 acre-feet in 2035. The projected increase of over 26,000 acre-feet is expected to come mainly from increased MWD purchases (over 21,000 acre-feet) and increased recycled water usage (5,000 acre-feet), with local groundwater pumping remaining nearly constant.

Three Valleys members current water supplies include local groundwater from the Chino, San Gabriel, Puente, Six Basins, and Spadra groundwater basins. The region also receives captured surface water from San Gabriel, San Dimas, and San Antonio canyon watersheds that provide water through Covina Irrigating Company, Golden State Water Company, and the City of Pomona. Typically, surface water provides about 5 to 8% of the total water demand within the TVMWD service area.

Existing and Projected Future Water Supply and Demand

According to its UWMP, projections of future water demand for TVMWD were developed by MWD using its MWD MAIN Water Use Forecasting model, taking into consideration demographics, hydrology, and regulatory/environmental restrictions. The plan states that local resources from the TVMWD service area will be tapped first to provide initial supply to meet overall demand. The balance will be met with imported supplies through MWD. Future demands from the UWMP are as follows:

Three Valleys MWD
Normal Year vs. Dry Year Demands, AFY
Conservation and Per Capita Water Use

TVMWD's UWMP contains a brief description of SBX7-7 requirements, including the following: "On a regional basis, the baseline water demand is estimated to be 193 gallons per capita per day (GPCD). A 20 percent reduction would lessen this to 154 GPCD. Based on population projections for 2020, this reduction translates to approximately 27,500 AF of projects and programs to lessen local dependence on potable supplies. Achieving this will require additional local and regional investments in both conservation and recycled water. TVMWD will work with its retail member agencies to develop policies and programs to address individual water reduction targets."

Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

Water Supply Reliability

TVMWD's plan indicates that it relies "primarily on the availability of MWD supplies to gauge reliability."
The plan refers to MWD's RUWMP: "wherein MWD explains the measures it has taken to try and guard against shortages in imported supplies coming from the two primary sources [SWP and Colorado River]." The plan also refers to MWD's groundwater banking/storage agreements, surface water storage, and conservation programs. The plan also discusses groundwater and conjunctive use programs within its service areas, such as the Chino Basin Dry-Year Yield Program and TVMWD's cyclic storage account in the Main San Gabriel Basin.

The plan states that there are several "avenues" that TVMWD and its member agencies can take to improved long-term water supply reliability including conjunctive use, cyclic storage, groundwater recover, and additional resource development. Specific projects are listed that could, cumulatively, provide an annual 28,000 acre-feet of additional yield into the TVMWD service area.
City of Torrance

Overview

The City of Torrance's Torrance Municipal Water (TMW) service area is approximately 16.2 square miles and comprises about 78 percent of the land within the City limits. California Water Service provides water service to the remaining portion of the City.

Torrance's 2010 UWMP lists its current population within TMW at 113,500 and projects the population to increase to 116,610 in the year 2035, an increase of 2.7% overall. Total normal year demand from the UWMP is expected to decrease 2.7% over the same period, from 25,203 acre-feet in 2010 to 24,522 acre-feet in 2035. At the same time, MWD demand within TMW is shown in the UWMP to decrease from 16,471 acre-feet to 9,332 acre-feet. The decrease in MWD supply listed in the UWMP is a result of increased groundwater, brackish water and recycled water use. Torrance qualifies its projections of supply and demand, stating "[the tables for normal, dry year, and multiple dry years are] not intended to be an estimate of the City's actual supply. City may pump amounts different from its adjudicated right of 5,640 AFY based on leases & may expand its Desalter Facility. Additionally, imported supplies may or may not be reduced. [These tables are] also not intended to be a projection of the City's actual demand. Demand of 133 GPCD is a conservative estimate based on SDx7-7 limits. Actual demand is likely to be below 133 GPCD with water efficiency trends in the City."

TMW pumps its groundwater from the West Coast Basin and uses desalted groundwater produced by the Water Replenishment District's Robert W. Goldsworthy Desalter. It also purchases reclaimed water from West Basin MWD.

Existing and Projected Future Water Supply and Demand

Torrance calculated its future demands based on the population forecast times 133 GPCD, which the UWMP states is less that its SBX7-7 target. Subject to the qualification shown above, the UWMP demands are as follows:
Conservation and Per Capita Water Use

Torrance evaluated its required SBX7-7 requirements using both Method 1 and Method 3 and determined its per capita target to be 141.5 GPCD. For planning water demand, it used 133 GPCD, lower than what is required. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows, but it should be recognized that a portion of the water from the TWD Well #6 and the Goldsworthy Desalter may not necessarily be included in a GPCD calculation for SBX7-7 reporting purposes:

City of Torrance
Per Capita Water Use- Actual and Projected, GPCPD
**Water Supply Reliability**

Torrance's UWMP indicates that future supplies are sufficient to meet its anticipated demands, but relies on MWD's RUWMP as the basis for this conclusion. Torrance's plan assumes that since MWD's plan lists a potential surplus of supply in normal, single dry year, and multiple dry years that the same percentage of potential surplus would be available to TMW for each of the years evaluated.

Torrance's UWMP lists supplies exceeding demands in all cases evaluated. In any given year, the plan lists its local supplies as constant through a normal, single dry year, and multiple dry years. MWD supplies, on the other hand, vary during these various supply conditions, but still exceed the UWMP estimated demand.

Torrance's UWMP discusses the potential to expand recycled water use and the Robert W. Goldsworthy Desalter. The plan does not quantify the additional water that may be available for such expansions. The plan also states that gray water use could increase, and that storm water capture and seawater desalination are not viable options for the TMW.
Upper San Gabriel Valley MWD

Overview

Upper San Gabriel Valley MWD (Upper District) is a wholesale water agency that supplies imported water from MWD and recycled water to its sub-agencies. Upper District is located within the San Gabriel Valley in Los Angeles County and overlies the "Main Basin." It service area is about 144 square miles and includes all or portions of 18 separate cities. The service area is largely urbanized consisting mainly of residential, light industrial, and commercial uses.

Upper District's UWMP lists its current population at 903,000 and projects population to increase to 1,025,000 in the year 2035, an increase of 13.5% overall. Total normal year demand from the UWMP is expected to increase only 1.6% over the same period, from 163,101 acre-feet in 2010 to 165,747 acre-feet in 2035. This demand increase is expected to be met by increasing reclaimed water use. Imported water constitutes a relatively small percentage of usage within the Upper District service area, accounting for 22,633 acre-feet in 2010. Under "normal" conditions Upper District expects to use 3,000 acre-feet of MWD firm supplies and 16,000 to 25,000 acre-feet of non-firm MWD supplies. Upper District's UWMP assumes that non-firm supplies would be available in both single dry and multiple dry year conditions, however for the purposes of this analysis single dry and multiple dry year MWD demands were treated as a firm demand, based on what occurred in 2010 when non-firm supplies were not available.

Existing andProjected Future Water Supply and Demand

According to the UWMP, Upper District is required to receive projections of water use from its retail urban water wholesalers. While not available for its plan, Upper District "reviewed projected values" based on historical trends and projected population. Upper District provides a relatively small percentage (14 to 16%) of the water in its service area. UWMP projected future demands are:
**Conservation and Per Capita Water Use**

Because Upper District is a wholesaler of water it is not required to set future per-capita targets. Presumably this is done individually or collectively by the 18 cities within the district. According to the plan, Upper District does have the ability to monitor water use within its boundaries. The district keeps track of local water use on a quarterly basis and imported water usage on a monthly basis. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:
**Water Supply Reliability**

Upper District's plan states "Metropolitan's 2010 RUWMP has concluded that the region can provide reliable water supplies under both the single driest year and the multiple dry year hydrologies for the next 20 years. The 2010 RUWMP prepared by Metropolitan, which is incorporated by reference, should be referred to for more details on the reliability of Metropolitan's imported water supplies. With regards to groundwater from the Main Basin, Upper District plan states "As noted in Chapter 3, the Main Basin is a well-managed groundwater basin and can ensure long-term reliability of water supply."

Upper District's plan discusses projects and facilities that will increase recycled water production from 6,000 acre-feet in 2010 to 15,000 acre-feet by 2030. Included is Phase IIA- Rosemead extension and Phase IIB- Industry Project, which will provide recycled water from the Whittier Narrows Water Reclamation Plant to a golf course, schools, parks, industrial complexes, and other projects.
West Basin MWD

Overview

The West Basin Municipal Water District is a wholesale water agency that provides potable water and recycled water to 17 cities, investor owned utilities, water districts and private companies. It covers approximately 185 square miles and a current population of 853,377. Its current population is expected to grow 10.5% by 2035 to 942,893. Water use is also expected to increase 8.1%, from 179,507 acre-feet in 2010 to 194,123 acre-feet in 2035. While overall water use is expected to increase, use of MWD supplies is expected to decrease over 30,000 acre-feet per year, due to increased direct use of recycled water, indirect use of recycled water and construction of a seawater desalination project. WBMWD's plan shows non-firm deliveries of up to 20,480 acre-feet per year from MWD in add demand scenarios, including single dry year and multiple dry years.

Existing and Projected Future Water Supply and Demand

West Basin completed a Demand Forecasting Model in 2010 for use in future water supply planning. The model produces various scenarios depending on the level of conservation activities, cost of waster, economic recovery and weather changes. The UWMP demands are as follows:

West Basin MWD
Normal Year vs. Dry Year Demands, AFY

Conservation and Per Capita Water Use

WBMWD's plan states that as a regional water supply wholesale area it is not required by SBX7-7 to report baseline targets, however it elected to do so as the reporting agency for a regional alliance formed by some of its customers. The base use was calculated for each member and ranges from 94.6
GPCD for California Water Service Hawthorne to 319.4 GPCD for Los Angeles County Water Works District #29. The combined base is 227.7 GPCD. Using method 1 the combined final targets are 194.1 and 160.5 GPCD for 2015 and 2020 respectively. Using population data and average and dry year UWMP forecasts, the per capita use is projected as follows:

West Basin MWD
Per Capita Water Use- Actual and Projected, GPCPD

Water Supply Reliability

WBMWD's UWMP does not anticipate future shortages in any of the scenarios evaluated. The plan cites MWD’s 2010 RUWMP as being able to meet imported water demands and "as a result, there will be no anticipated shortages under any dry year scenarios. It further states "Any shortfall in supplies will be met through imported water so long as MWD manages its supply and demand balance through its Water Surplus and Drought Management Plans.

The plan describes WBMWD's intent to increase recycled water use through both direct and indirect means. Recycled water use (direct and indirect) is expected to increase from 21,888 acre-feet per year in 2010 to 57,862 acre-feet in 2035. At the same time WBMWD anticipates seawater desalination to provide 21,500 acre-feet per year. While the seawater desalination plant is included in its UWMP, the plan states that the Ocean Water Desalination Demonstration Facility will test its viability. WBMWD is current preparing a Desalination Program Master Plan.
Western Municipal Water District (MWD)

Overview

The Western Municipal Water District provides both wholesale and retail water service to western Riverside County. Western serves imported and local supplies on a wholesale basis to nine local area water purveyors, including a portion of the Rancho California Water District. Western also has a retail service area that it provides with similar water supplies. The general district (wholesale and retail areas combined) consists of 527 square miles and an estimated population of more than 860,000 people. Western’s retail service area population is currently 85,469 and is expected to grow by 88.4% to 161,016 by 2035. The UWMP does not give estimated population growth figures for the entire service area. Water use within the retail area is expected to grow from 24,741 acre-feet in 2010 to 46,968 acre feet in 2035, an increase of 89%. However, in 2009 water use in the retail area was roughly 30,000 acre-feet, so increased usage from 2009 to 2035 is expected to be about 56.6%. 2035 demand projects include additional conservation that is expected to occur.

Existing and Projected Future Water Supply and Demand

Western developed its Water Demand Forecast (WDF) model to help project future water demands within the retail and wholesale service area. The WDF is a GIS based application that uses general plan land use data to project water demands. Using the underlying land use information, the WDF takes user inputs on unit demands and growth rate assumptions to project demands from the year 2006 to buildout. The WDF model results were used as the basis of water projections for Western’s retail service area, and was offered to its member agencies during the UWMP public coordination process. However, a number of agencies preferred to develop their own demand projections and their results were incorporated into the Western UWMP. The UWMP demands are as follows:

Western MWD
Normal Year vs. Dry Year Demands, AFY

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal</th>
<th>Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>20,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2015</td>
<td>40,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2020</td>
<td>60,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2035</td>
<td>80,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>

- Normal Year
- Dry Year

Water supply sources include:
- Reclaimed Water
- Other Local Sources
- MWD Sources

Western MWD

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal</th>
<th>Dry</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>20,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2015</td>
<td>40,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2020</td>
<td>60,000</td>
<td>80,000</td>
</tr>
<tr>
<td>2035</td>
<td>80,000</td>
<td>80,000</td>
</tr>
</tbody>
</table>
**Conservation and Per Capita Water Use**

Western's UWMP states that it will need to reduce current water use demands in its retail areas by approximately 5 percent by 2015 and 10 percent by 2020. It is increasing its recycled water use by 730 acre-feet for a total of 1,500 acre-feet by year 2020. Western has a Water Use Efficiency Master Plan to accomplish its conservation goals. The plan describes the measures it will take to reach their goal and incorporates numerical conservation savings into its forecasted demand. The plan does not state specifically what its GPCD targets are or the method used to calculate reductions. However, the plan appears to reflect reduced per capita water usage in the future. Using population data and average year UWMP forecasts, the per capita use is projected as follows:

![Western MWD Per Capita Water Use - Actual and Projected, GPCPD Retail Area Only](image)

**Water Supply Reliability**

Western's UWMP shows water supplies exceeding demands under all conditions evaluated. The plan states "As part of its 2010 Regional Urban Water Management Plan, MWD evaluated the dependability of these [SWP and CRA] supplies and concluded that the combination of imported water and expanded local resource programs would ensure that its service area's demands would be met in the future. Western is relying on MWD's 2010 Regional Urban Water Management Plan to evaluate the reliability of imported supplies and the amount of imported water which will be available in the Western Service area."
Table 3-2 in Western’s UWMP shows Current and Planned Imported Water Supplies from MWD. The plan states "The demands documented in Table 3-2 have been provided to MWD and were included in MWD’s 2010 Regional Urban Water Management Plan." However, the demands shown in Table 3-2 far exceed Western’s Total Forecasted Demands, shown in the UWMP Table 2-15, as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 2-15, Total Forecasted Demands on Western's Water Supplies, Acre-Feet</td>
<td>118,640</td>
<td>124,042</td>
<td>134,684</td>
<td>145,164</td>
<td>156,231</td>
</tr>
<tr>
<td>Table 3-2, Current and Planned Imported Water Supplies from MWD, Acre-Feet</td>
<td>160,313</td>
<td>174,127</td>
<td>184,131</td>
<td>195,301</td>
<td>208,035</td>
</tr>
</tbody>
</table>

According to the UWMP, the supplies shown in Table 3-2 are expected to be available to Western in single-dry and multiple dry years. Because of this, the plan shows that supplies far exceed demands in each evaluated scenario. Using normal year demands from Table 5-1 and available local supplies the actual demand on MWD is expected to be as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western UWMP Table 5-1 Normal Demands, Adjusted for Conservation, Acre-feet</td>
<td>118,640</td>
<td>127,879</td>
<td>138,982</td>
<td>149,922</td>
<td>161,450</td>
</tr>
<tr>
<td>MWD Demands, Calculated as Normal Demands less Available Local Supplies, Acre-feet</td>
<td>99,970</td>
<td>107,649</td>
<td>118,192</td>
<td>128,012</td>
<td>138,420</td>
</tr>
</tbody>
</table>

Despite the assumption that MWD will have more than sufficient supplies to meet demands, Western is developing additional reclaimed water supplies, participating in the expansion of the Arlington Desalter and expanding a groundwater banking program in the San Bernardino Basin Area (SBBA).
Appendix B

Member Agency Data from Urban Water Management Plans
### City of Anaheim

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Population</strong></td>
<td>Projected</td>
<td>364,921</td>
<td>383,768</td>
<td>395,769</td>
<td>409,096</td>
<td>424,558</td>
<td>432,949</td>
<td>364,921</td>
<td>383,768</td>
<td>395,769</td>
<td>409,096</td>
<td>424,558</td>
<td>432,949</td>
<td>364,921</td>
<td>383,768</td>
<td>395,769</td>
<td>409,096</td>
<td>424,558</td>
<td>432,949</td>
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<tr>
<td><strong>Water Demands</strong></td>
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</tr>
<tr>
<td>Firm Demand</td>
<td></td>
<td>66,929</td>
<td>72,180</td>
<td>73,345</td>
<td>75,645</td>
<td>77,245</td>
<td>77,445</td>
<td>66,929</td>
<td>78,479</td>
<td>79,748</td>
<td>82,248</td>
<td>83,988</td>
<td>84,205</td>
<td>66,929</td>
<td>78,479</td>
<td>79,748</td>
<td>82,248</td>
<td>83,988</td>
<td>84,205</td>
</tr>
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<td>Recycled Demand, Direct</td>
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<td>-</td>
<td>220</td>
<td>255</td>
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<td>255</td>
<td>255</td>
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<td>255</td>
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<td>220</td>
<td>255</td>
<td>255</td>
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<tr>
<td><strong>Non-Firm, Replenishment</strong></td>
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<tr>
<td>Total Demand</td>
<td></td>
<td>66,929</td>
<td>72,400</td>
<td>73,600</td>
<td>75,900</td>
<td>77,500</td>
<td>77,700</td>
<td>66,929</td>
<td>78,699</td>
<td>80,003</td>
<td>82,503</td>
<td>84,243</td>
<td>84,460</td>
<td>66,929</td>
<td>78,699</td>
<td>80,003</td>
<td>82,503</td>
<td>84,243</td>
<td>84,460</td>
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<tr>
<td><strong>Water Supply</strong></td>
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<tr>
<td>Imported, MWD non-firm</td>
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<td><strong>Surface Supply/Storage</strong></td>
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<tr>
<td>Recycled, Indirect</td>
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<tr>
<td>Seawater</td>
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<tr>
<td><strong>Total Water Supply</strong></td>
<td></td>
<td>66,929</td>
<td>72,400</td>
<td>73,600</td>
<td>75,900</td>
<td>77,500</td>
<td>77,700</td>
<td>66,929</td>
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<td>80,003</td>
<td>82,503</td>
<td>84,243</td>
<td>84,460</td>
<td>66,929</td>
<td>78,699</td>
<td>80,003</td>
<td>82,503</td>
<td>84,242</td>
<td>84,460</td>
</tr>
<tr>
<td><strong>Per Capita Use GPCPD</strong></td>
<td></td>
<td>163.7</td>
<td>168.4</td>
<td>166.0</td>
<td>165.6</td>
<td>163.0</td>
<td>160.2</td>
<td>163.7</td>
<td>183.1</td>
<td>180.5</td>
<td>180.0</td>
<td>177.1</td>
<td>174.2</td>
<td>163.7</td>
<td>183.1</td>
<td>180.5</td>
<td>180.0</td>
<td>177.1</td>
<td>174.2</td>
</tr>
<tr>
<td><strong>Per Capita less Recycled/Non-Firm</strong></td>
<td></td>
<td>163.7</td>
<td>167.9</td>
<td>165.4</td>
<td>165.1</td>
<td>162.4</td>
<td>159.7</td>
<td>163.7</td>
<td>182.6</td>
<td>179.9</td>
<td>179.5</td>
<td>176.6</td>
<td>173.6</td>
<td>163.7</td>
<td>182.6</td>
<td>179.9</td>
<td>179.5</td>
<td>176.6</td>
<td>173.6</td>
</tr>
</tbody>
</table>

**Notes**

207 of 564
<table>
<thead>
<tr>
<th>City of Beverly Hills</th>
<th>Normal Water Year</th>
<th>Single Dry Water Year</th>
<th>Multiple Dry Water Year</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>Population Projection</td>
<td>45,000</td>
<td>45,632</td>
<td>46,144</td>
<td>46,646</td>
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<tr>
<td>Water Demands</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firm Demand</td>
<td>11,562</td>
<td>11,654</td>
<td>11,786</td>
<td>11,913</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Demand</td>
<td>11,562</td>
<td>11,654</td>
<td>11,786</td>
<td>11,913</td>
</tr>
<tr>
<td>MWD Firm Demand</td>
<td>10,473</td>
<td>10,854</td>
<td>10,986</td>
<td>11,113</td>
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<td>Water Supply</td>
<td></td>
<td></td>
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<tr>
<td>Imported, Other</td>
<td>1,089</td>
<td>800</td>
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<td>Total Local</td>
<td>1,089</td>
<td>800</td>
<td>800</td>
<td>800</td>
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<tr>
<td>Per Capita Water Use GPCPD</td>
<td>229.4</td>
<td>228.0</td>
<td>228.0</td>
<td>228.0</td>
</tr>
<tr>
<td>Per Capita less Recycled/Non-Firm</td>
<td>229.4</td>
<td>228.0</td>
<td>228.0</td>
<td>228.0</td>
</tr>
</tbody>
</table>

Notes:
2010 Groundwater pumping for 2010 assumed to be the difference between MWD deliveries and demand from UWMP.
## City of Burbank

<table>
<thead>
<tr>
<th></th>
<th>Normal Water Year</th>
<th></th>
<th>Single Dry Water Year</th>
<th></th>
<th>Multiple Dry Water Year- Year 3</th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2010</td>
<td>2015</td>
<td>2020</td>
<td>2025</td>
<td>2030</td>
<td>2035</td>
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<tr>
<td>Population Projection</td>
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<td>115,986</td>
<td>120,436</td>
<td>124,712</td>
<td>128,088</td>
<td>132,877</td>
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<td>Water Demands</td>
<td></td>
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<td></td>
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<tr>
<td>Firm Demand</td>
<td>17,769</td>
<td>17,750</td>
<td>18,481</td>
<td>19,141</td>
<td>19,779</td>
<td>20,391</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>2,010</td>
<td>3,660</td>
<td>5,160</td>
<td>5,160</td>
<td>5,160</td>
<td>5,160</td>
</tr>
<tr>
<td>Non-Firm, Replenishment</td>
<td>2,034</td>
<td>2,100</td>
<td>500</td>
<td>300</td>
<td>200</td>
<td>100</td>
</tr>
<tr>
<td>Total Demand</td>
<td>21,813</td>
<td>23,510</td>
<td>24,141</td>
<td>24,601</td>
<td>25,139</td>
<td>25,651</td>
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<tr>
<td>MWD Firm Demand</td>
<td>7,852</td>
<td>6,750</td>
<td>7,481</td>
<td>8,141</td>
<td>8,779</td>
<td>9,391</td>
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<td>Water Supply</td>
<td></td>
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<tr>
<td>Imported, MWD firm</td>
<td>7,852</td>
<td>6,750</td>
<td>7,481</td>
<td>8,141</td>
<td>8,779</td>
<td>9,391</td>
</tr>
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<td>Imported, MWD non-firm</td>
<td>2,034</td>
<td>2,100</td>
<td>500</td>
<td>300</td>
<td>200</td>
<td>100</td>
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<tr>
<td>Groundwater, Potable</td>
<td>9,917</td>
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<td>11,000</td>
<td>11,000</td>
<td>11,000</td>
<td>11,000</td>
</tr>
<tr>
<td>Surface Supply/Storage</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Recycled, Direct</td>
<td>2,010</td>
<td>3,660</td>
<td>5,160</td>
<td>5,160</td>
<td>5,160</td>
<td>5,160</td>
</tr>
<tr>
<td>Recycled, Indirect</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brackish Water</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Seawater</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Conservation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Local</td>
<td>11,927</td>
<td>14,660</td>
<td>16,160</td>
<td>16,160</td>
<td>16,160</td>
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</tr>
<tr>
<td>Total Water Supply</td>
<td>21,813</td>
<td>23,510</td>
<td>24,141</td>
<td>24,601</td>
<td>25,139</td>
<td>25,651</td>
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<tr>
<td>Per Capita Water Use GPCPD</td>
<td>179.5</td>
<td>181.0</td>
<td>179.0</td>
<td>176.1</td>
<td>174.1</td>
<td>172.3</td>
</tr>
<tr>
<td>Per Capita less Recycled/Non-Firm</td>
<td>146.2</td>
<td>136.6</td>
<td>137.0</td>
<td>137.0</td>
<td>137.0</td>
<td>137.0</td>
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</tbody>
</table>

### Notes
- 209 of 564
### Calleguas MWD

#### Population Projection

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal Water Year</th>
<th>Single Dry Water Year</th>
<th>Multiple Dry Water Year- Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>612,399</td>
<td>659,330</td>
<td>692,657</td>
</tr>
<tr>
<td>2015</td>
<td>620,653</td>
<td>669,055</td>
<td>702,388</td>
</tr>
<tr>
<td>2020</td>
<td>719,055</td>
<td>730,788</td>
<td>719,055</td>
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</tbody>
</table>

#### Water Demands

- **Firm Demand**
  - 2010: 164,829
  - 2015: 167,809
  - 2020: 171,414
  - 2025: 173,664
  - 2030: 179,073
  - 2035: 182,985
- **Recycled Demand, Direct**
  - 2010: 6,947
  - 2015: 12,009
  - 2020: 17,275
  - 2025: 18,457
  - 2030: 19,091
  - 2035: 19,175

#### Non-Firm, Replenishment

- **Total Demand**
  - 2010: 171,776
  - 2015: 179,818
  - 2020: 188,687
  - 2025: 192,121
  - 2030: 198,164
  - 2035: 202,160

#### Water Supply

- **MWD Firm Demand**
  - 2010: 116,867
  - 2015: 113,384
  - 2020: 118,283
  - 2025: 124,810
  - 2030: 128,105

#### Water Supply Import

- **Import, MWD firm**
  - 2010: 116,867
  - 2015: 113,384
  - 2020: 118,283
  - 2025: 124,810
  - 2030: 128,105

#### Groundwater, Potable

- 2010: 40,094
- 2015: 33,595
- 2020: 31,365
- 2025: 30,345
- 2030: 31,495

#### Surface Supply/Storage

- **Recycled, Direct**
  - 2010: 6,947
  - 2015: 12,009
  - 2020: 17,275
  - 2025: 18,457
  - 2030: 19,091

#### Other

- **Conservation**
  - 2010: 54,909
  - 2015: 66,434
  - 2020: 70,404
  - 2025: 70,974
  - 2030: 73,354
  - 2035: 74,015

#### Per Capita Water Use GPCPD

- 2010: 242.5
- 2015: 243.5
- 2020: 246.8
- 2025: 244.2
- 2030: 249.8
- 2035: 247.0

#### Notes

1. Population Projections based on MWD/SCAG. Alternative projection is also shown in UWMP.
2. Local supply and imported demands are based upon CMWD projections. MWD projections are higher.
3. CMWD does not separate recycled demand from firm demand. CMUD subtracts local supplies to determine imported demand.
<table>
<thead>
<tr>
<th></th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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<tbody>
<tr>
<td><strong>Central Basin MWD</strong></td>
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<td>1,770,700</td>
<td>1,751,519</td>
<td>1,781,368</td>
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<td>Water Demands</td>
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</tr>
<tr>
<td>Firm Demand</td>
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<td>239,125</td>
<td>241,285</td>
<td>244,470</td>
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<td>248,040</td>
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<tr>
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<td>6,632</td>
<td>6,700</td>
<td>11,000</td>
<td>16,000</td>
<td>16,000</td>
<td>16,000</td>
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<tr>
<td>Non-Firm, Replenishment</td>
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</tr>
<tr>
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<td>250,864</td>
<td>261,470</td>
<td>263,355</td>
<td>265,040</td>
<td>269,585</td>
</tr>
<tr>
<td>MWD Firm Demand</td>
<td>63,443</td>
<td>63,443</td>
<td>63,443</td>
<td>63,443</td>
<td>63,443</td>
<td>63,443</td>
</tr>
<tr>
<td>Water Supply</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Imported, MWD firm (2)</td>
<td>63,443</td>
<td>72,360</td>
<td>72,360</td>
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<tr>
<td>Groundwater, Potable</td>
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<td>194,400</td>
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<td>194,400</td>
<td>194,400</td>
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<tr>
<td>Surface Supply/Storage</td>
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<td>12,900</td>
<td>17,900</td>
<td>17,900</td>
<td>17,900</td>
<td>17,900</td>
</tr>
<tr>
<td>Recycled, Indirect</td>
<td>6,632</td>
<td>12,900</td>
<td>17,900</td>
<td>17,900</td>
<td>17,900</td>
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<tr>
<td>Seawater</td>
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<tr>
<td>Other</td>
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<td>284,660</td>
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<tr>
<td>Per Capita Water Use GPCPD</td>
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<td>140.6</td>
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<tr>
<td>Per Capita less Recycled/Non-Firm</td>
<td>128.3</td>
<td>126.4</td>
<td>125.2</td>
<td>124.6</td>
<td>123.5</td>
<td>122.4</td>
</tr>
</tbody>
</table>

Notes:
1. Population Projections based on MWD/SCAG. Alternative projection is also shown in UWMP.
2. MWD Firm demands calculated from Table 2-4
3. MWD Demands based on MWD Tier 1 purchase order contract, per plan
4. MWD firm demand in normal years is MWD demand, less 21,000 replenishment
### City of Compton

#### Population Projection

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>81,963</td>
<td>84,669</td>
<td>87,365</td>
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#### Water Demands

**Firm Demand**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8,929</td>
<td>9,522</td>
<td>10,121</td>
<td>10,455</td>
</tr>
</tbody>
</table>

**Recycled Demand, Direct**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8,929</td>
<td>9,522</td>
<td>10,121</td>
<td>10,455</td>
</tr>
</tbody>
</table>

**Total Demand**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8,929</td>
<td>9,522</td>
<td>10,121</td>
<td>10,455</td>
</tr>
</tbody>
</table>

#### Water Supply

**MWD Firm Demand**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,603</td>
<td>3,704</td>
<td>4,018</td>
<td>4,341</td>
</tr>
</tbody>
</table>

**Imported, MWD firm**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,803</td>
<td>3,704</td>
<td>4,018</td>
<td>4,341</td>
</tr>
</tbody>
</table>

**Imported, MWD non-firm**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,803</td>
<td>3,704</td>
<td>4,018</td>
<td>4,341</td>
</tr>
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</table>

**Imported, Other**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2,803</td>
<td>3,704</td>
<td>4,018</td>
<td>4,341</td>
</tr>
</tbody>
</table>

**Groundwater, Potable**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Surface Supply/Storage**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Recycled, Direct**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Recycled, Indirect**

<table>
<thead>
<tr>
<th>Year</th>
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<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Other**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Groundwater, Non-Potable**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6,326</td>
<td>5,780</td>
<td>5,780</td>
<td>5,780</td>
</tr>
</tbody>
</table>

**Total Local**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9,129</td>
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<td>9,708</td>
<td>9,942</td>
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</tbody>
</table>

**Total Water Supply**

<table>
<thead>
<tr>
<th>Year</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9,129</td>
<td>9,484</td>
<td>9,708</td>
<td>9,942</td>
</tr>
</tbody>
</table>

#### Per Capita Water Use (GPCPD)

<table>
<thead>
<tr>
<th>Year</th>
<th>Normal Water Year</th>
<th>Single Dry Water Year</th>
<th>Multiple Dry Water Year - Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>97.3</td>
<td>100.0</td>
<td>101.5</td>
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</tbody>
</table>

#### Notes

- Population, Supply and Demand for 2035 is 2030 data.
- Supplies for Dry and Multiple Dry are listed as same for average year. UWMP states that additional MWD surplus water would be available, although conservation would be in effect.
### Eastern MWD

#### Normal Water Year

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
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<td>695,923</td>
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<td>870,603</td>
<td>960,053</td>
<td>1,064,818</td>
<td>1,111,729</td>
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#### Water Demands

<table>
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<tr>
<th>Type</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Demand</td>
<td>116,561</td>
<td>170,000</td>
<td>191,400</td>
<td>210,700</td>
<td>246,900</td>
<td>257,600</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>41,500</td>
<td>45,500</td>
<td>51,800</td>
<td>56,900</td>
<td>57,300</td>
<td>57,700</td>
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</table>

#### Non-Firm, Replenishment

<table>
<thead>
<tr>
<th>Type</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Demand</td>
<td>158,061</td>
<td>213,900</td>
<td>241,400</td>
<td>265,300</td>
<td>285,600</td>
<td>302,200</td>
</tr>
<tr>
<td>MWD Firm Demand</td>
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<td>170,700</td>
<td>190,700</td>
<td>210,000</td>
<td>226,200</td>
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#### Water Supply

<table>
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<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported, MWD firm</td>
<td>88,391</td>
<td>149,300</td>
<td>170,700</td>
<td>190,700</td>
<td>210,000</td>
<td>226,200</td>
</tr>
<tr>
<td>Groundwater, Potable</td>
<td>22,383</td>
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<td>13,200</td>
<td>13,200</td>
<td>13,200</td>
<td>13,200</td>
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<tr>
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<td>45,500</td>
<td>51,800</td>
<td>56,900</td>
<td>57,300</td>
<td>57,700</td>
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<tr>
<td>Brackish Water</td>
<td>5,787</td>
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#### Conservation

<table>
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<th>2035</th>
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</thead>
<tbody>
<tr>
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</table>

#### Total Water Supply

<table>
<thead>
<tr>
<th>Year</th>
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<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>158,061</td>
<td>213,900</td>
<td>241,400</td>
<td>265,300</td>
<td>285,600</td>
<td>302,200</td>
<td></td>
</tr>
</tbody>
</table>

#### Per Capita Water Use GPCPD

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal Water Year</td>
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<td>244.9</td>
<td>247.5</td>
<td>246.7</td>
<td>244.3</td>
<td>242.7</td>
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#### Notes

- 2010 Supply figures from MWD and Table 3.1
- Population is for entire service area. Per capita is calculated based on retail area.
- All figures included sales to others
- 2010 GW figures calculated
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Notes:
Population Provided by member retail agencies.
Recycled water shown is produced by LA County San and delivered to golf course.
### City of Fullerton

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<td>Total Demand</td>
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Notes
MWD Demand shown is from available MWD supplies in RUWMP. These figures are less than MWD projections as pointed out in Plan.
MWD Demand could be less, if City uses its local supplies to the extent they are available.
### Inland Empire Utilities Agency

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**Notes**

- Recycled water direct use from table 3-15
- Recycled, indirect includes recharge potential
- Other includes balance of recycled supply available
- Demand figures include slight ag usage
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<th>Water Supply</th>
<th>Notes</th>
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Notes
- Population Projections by SCAG
- MWD supply vs. MWD demand calculated by using percentages on LVMWD table 7.9
- Firm Demand includes recycled water
- Conservation shown is from Table 5.5
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Notes:
Supplies equal demands.
### City of Los Angeles

#### Population Projection

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#### Water Demands

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<td>646,432</td>
<td>547,251</td>
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#### Potential Supplies

- **Strawwater Capture and Reuse**: - 2,000 4,000 6,000 8,000 10,000 - 2,000 4,000 6,000 8,000 10,000 - 2,000 4,000 6,000 8,000 10,000
- **Strawwater capture Increase GW**: - 1,000 4,000 8,000 15,000 - 1,000 4,000 8,000 15,000 - 1,000 4,000 8,000 15,000

#### Notes

1. **Replenishment Demand is for recycled water**
2. **MWD purchases would be reduced by additional supplies**
### MWDOC

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<td>567,970</td>
<td>485,311</td>
<td>561,235</td>
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<td>600,894</td>
<td>605,456</td>
<td>485,311</td>
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Notes
Other supply consists of Planned Stormwater Harvesting
## SDCWA

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### Water Demand

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<td>46,603</td>
<td>48,278</td>
<td>49,998</td>
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### Non-Firm, Replenishment

| Total Demand | 566,443 | 647,285 | 675,089 | 717,995 | 753,619 | 785,685 |

### Water Supply

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### Total Water Supply

| Total Water Supply | 568,145 | 647,285 | 675,089 | 717,995 | 753,619 | 785,685 |

### Per Capita Water Use GPCPD

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### Notes

- Groundwater Recovery shown as brackish water
- Other Imported includes water transfers figure from MWD
- Brackish water for 2010 assumed same as 2015
### City of San Fernando

#### Normal Water Year

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<th>2030</th>
<th>2035</th>
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<td>24,365</td>
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#### Single Dry Water Year

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#### Multiple Dry Water Year - Year 3

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**Notes**

2010 figures are for 2009.
## City of San Marino

### Population Projection

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### Water Supply

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### Per Capita Water Use GPCPD

Per Capita less Recycled/Non-Firm

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**Notes**
### City of Santa Ana

#### Population Projection
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#### Water Demands

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#### Water Supply

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<td>18,050</td>
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<td>19,038</td>
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#### Per Capita Water Use

- GPCPD: 116.7, 117.5, 117.4, 117.5, 117.6, 116.7, 126.0, 125.9, 126.0, 125.9, 126.1
- Per Capita less Recycled/Non-Firm: 116.2, 116.8, 116.7, 116.9, 116.8, 116.9, 125.3, 125.2, 125.3, 125.2, 125.4

#### Notes

226 of 564
### City of Santa Monica

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#### Water Demands

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#### Total Demand

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#### Water Supply

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#### Total Local

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### Single Dry Water Year

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#### Total Demand

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### Multiple Dry Water Year- Year 3

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#### Total Demand

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### Notes

- Population projections from MWD IRP update
- Recycled Demand and Supply is "Recycled Dry Weather Urban Runoff"
- GW demand exceeds supply, according to table 5.4
- UWMP calls for reducing MWD to zero in most years- MWD is a backup supply
### Three Valleys MWD

#### Normal Water Year

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#### Water Demands

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</tr>
</tbody>
</table>

#### Total Demand

<table>
<thead>
<tr>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>127,621</td>
<td>137,797</td>
<td>149,261</td>
<td>148,667</td>
<td>152,371</td>
<td>154,753</td>
</tr>
</tbody>
</table>

#### MWD Firm Demand

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>64,746</td>
<td>72,343</td>
<td>77,864</td>
<td>80,499</td>
<td>83,498</td>
<td>85,197</td>
<td>85,806</td>
</tr>
</tbody>
</table>

#### Water Supply

<table>
<thead>
<tr>
<th>Category</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported, MWD firm</td>
<td>64,746</td>
<td>72,343</td>
<td>77,864</td>
<td>80,499</td>
<td>83,498</td>
<td>85,197</td>
</tr>
<tr>
<td>Imported, MWD non-firm</td>
<td>5,000</td>
<td>5,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
<td>6,000</td>
</tr>
<tr>
<td>Groundwater, Potable</td>
<td>46,056</td>
<td>46,137</td>
<td>46,141</td>
<td>46,146</td>
<td>46,151</td>
<td>46,155</td>
</tr>
<tr>
<td>Surface Supply/Storage</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
<td>6,500</td>
</tr>
<tr>
<td>Recycled, Direct</td>
<td>5,317</td>
<td>7,272</td>
<td>8,185</td>
<td>8,937</td>
<td>9,623</td>
<td>10,292</td>
</tr>
<tr>
<td>Recycled, Indirect</td>
<td>5,317</td>
<td>7,272</td>
<td>8,185</td>
<td>8,937</td>
<td>9,623</td>
<td>10,292</td>
</tr>
<tr>
<td>Total Local</td>
<td>57,873</td>
<td>59,909</td>
<td>60,826</td>
<td>61,583</td>
<td>62,274</td>
<td>62,947</td>
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</tbody>
</table>

#### Total Water Supply

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>127,621</td>
<td>137,797</td>
<td>149,261</td>
<td>148,667</td>
<td>152,371</td>
<td>154,753</td>
<td>156,197</td>
</tr>
</tbody>
</table>

#### Conservation from UWMP

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>19,199</td>
<td>20,381</td>
<td>20,908</td>
<td>23,165</td>
<td>25,306</td>
<td>27,326</td>
<td>19,199</td>
</tr>
</tbody>
</table>

#### Per Capita Water Use

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>198.6</td>
<td>204.0</td>
<td>205.2</td>
<td>200.9</td>
<td>197.6</td>
<td>193.2</td>
<td>199.3</td>
</tr>
<tr>
<td>182.5</td>
<td>185.8</td>
<td>185.1</td>
<td>180.6</td>
<td>177.2</td>
<td>172.8</td>
<td>183.3</td>
</tr>
</tbody>
</table>

### Notes

- Population Projections from SCAG and SGV Council of Governments
- Conservation is 1990 base year
- Retail Ag is included in firm demand
- Groundwater and Groundwater Recover are combined
### City of Torrance

#### Population Projection

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>113,500</td>
<td>114,114</td>
<td>114,738</td>
<td>115,362</td>
<td>115,986</td>
<td>116,610</td>
</tr>
</tbody>
</table>

#### Water Demands

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Demand</td>
<td>18,758</td>
<td>20,368</td>
<td>20,882</td>
<td>21,409</td>
<td>21,950</td>
<td>22,604</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>6,445</td>
<td>6,500</td>
<td>6,650</td>
<td>7,150</td>
<td>7,150</td>
<td>7,150</td>
</tr>
</tbody>
</table>

**Non-Firm, Replenishment**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Deman</td>
<td>25,203</td>
<td>28,868</td>
<td>29,312</td>
<td>28,510</td>
<td>29,100</td>
<td>29,754</td>
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</table>

#### MWD Firm Demand

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>16,471</td>
<td>12,328</td>
<td>12,842</td>
<td>13,369</td>
<td>13,910</td>
<td>14,464</td>
</tr>
</tbody>
</table>

#### Water Supply

**Imported, MWD Firm**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater, Potable</td>
<td>1,564</td>
<td>5,640</td>
<td>5,640</td>
<td>5,640</td>
<td>5,640</td>
<td>5,640</td>
</tr>
<tr>
<td>Surface Supply/Storage</td>
<td>8,445</td>
<td>6,500</td>
<td>6,650</td>
<td>7,150</td>
<td>7,150</td>
<td>7,150</td>
</tr>
<tr>
<td>Recycled, Direct</td>
<td>1,106</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
</tr>
<tr>
<td>Brackish Water</td>
<td>1,106</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
</tr>
<tr>
<td>Seawater</td>
<td>1,106</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
<td>2,400</td>
</tr>
</tbody>
</table>

**Total Local**

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
</table>

**Per Capita Water Use GPCPD**

| Year | 198.2 | 210.2 | 214.2 | 221.0 | 224.0 | 227.8 |

**Per Capita less Recycled/Non-Firm**

| Year | 147.5 | 159.3 | 162.5 | 165.7 | 168.9 | 173.1 |

### Notes

- Groundwater supply will be fully utilized to meet demand.
- Desalter supply will be fully utilized to meet demand.
- Reclaimed supply will be fully utilized to meet reclaimed demand.
- Imported supply is greater than imported demand.
- 2010 figures from table 4.1.
### USG Valley MWD

#### Population Projection

<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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>903,000</td>
<td>935,000</td>
<td>966,000</td>
<td>996,000</td>
<td>1,025,000</td>
<td>1,025,000</td>
<td>903,000</td>
<td>935,000</td>
<td>966,000</td>
<td>996,000</td>
<td>1,025,000</td>
<td>1,025,000</td>
</tr>
</tbody>
</table>

#### Water Demands

<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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Demand</td>
<td>157,101</td>
<td>162,739</td>
<td>146,118</td>
<td>148,495</td>
<td>150,747</td>
<td>150,747</td>
<td>157,101</td>
<td>162,739</td>
<td>146,118</td>
<td>148,495</td>
<td>150,747</td>
<td>150,747</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>6,000</td>
<td>7,500</td>
<td>10,000</td>
<td>12,500</td>
<td>15,000</td>
<td>15,000</td>
<td>6,000</td>
<td>7,500</td>
<td>10,000</td>
<td>12,500</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Non-Firm, Replenishment</td>
<td>25,000</td>
<td>16,000</td>
<td>19,000</td>
<td>23,000</td>
<td>23,000</td>
<td>23,000</td>
<td>25,000</td>
<td>16,000</td>
<td>19,000</td>
<td>23,000</td>
<td>23,000</td>
<td>23,000</td>
</tr>
</tbody>
</table>

#### Total Demand

|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

#### MWD Firm Demand

<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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22,633</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>22,633</td>
<td>28,000</td>
<td>19,000</td>
<td>22,000</td>
<td>26,000</td>
<td>26,000</td>
</tr>
</tbody>
</table>

#### Water Supply

<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>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Imported, MWD firm</td>
<td>5,700</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>3,000</td>
<td>32,000</td>
<td>31,000</td>
<td>45,000</td>
<td>43,000</td>
<td>41,000</td>
<td>41,000</td>
</tr>
<tr>
<td>Imported, MWD non-firm</td>
<td>22,000</td>
<td>25,000</td>
<td>16,000</td>
<td>19,000</td>
<td>23,000</td>
<td>23,000</td>
<td>32,000</td>
<td>31,000</td>
<td>45,000</td>
<td>43,000</td>
<td>41,000</td>
<td>41,000</td>
</tr>
<tr>
<td>Imported, Other</td>
<td>22,633</td>
<td>28,000</td>
<td>19,000</td>
<td>22,000</td>
<td>26,000</td>
<td>26,000</td>
<td>32,000</td>
<td>31,000</td>
<td>45,000</td>
<td>43,000</td>
<td>41,000</td>
<td>41,000</td>
</tr>
</tbody>
</table>

### Notes

- Plan goes through 2030 only; 2035 is assumed the same as 2030
- MWD Demand in red is firm demand only
- Plan show non-firm demands in dry and multiple dry years. These supplies are included as firm demands in this table.
### West Basin MWD

<table>
<thead>
<tr>
<th></th>
<th>Normal Water Year</th>
<th>Single Dry Water Year</th>
<th>Multiple Dry Water Year - Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Demands</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>14,182</td>
<td>18,368</td>
<td>33,882</td>
</tr>
<tr>
<td>Non-Firm, Replenishment</td>
<td>22,380</td>
<td>20,480</td>
<td>20,480</td>
</tr>
<tr>
<td><strong>Total Demand</strong></td>
<td>177,967</td>
<td>197,495</td>
<td>197,659</td>
</tr>
<tr>
<td><strong>MWD Firm Demand</strong></td>
<td>104,985</td>
<td>114,647</td>
<td>76,977</td>
</tr>
<tr>
<td><strong>Water Supply</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Import, MWD firm</td>
<td>104,985</td>
<td>114,647</td>
<td>76,977</td>
</tr>
<tr>
<td>Import, MWD non-firm</td>
<td>15,274</td>
<td>3,500</td>
<td>3,500</td>
</tr>
<tr>
<td><strong>Total Local</strong></td>
<td>120,259</td>
<td>118,147</td>
<td>80,477</td>
</tr>
<tr>
<td><strong>Total Water Supply</strong></td>
<td>177,967</td>
<td>197,495</td>
<td>197,659</td>
</tr>
<tr>
<td>Conservation from UWMP</td>
<td>14,000</td>
<td>15,119</td>
<td>21,039</td>
</tr>
<tr>
<td>Per Capita Water Use GPCPD</td>
<td>186.2</td>
<td>201.7</td>
<td>197.8</td>
</tr>
<tr>
<td>Per Capita less Recycled/Non-Firm</td>
<td>147.3</td>
<td>164.1</td>
<td>143.4</td>
</tr>
</tbody>
</table>

**Notes:**
- Replenishment demands (IW and RW) are from Table 3-5, but not shown on tables 5-3 to 5-5.
- Desalination includes brackish and ocean water.
- Recycled does not include replenishment or deliveries to others.
### Western MWD

#### Normal Water Year
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Projection</td>
<td>85,609</td>
<td>98,812</td>
<td>112,157</td>
<td>125,534</td>
<td>142,732</td>
<td>161,016</td>
</tr>
<tr>
<td>Total Demand in Service Area w/ cons</td>
<td>85,609</td>
<td>98,812</td>
<td>112,157</td>
<td>125,534</td>
<td>142,732</td>
<td>161,016</td>
</tr>
</tbody>
</table>

#### Single Dry Water Year
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Demand</td>
<td>84,684</td>
<td>117,520</td>
<td>122,362</td>
<td>132,444</td>
<td>141,804</td>
<td>151,751</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>950</td>
<td>1,120</td>
<td>1,680</td>
<td>2,240</td>
<td>3,360</td>
<td>4,480</td>
</tr>
</tbody>
</table>

#### Multiple Dry Water Year- Year 3
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firm Demand</td>
<td>84,684</td>
<td>132,943</td>
<td>138,487</td>
<td>149,953</td>
<td>160,675</td>
<td>172,082</td>
</tr>
<tr>
<td>Recycled Demand, Direct</td>
<td>950</td>
<td>1,120</td>
<td>1,680</td>
<td>2,240</td>
<td>3,360</td>
<td>4,480</td>
</tr>
</tbody>
</table>

#### Water Supply

#### Import, MWD firm
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundwater, Potable</td>
<td>1,000</td>
<td>2,600</td>
<td>3,600</td>
<td>3,600</td>
<td>3,600</td>
<td>3,600</td>
</tr>
<tr>
<td>Surface Supply/Storage</td>
<td>6,000</td>
<td>6,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
<td>15,000</td>
</tr>
<tr>
<td>Recycled, Direct</td>
<td>950</td>
<td>1,120</td>
<td>1,680</td>
<td>2,240</td>
<td>3,360</td>
<td>4,480</td>
</tr>
<tr>
<td>Recycled, Indirect</td>
<td>6,400</td>
<td>10,750</td>
<td>10,750</td>
<td>10,750</td>
<td>10,750</td>
<td>10,750</td>
</tr>
<tr>
<td>Seawater</td>
<td>6,200</td>
<td>6,200</td>
<td>6,200</td>
<td>6,200</td>
<td>6,200</td>
<td>6,200</td>
</tr>
<tr>
<td>Conservation</td>
<td>20,550</td>
<td>26,670</td>
<td>37,230</td>
<td>37,790</td>
<td>38,910</td>
<td>40,010</td>
</tr>
</tbody>
</table>

#### Total Water Supply
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>151,778</td>
<td>186,983</td>
<td>211,357</td>
<td>221,921</td>
<td>234,211</td>
<td>248,085</td>
<td></td>
</tr>
</tbody>
</table>

#### Conservation from UWMP
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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<tbody>
<tr>
<td>11,021</td>
<td>21,685</td>
<td>23,227</td>
<td>24,728</td>
<td>26,377</td>
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#### Per Capita Water Use GPCPD
<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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<tbody>
<tr>
<td>894.5</td>
<td>1071.9</td>
<td>987.3</td>
<td>950.3</td>
<td>898.0</td>
<td>866.2</td>
<td></td>
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</tbody>
</table>

#### Notes
- Population is for retail area only. Per capita numbers cannot be calculated.
- Supplies exceed demands in all cases.
- Demand provided to MWD appears to exceed actual demands.
- MWD Demand in 2010 from Delivery summary from MWD- Appears to be a conflict from table ES-2.
- Other includes purchases from Meeks, Daley and City of Riverside.
- Existing and planned supplies are combined, as they appear certain.
- Verify to see if above includes conservation.
- 2010 MWD Demand includes agriculture.
- 2010 Total Demand from Table 2-4.
## Totals

### Population Projection Million

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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</table>

### Water Demands

#### Firm Demand

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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</table>

#### Recycled Demand, Direct

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>194,606</td>
<td>263,168</td>
<td>317,751</td>
<td>351,352</td>
<td>388,359</td>
<td>378,474</td>
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#### Non-Firm, Recharge

<table>
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<tr>
<th>Year</th>
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<th>2030</th>
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</thead>
<tbody>
<tr>
<td>Million</td>
<td>30,534</td>
<td>75,580</td>
<td>63,980</td>
<td>81,780</td>
<td>93,180</td>
<td>103,580</td>
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#### Total Demand

<table>
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<tr>
<th>Year</th>
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<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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</thead>
<tbody>
<tr>
<td>Million</td>
<td>3,361,480</td>
<td>3,770,925</td>
<td>3,872,771</td>
<td>4,020,960</td>
<td>4,142,052</td>
<td>4,236,290</td>
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### Water Supply

#### MWD Firm Demand

<table>
<thead>
<tr>
<th>Year</th>
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<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>1,580,579</td>
<td>1,717,165</td>
<td>1,541,752</td>
<td>1,612,468</td>
<td>1,690,853</td>
<td>1,758,264</td>
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#### Imported, MWD Firm

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>1,616,814</td>
<td>1,857,507</td>
<td>1,701,770</td>
<td>1,753,168</td>
<td>1,800,038</td>
<td>1,883,305</td>
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#### Imported, MWD Non-Firm

<table>
<thead>
<tr>
<th>Year</th>
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<th>2020</th>
<th>2025</th>
<th>2030</th>
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</thead>
<tbody>
<tr>
<td>Million</td>
<td>43,308</td>
<td>56,600</td>
<td>47,000</td>
<td>49,800</td>
<td>52,000</td>
<td>55,100</td>
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#### Imported, Other

<table>
<thead>
<tr>
<th>Year</th>
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<th>2030</th>
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<tbody>
<tr>
<td>Million</td>
<td>182,018</td>
<td>220,200</td>
<td>310,200</td>
<td>320,200</td>
<td>320,200</td>
<td>320,200</td>
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</table>

#### Groundwater, Potable

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>939,880</td>
<td>997,493</td>
<td>1,046,741</td>
<td>1,094,730</td>
<td>1,070,011</td>
<td>1,080,675</td>
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</table>

#### Groundwater, Non-Potable

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
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<tbody>
<tr>
<td>Million</td>
<td>7,068</td>
<td>7,311</td>
<td>7,734</td>
<td>8,112</td>
<td>8,730</td>
<td>9,328</td>
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#### Surface Supply/Storage

<table>
<thead>
<tr>
<th>Year</th>
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<th>2025</th>
<th>2030</th>
<th>2035</th>
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<tbody>
<tr>
<td>Million</td>
<td>73,553</td>
<td>97,876</td>
<td>106,410</td>
<td>106,348</td>
<td>106,012</td>
<td>105,759</td>
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</table>

#### Recycled, Direct

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>194,606</td>
<td>263,168</td>
<td>324,651</td>
<td>351,352</td>
<td>388,359</td>
<td>378,474</td>
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</table>

#### Recycled, Indirect

<table>
<thead>
<tr>
<th>Year</th>
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<th>2015</th>
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<tbody>
<tr>
<td>Million</td>
<td>7,706</td>
<td>24,188</td>
<td>36,980</td>
<td>52,980</td>
<td>63,980</td>
<td>71,480</td>
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#### Brackish Water

<table>
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<tr>
<th>Year</th>
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<th>2015</th>
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<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>39,150</td>
<td>62,202</td>
<td>67,935</td>
<td>67,943</td>
<td>67,951</td>
<td>67,960</td>
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#### Seawater

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>500</td>
<td>1,000</td>
<td>77,500</td>
<td>82,500</td>
<td>82,500</td>
<td>82,500</td>
</tr>
</tbody>
</table>

#### Other

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>213,147</td>
<td>288,368</td>
<td>270,516</td>
<td>270,670</td>
<td>270,805</td>
<td>272,360</td>
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</table>

#### Conservation

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

#### Total Local

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>1,475,410</td>
<td>1,733,047</td>
<td>1,932,371</td>
<td>2,099,735</td>
<td>2,049,678</td>
<td>2,083,408</td>
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</table>

#### Total Water Supply

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>3,577,550</td>
<td>3,847,394</td>
<td>3,992,207</td>
<td>4,152,923</td>
<td>4,247,316</td>
<td>4,371,038</td>
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</table>

#### Single Dry Water Year

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
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</table>

#### Multiple Dry Water Year - Year 3

<table>
<thead>
<tr>
<th>Year</th>
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<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Million</td>
<td>3,141,873</td>
<td>3,575,159</td>
<td>3,644,053</td>
<td>3,768,814</td>
<td>3,888,150</td>
<td>3,980,805</td>
</tr>
</tbody>
</table>
January 18, 2012

Attention: Imported Water Committee

Colorado River Program Quarterly Report (Information)

Purpose
This is a status report on the implementation of Colorado River Program water supply projects and activities, including the Water Authority’s water transfer with the Imperial Irrigation District (IID), the All-American and Coachella canal lining projects, and binational activities related to the river. The report covers activities since October 2011.

Discussion

Coachella Canal Lining Project.
The Water Authority and Coachella Valley Water District executed an agreement in November 2011 to repair cracked panels in the canal lining agreement, substitute commercial electric power for existing solar power equipment to operate a check structure, and revise future operation of the project to reduce the risk of further damaging the canal lining. The Water Authority Board of Directors had authorized the agreement at its October meeting. Under the agreement, the Water Authority is paying for the repair of the cracked lining panels, while CVWD will pay to install commercial electric power to the check structure, which controls the flow of water. CVWD also agreed to operate the canal as directed by new operating procedures that have been approved by the Water Authority, CVWD, and Reclamation.

Work on replacing damaged panels began in mid-December. The project is being constructed during CVWD’s winter low-flow period, when the panels are not submerged. The contractor expects to complete the job by this spring. Under terms of the agreement, CVWD has 18 months in which to install commercial power to the check structure. This work is expected to begin this year.

Because the agencies agreed to complete these outstanding project items, Reclamation transferred the project from construction to operation and maintenance status. This action enables the Water Authority to recover about $960,000 of project funds from the state’s Department of Water Resources that have been retained pending project completion.

Remaining CCLP work includes the construction of a sport fishery pond required for environmental mitigation. Water Authority staff are managing this project, and are currently obtaining appropriate permits from regulatory agencies for its construction. The project will build a 50-acre pond at the Department of Fish and Game’s Wister management unit located near the southeastern area of the Salton Sea. Project design is completed, and construction is expected to begin in summer of 2012. Once built, the facility will be managed by DFG using funds from project endowments for water supply and operations and maintenance expenses.

All-American Canal Lining Project.
The project completed work last month to repair and resurface a section of maintenance road. This was the final construction effort needed for Reclamation to transition the canal lining project from
construction to operating and maintenance status. The project’s Operations, Maintenance and Repair Committee is continuing discussions regarding the establishment of a baseline from which to measure future project operating and maintenance costs, as well as an index that would be used to adjust the baseline for future cost inflation.

**QSA litigation status**

On December 7, 2011, the Third District Court of Appeal in a decision written by Justice Ronald Robie concluded that the trial court erred in determining that the QSA Joint Powers Agreement violates the California Constitution. The Court of Appeal confirmed the State’s obligation to pay mitigation costs in excess of those funds provided by the QSA JPA parties is “unconditional” in that the state cannot assert the failure of the Legislature to appropriate funds to pay the excess mitigation costs as a defense to a breach of contract claim under the JPA Agreement. The court also found that the obligation itself was contingent on future occurrences and that enforcement of the obligation was contingent on an appropriation by the Legislature. Therefore, the contract did not violate the appropriation or debt limitation requirements of the California Constitution.

In October 2011 the Water Authority and IID filed a joint petition with the State Water Resources Control Board to modify existing QSA JPA mitigation requirements with the goal of developing more durable habitat and air quality projects at the Salton Sea while protecting the financial viability of the QSA JPA.

**Imperial Valley outreach**

The outreach program assisted with a third board-to-board meeting between the Water Authority and IID. The meeting was held in the Imperial Valley on Dec. 21 and gave board members a chance to discuss how the QSA moves forward in the wake of the appellate court ruling that reversed a trial court invalidation of the QSA.

Outreach staff attended an Assembly budget subcommittee public hearing held along the north shore of the Salton Sea in November that was organized by Assemblyman Manuel Perez to discuss the sea’s future. Outreach staff provided comments at the hearing, stating that it is critical for the future of the QSA and the sea that the state follow through with its obligations as outlined in 2003 legislation. Outreach staff also continued to attend Salton Sea Authority meetings to monitor that organization’s activities related to Salton Sea restoration.

Staff attended CVWD board meetings twice a month to improve Water Authority awareness of CVWD positions on QSA matters. Staff will continue attendance at these meetings this year.

**Binational Activities**

A small leadership group of U.S. and Mexican federal representatives continue to meet and discuss proposals intended to provide binational river management benefits. The seven U.S. Colorado River Basin states have also held a number of meetings to provide input and feedback to the leadership team. Proposals that are under consideration include shortage and surplus guidelines for Mexico, ways to store a portion of Mexico’s apportionment from the river U.S. reservoirs, water conservation and supply projects, and salinity management. These efforts are intended to result in a formal agreement between the two countries in early 2012.

Prepared by: Dave Fogerson, Senior Engineer
Reviewed by: Halla Razak, Colorado River Program Director
January 18, 2012

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 report provides a summary of key actions taken at the January 9 and 10 meetings of the MWD board of directors. The next committee and board meetings will take place on February 13 and 14, 2012. The Water Authority delegation supported four of five action items approved by the MWD Board. Because the action involves the Water Authority, the delegates abstained on an item that authorized an increase in legal services related to the Water Authority rate litigation case.

Proposed Biennial Budget, Revenue Requirements, and Water Rates and Charges for Fiscal Years 2012/13 and 2013/14. The board reviewed the recommended revenue requirements for fiscal years 2012/13 and 2013/14, and approved the public hearing date for rates and charges for March 12, 2012, as well as changing MWD’s budget from a cash year accounting basis to a modified accrual basis. The revenue requirements set forth the recommended rates and charges for calendar years 2013 and 2014, with average rate increases of 7.5 and 5 percent respectively. Please refer details of the proposed rates and charges to Report on MWD’s 2012/13 and 2013/14 Proposed Budget and Associated Rates and Charges included in this month’s Committee’s agenda.

The MWD committees and board also:
- Heard an update on Local Resources Development Strategy Task Force efforts;
- Reviewed options for a replenishment program;
- Appropriated funds and awarded a contract for rehabilitation of the Copper Basin Reservoir outlet structure;
- Adopted a resolution designating authorized agents to accept federal and state funding for declared disasters and to sign official correspondence for disaster assistance; and
- Appropriated funds and authorized preliminary design to replace wastewater systems at the Colorado River Aqueduct pumping plants.

State Water Contractors (SWC) The SWC met on December 15, 2011. DWR staff provided an overview of current water supply and water operations conditions. Oroville Reservoir storage is 2.67 million acre-feet (maf), which is about 76 percent of capacity; the SWP share at San Luis Reservoir is about 940 taf, and the Central Valley Project share is about 890 taf. After a wet October, the 2012 water year has been dry, with limited rainfall in November and no rainfall through the first part of December. On November 18, the Department of Water Resources (DWR) released its initial allocation of State Water Project (SWP) supplies for 2012 at 60 percent of contractors’ requested “Table A” deliveries. This would provide MWD with approximately 1.15 million acre-feet. The initial delivery is conservative because it is made before the major winter storm season occurs which provides much of the year’s supply. The
initial allocation for 2012 is higher than previous years due to a large amount of carryover storage from wet conditions last winter. This time last year the initial allocation was set at 25 percent and with near-record snowpack, the final allocation was increased to 80 percent of requests. For other SWC actions, see Attachment 1.

Prepared by:    Debbie Discar-Espe, Senior Water Resources Specialist
Reviewed by:   Amy Chen, MWD Program Chief
The following actions were taken at the State Water Contractors (SWC) Board of Directors December 15, 2011 meeting upon motions duly made, seconded and unanimously passed.

1. Approved the Consent Calendar, including Draft Board Minutes for November 17, 2011, the Financial Report, and November 2011 Consultant Reports.

2. Authorized the General Manager to increase the budget for legal consulting for the Cortopassi Litigation from $50,000 to $150,000. The budget increase will be derived from the contingency allocation remaining in the Bay Delta Fund.

3. Authorized the SWC General Manager to increase the consulting service contract with Economic Insight by $50,000 in order to mitigate costs of implementing AB 32 and the California Air Resources Board Cap-and-Trade regulations by obtaining free emission allowances.

4. In Closed Session: Approved the Personnel Committee’s recommendation to reclassify Julie Ramsay as a Financial Auditor, with a one-step increase as of January 1, 2012 in anticipation of (and also in-lieu of) the normal salary adjustment on the start of the new fiscal year on July 1.

Other Actions:

1. Appointed Joan Maher, David Okita and Dan Flory to the Budget Committee for the fiscal year 2012-13.

2. Presentations were requested for the January SWC Board meeting from ACWA on the Clean Water/Jobs Education campaign and from the Southern California Water Committee on the Delta Disrupted campaign.

3. A workgroup was designated to provide policy review to the SWC General Manager on a potential South Delta Water Agency Water Rights Settlement Agreement. Members of the workgroup include: Dan Flory, Steve Arakawa and Curtis Creel.

4. The Legal Committee was requested to hold a special meeting on the recent Casitas Municipal Water District takings decision and possible application to the State Water Project.
January 18, 2012

Attention: Imported Water Committee

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

Purpose
This memorandum is to recommend that the committee by motion hold a closed session, pursuant to Government Code §54956.9(a) to discuss the above-referenced matter at the January 26, 2012, Board meeting.

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

Prepared by: Daniel S. Hentschke, General Counsel
January 18, 2012

Attention: Imported Water Committee

CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(a) - SDCWA v Metropolitan Water District of Southern California; Case No. CPF-10-510830

Purpose
This memorandum is to recommend that the committee by motion hold a closed session, pursuant to Government Code §54956.9(a) to discuss the above-referenced matter at the January 26, 2012, Board meeting.

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

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

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

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

4. Chair’s report.
   4-A Progress report on Water Planning Committee Goals for 2011 and 2012.
   4-B Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. Resolution approving Otay Water District’s proposed Peaceful Valley Ranch Annexation.
   Staff recommendation:
   Adopt Resolution No. 2012-___ that:
   a) Resolves that the Final EIR certified by the County of San Diego as Lead Agency complies with CEQA and the State CEQA Guidelines, and adequately addresses the potential environmental effects resulting from annexation, issues findings required by CEQA as a Responsible Agency; and
   b) Sets final terms and conditions and approves the concurrent annexation of Otay Water District’s proposed Peaceful Valley Ranch 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. (Action)
2. Update on review of the Water Authority’s Water Shortage and Drought Response Allocation Methodology. (Discussion) Dana Friehauf

3. Carlsbad Desalination Project.
   3-A Status report on the draft Water Purchase Agreement for the Carlsbad Desalination Project. (Discussion) Ken Weinberg

   3-B Budget Revisions and contract amendments for the Carlsbad Desalination Project.
   Staff recommendation:
   1) Approve the consultant contract amendments listed on Tables 1 and 2.
   2) Increase the current Capital Improvement Program 2 year appropriation and life budget for the Carlsbad Desalination Project by $2,783,904 and amend the project name and description to reflect the current Water Purchase Agreement negotiation. (Action) Ken Weinberg

3-C Amendment to professional services contract for Franklin G. DeFazio, Incorporated for hydraulic transient analysis support services.
   Staff recommendation: Approve Amendment 4 for $220,000 to provide additional hydraulic analysis as-needed support services, increasing the contract amount from $686,800 to $906,800. (Action) Ken Weinberg

III. INFORMATION


2. Presentation on water supply and demand conditions Lesley Dobalian


IV. CLOSED SESSION
V. ADJOURNMENT

Doria F. Lore
Clerk of the Board

NOTE: This meeting is called as an 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 18, 2012

Attention: Water Planning Committee


Purpose
This report provides a progress report on the Water Planning Committee’s goals that were adopted by the Board on March 24, 2011 and amended on July 20, 2011.

Background
The Water Planning Committee is responsible for developing policies relative to long range water resources planning and local supply development including: the Urban Water Management Plan, Integrated Regional Water Management Plan, regional and member agency sponsored local water supply development, water shortage and drought management planning, assisting member agencies on local projects, annexation, other planning matters, environmental interests of the Water Authority, and overseeing the implementation of those policies.

Previous Board action: The Board adopted the Water Planning Committee goals for 2011 and 2012 on March 24, 2011. On July 20, 2011, the Board amended the goals to reflect issues addressed at the March 31, 2011 Board retreat.

Discussion
The attached report lists the Water Planning Committee goals for 2011 and 2012 and provides an update on the activities taken to achieve the goals. The goals were prepared under the direction of the Water Planning Committee Chair and Vice Chairs.

Prepared by: Ken Weinberg, Director of Water Resources
Reviewed by: Mitchell S. Dion, Chair, Water Planning Committee

Attachment: Progress Report on Water Planning Committee goals for 2011 and 2012
Progress Report on Water Planning Committee Goals
Calendar Years 2011 and 2012

Strategic Plan Objectives:

1. Review, provide input and approve the Update to the Water Facilities Master Plan in conjunction with the 2015 Urban Water Management Plan. (January 2012)

   Activities: Work on the 2012 Regional Water Facilities Optimization and Master Plan Update (Master Plan Update) began in early 2011 following Committee/Board approval of the consultant contract with CH2M Hill to develop and prepare the Master Plan Update. In August 2011, the Committee/Board also approved the consultant contract with HCG, LLC for preparation of a Program Environmental Impact Report (EIR) and Climate Action Plan for the Master Plan Update. A special meeting of the Water Planning Committee is planned for February 9, 2012, to review the initial findings from the Master Plan Update. A Board workshop is also scheduled for April 2012 in advance of the release of the member agency/public review draft of the Master Plan Update. The draft Program EIR is scheduled to be released in October 2012. Board certification of the Program EIR and adoption of the final Master Plan Update is scheduled for March 2013.

2. Approve agreements and provide direction to staff that either facilitates and/or develops local seawater and brackish groundwater desalination facilities that will represent ten percent of the region’s total water supply requirements. (January 2020)

   Activities: In June 2011, the Committee/Board approved proposed guiding principles for allowing member agency purchases of potential Water Authority-owned local water supplies from the Carlsbad Desalination Project. With all conditions precedent met in September 2011, based on the Term Sheet approved by the Board in July 2010, negotiations on a water purchase agreement (WPA) between Poseidon and the Water Authority are now under way. Staff plans to provide a schedule for completing the negotiations to the Committee/Board in January 2012. Once the WPA negotiations are completed, staff plans to schedule two Board workshops to review the proposed WPA and its impact in detail. Board consideration of the WPA is planned for calendar year 2012.

3. Approve agreements or direct staff to support efforts of the member agencies, with the assistance of the Water Authority, that will supply at least six percent of the region’s total water supply through non-potable reuse. (January 2025)

   Activities: Staff continued to administer existing contracts for local water supply development and the local investigations and studies assistance (LISA) program that were previously approved by the Committee/Board. Staff continued work on the technical assistance contract with Winzler & Kelly that was previously approved by the Committee in December 2008 and amended in October 2009. Staff also worked with the member agencies and regulatory agencies to development a general agreement with San Diego County Department of Environmental Health on reducing the level of county oversight for recycled water use sites. As a next step, each member agency will need to enter into an individual agreement with the county regarding oversight.
**Business Plan Goals & Other Related Goals:**

**Brackish and Seawater Desalination**

1. Review and provide input to staff on the Desalinated Water Conveyance and Integration Study for the Camp Pendleton Seawater Desalination project as part of the update to the Regional Water Facilities Master Plan. (January 2012)

   **Activities:** Work on the 2012 Regional Water Facilities Optimization and Master Plan Update began in early 2011, including development of conveyance and integration strategies for the proposed Camp Pendleton Desalination Project. A special meeting of the Water Planning Committee is planned for February 9, 2012, to review the initial findings from the Master Plan Update including the conveyance/integration alternatives for the proposed Camp Pendleton project.

2. Review, comment and consider approval of a Water Purchase Agreement with Poseidon for the delivery of water from the Carlsbad Desalination Project to the Water Authority's aqueduct system. (December 2012)

   **Activities:** In June 2011, the Committee/Board approved proposed guiding principles for allowing member agency purchases of potential Water Authority-owned local water supplies from the Carlsbad Desalination Project. Negotiations on a water purchase agreement (WPA) between Poseidon and the Water Authority are now under way. Staff plans to provide a schedule for completing the negotiations to the Committee/Board in January 2012. Once the WPA negotiations are completed, staff plans to schedule two Board workshops to review the proposed WPA and its impact in detail. Board consideration of the WPA is planned for calendar year 2012.

3. Approve the consultant agreement to conduct hydrogeologic, geotechnical, and oceanographic studies for the Camp Pendleton Seawater Desalination project. (December 2012)

   **Activities:** In March 2011, the Committee/Board approved a consultant contract with RBF Consulting for hydrogeologic, geotechnical, marine and oceanographic technical studies to support further planning for a proposed Camp Pendleton Desalination Project. Also, in August 2011, the Committee/Board approved a consultant contract with GHD for additional site development studies for the project. The findings and recommendations from these two efforts will be incorporated into the Master Plan Update in 2012.

4. Support activities and develop policies that achieve annual production of 8,000 AF of water supplies from brackish groundwater desalination.

   **Activities:** With the approval of the 2010 Urban Water Management Plan in June 2011, the Committee supported continued member agency development of brackish groundwater desalination. Member agency brackish groundwater desalination is already approaching 8,000 AF annually.
5. Consider staff recommendations related to the feasibility study of a binational seawater desalination plant at Rosarito Beach, Baja California, Mexico.

**Activities:** The Committee assumed responsibility for oversight of the study from the Imported Water Committee, which in January 2011 authorized the Water Authority to initiate Phase 2 of the study and to contribute $75,000 for its implementation. The Water Planning Committee heard a status report on the study in August 2011, including information on funding contributions that were agreed to from the U.S. section of the International Boundary and Water Commission ($75,000) and Mexico’s federal water agency, Comision Nacional del Agua ($250,000). Work on the second phase of the study is expected to occur in 2012.

**Drought Management**

1. Review and comment on a three-year water supply outlook with dry-year supply estimates for short-term water transfers, groundwater banking, and carryover storage. (March 2011 and March 2012)

**Activities:** The Committee reviewed and commented on the three-year water supply outlook in March 2011, which demonstrated favorable conditions. The Committee began receiving monthly updates on water supply conditions in October 1, 2011 to coincide with the start of a new water year.

2. Approve shortage management actions based on water supply conditions. (April 2011 and April 2012)

**Activities:** In April 2011, the Committee approved management actions in response to the end of the drought and termination of supply cutbacks from Metropolitan Water District. The actions included: discontinue municipal and industrial supply allocations, suspend Special Agricultural Water Rate cutbacks, declare an end to Drought Response Levels contained in the Water Authority’s Drought Response Ordinance, and reinforce importance of continued efficient water use practices.

3. Approve updates and modifications to the Metropolitan Water District and Water Authority water supply allocation programs in 2011 and 2012. (July 2011)

**Activities:** The Committee will receive an informational report on the proposed refinements to the Water Authority’s supply allocation methodology and modifications made to Metropolitan Water District Water Supply Allocation Plan (WSAP) in January 2012. The delay in meeting the goal is due to the Metropolitan Board not approving the adjustments to WSAP until September 2011. Since then staff has been working with member agency staff to develop proposed refinements to the Water Authority allocation methodology for Committee consideration. A Committee workshop on the subject is scheduled for February 2012 with Committee consideration on the refinements planned for March 2012.

4. Make timely recommendations to the full Board of Directors on modifications to member agency drought allocations. (Ongoing)
Activities: The Committee received monthly reports on allocation performance through discontinuance of supply allocations, which was April 2011. No modifications to the allocation targets were necessary.

Recycled Water

1. Support activities and policies that encourage over 30,000 AF of beneficially reused recycled water in San Diego County by 2012.

Activities: The committee supported the regional strategies described below to increase recycled water use which reached over 27,000 AF in 2011. Staff continued to administer existing contracts for local water supply development and the local investigations and studies assistance (LISA) program that were previously approved by the Committee/Board.

2. Support regional strategies to address regulatory and other constraints to increase beneficial reuse of recycled water.

Activities: Staff continued work on the technical assistance contract with Winzler & Kelly that was previously approved by the Committee in December 2008 and amended in October 2009. This included preparation of guidelines acceptable to the California Department of Public Health for greywater use, dual plumbed systems, street sweeping, filling stations and the use of alternative containers for the transport and use of recycled water. Staff and consultants completed a video promoting indirect potable reuse that was presented to the committee in December 2011. Staff is also working with member agencies to reduce the level of county oversight on recycled water use sites.

Climate Change and Sustainability

1. Evaluate and recommend changes to the full Board of Directors on water supply planning and design standards that incorporate impacts of climate change. (June 2011)

Activities: In June 2011, the Committee approved the 2010 Urban Water Management Plan. Included in the Plan was a scenario planning methodology for evaluating water supply uncertainty that could result from projected climate change. This included possible adaptive management approaches that could be implemented if such scenarios occur.

In December 2010, the Committee approved a contract with CH2MHill to prepare the 2012 Regional Water Facilities Optimization and Master Plan Update. Part of the update includes a review of facility design standards that may need revision to account for projected climate change impacts. The extent of these revisions will be evaluated through the Climate Action Plan (see Environmental Management Goal #1 below), which is being prepared in conjunction with the Master Plan Update.

2. Determine a range of climate change impacts to water supplies through improved modeling and regional downscaling techniques to meet the needs for long-term water resource planning. (June 2012)
**Activities:** Staff continues to work collaboratively with the Scripps Institution of Oceanography and San Diego State University to develop municipal and rural water demand models for the San Diego region that include potential climate change impacts to local and imported water supplies.

**Environmental Management**

1. **AB32 Compliance Strategy** – Consider staff recommendation for a Climate Action Plan and Program EIR to examine greenhouse gas reductions for facility construction and operations. (June 2011)

   **Activities:** In August 2011, the Committee approved a contract with HCG, LLC to prepare a Climate Action Plan and Program EIR for the 2012 Regional Water Facilities Optimization and Master Plan Update. The comprehensive Master Plan Update provides an ideal mechanism to evaluate greenhouse gas emissions in conjunction with an assessment of current and future Water Authority construction and operation activities.

2. **Wetland Banking Agreement** – Approve multi-agency agreement to provide banking of wetland mitigation credits. (December 2011)

   **Activities:** Staff continues to pursue productive, but protracted, discussions with the US Army Corps of Engineers Solicitor and Regional Water Quality Control Board staff on agreement language that allows multiple wetland mitigation sites to be used for banking. Execution of a workable agreement is a prerequisite to undertaking planned wetland creation projects in the Tijuana River Valley, along the San Luis Rey River, and elsewhere in the region. Wetland banks will provide the mitigation necessary for future Water Authority construction and operation activities.

3. **Clean Water Act Permits** – Approve multi-agency agreement to allow wetland impacts resulting from ongoing facility operation and maintenance. (June 2012)

   **Activities:** Staff continues to collaboratively work with the US Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish & Game, and Environmental Protection Agency to develop long-term permits for ongoing and future Water Authority activities in wetlands and “waters of the United States.” These agencies have proposed that the wetland banking efforts be linked to the permitting effort to ensure clarity of purpose. This will add additional complexity to the effort.

4. **Receive periodic updates from staff on the triennial Basin Plan review.**

   **Activities:** Staff participated on the Regional Water Quality Control Board’s Triennial Review Advisory Committee to establish priorities for the triennial Basin Plan update. Regional Board approved priorities in June 2011. Regional Board Tier 1 and 2 items of interest to Water Authority member agencies included: Refinements to Water Contact Recreation Beneficial Uses, Nutrient Objectives in Surface Water, updates to facilitate Indirect Potable Reuse and work on Salt and Nutrient Management Plans. Staff will inform and get input from the Committee as these efforts proceed.
5. Provide input and direction to staff in working with RWQCB to remove surface water reservoirs from the impaired water body listing as a result of the storage of imported water.

**Activities:** RWQCB staff has agreed to work with the Water Authority to address the impaired water body issues. Water Authority staff will convene a member agency Technical Advisory Committee in January 2012 to get input on a regional approach prior to meeting further with the RWQCB. Staff will provide updates and get input from the Committee as this effort proceeds.

**Infrastructure Planning**

1. Review, comment and consider approval of the updated Regional Water Facilities Master Plan, including review of the energy plan component. (December 2012)

**Activities:** Work on the 2012 Regional Water Facilities Master Plan Update began in early 2011 following Committee/Board approval of the consultant contract with CH2M Hill to develop and prepare the Master Plan Update. In August 2011, the Committee/Board also approved the consultant contract with HCG, LLC for preparation of a Program EIR and Climate Action Plan for the Master Plan Update. A special meeting of the Water Planning Committee is planned for February 9, 2012, to review the initial findings from the Master Plan Update. A Board workshop is also scheduled for April 2012 in advance of the release of the member agency/public review draft of the Master Plan Update. The draft Program EIR is scheduled to be released in October 2012. Board certification of the Program EIR and adoption of the final Master Plan Update is scheduled for March 2013.

2. Review and provide direction to staff on an operating plan to manage the Water Authority's combined 170,000 AF of surface and groundwater carryover storage pools. (December 2012)

**Activities:** Storage requirements are being evaluated as part of the 2012 Regional Water Facilities Optimization and Master Plan Update. A special meeting of the Water Planning Committee is planned for February 9, 2012, to review the initial findings from the Master Plan Update including initial findings on optimal storage operations.

**Water Resources Planning**

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

**Activities:** The Committee took action to request Metropolitan Water District set formal terms and conditions for Otay Water District’s proposed Peaceful Valley Ranch annexation in August 2011. The Committee had established informal terms and conditions for this annexation in July 2010. The July 2011 action was required as part of Metropolitan’s annexation procedures. The Committee is anticipated to consider final approval of the Peaceful Valley Ranch annexation in January 2012.
2. Approve the 2010 Urban Water Management Plan to comply with California Water Code Sections 10610-10656. (June 2011)

**Activities:** In June 2011, the Committee approved the Water Authority’s 2010 Urban Water Management Plan and submitted it to the State of California in accordance with California Water Code.

3. Accept the Annual Water Supply Report as required by Water Authority Administrative Code Section 8.00.050. (June 2012)

**Activities:** Staff will begin work on this goal in 2012 and provide a draft Annual Water Supply Report for Committee consideration in June 2012.

4. Review, comment and approve the Update to the San Diego Integrated Regional Water Management (IRWM) Plan to comply with new state requirements. (July 2013)

**Activities:** The Water Authority issued an RFP for the IRWM Plan update in July 2011. In September 2011, the Committee/Board authorized a contract with RMC Water and Environment to assist the San Diego Regional Water Management Group in preparing the IRWM plan update. Staff will keep the Committee apprised and get input from the Committee on the plan update as it proceeds.

5. Approve Grant Applications that result in the San Diego IRWM Planning Region’s obtaining its share of Proposition 84 funding, as described in the Tri-County Funding Area (MOU) (approved by the Board in March 2009). (Ongoing)

**Activities:** In September 2010, the Committee/Board approved an application for a $1,000,000 planning grant for the Regional Water Management Group. DWR awarded the funding to the San Diego Region. The Water Authority entered into an agreement with DWR to receive the grant funding in November 2011. The planning grant is the primary source of funding for the plan update.

In December 2010, the Committee/Board approved an application for a $7,900,000 implementation grant. DWR awarded the funding to the San Diego Region in August 2011. Staff is working with DWR to complete the final terms of the agreement. After signing the agreement with DWR, the Water Authority will enter into agreements with each of the local project sponsors to distribute the funding.
January 18, 2012

Attention: Water Planning Committee

Resolution approving Otay Water District’s proposed Peaceful Valley Ranch Annexation (Action)

Purpose
This report seeks Board approval of Otay Water District’s proposed Peaceful Valley Ranch Annexation.

Staff recommendation
Adopt Resolution No. 2012-__ (Attachment 1) that:

a) Resolves that the Final EIR certified by the County of San Diego as Lead Agency complies with CEQA and the State CEQA Guidelines, and adequately addresses the potential environmental effects resulting from annexation, issues findings required by CEQA as a Responsible Agency; and

b) Sets final terms and conditions and approves the concurrent annexation of Otay Water District’s proposed Peaceful Valley Ranch 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.

Alternative
Do not adopt the Resolution approving the proposed annexation, thereby rejecting Otay Water District’s request to concurrently annex the property to the Water Authority and Metropolitan Water District of Southern California.

Fiscal Impact
The staff recommendation presents no fiscal or rate category impact to the Water Authority. The Water Authority received the $3,000 administrative fee to cover costs associated with processing the annexation and, upon final approval, an additional $446,379.60 – based on the current annexation fee of $2,929 per acre and annexation of 152.4 acres – will be paid to the Water Authority.

Background
The Otay Water District (Otay) has requested concurrent annexation of the Peaceful Valley Ranch property to the Water Authority and the Metropolitan Water District (MWD). The proposed Peaceful Valley Ranch annexation is 152.4 acres in the community of Jamul. It is part of a proposed project to develop a 181.3-acre residential development, of which 28.9 acres are already within the Water Authority and MWD service areas. The entire 181.3 acres is already located within the Otay service area. The proposed project would include private and public
equestrian facilities. Otay estimates that the average water demand on the Water Authority from the proposed annexation would be approximately 70 acre-feet per year. Groundwater would be used to irrigate the landscape, to the extent practicable.

The projected 70 acre-feet per year of demands associated with the proposed annexation are included in the Water Authority’s 2010 Urban Water Management Plan. The demands were included only for planning purposes and do not limit the Board’s discretion to deny or approve the annexation.

Otay requested annexation of the property by way of a resolution in 2003. The annexation process was delayed due to the need for the property owner to complete environmental documents to comply with the California Environmental Quality Act (CEQA). The table below summarizes the steps that have been taken and those that are still required in order to annex the Peaceful Valley Ranch property. The process will stop if, at any step, the Water Authority or MWD denies approval, but the agencies may reinstate the process upon later application.

<table>
<thead>
<tr>
<th>Major Steps for Concurrent Annexation to Water Authority and MWD</th>
<th>Peaceful Valley Ranch Annexation Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Otay adopts resolution requesting concurrent annexation to the Water Authority and MWD.</td>
<td>September 3, 2003</td>
</tr>
<tr>
<td>Water Authority Board establishes preliminary informal terms and conditions, and requests MWD grant conditional approval and give notice of intent to impose water standby charges.</td>
<td>July 22, 2010</td>
</tr>
<tr>
<td>MWD Board adopts resolution granting conditional approval and intent to levy standby charges.</td>
<td>July 12, 2011</td>
</tr>
<tr>
<td>Water Authority Board adopts resolution requesting MWD set formal terms and conditions.</td>
<td>August 25, 2011</td>
</tr>
<tr>
<td>MWD Board adopts resolution, providing consent for the concurrent annexation, fixing terms and conditions, and levying standby charge.</td>
<td>December 13, 2011</td>
</tr>
<tr>
<td>Water Authority Board will consider setting final terms and conditions and approval of annexation.</td>
<td>Recommended action of this Board memo</td>
</tr>
<tr>
<td>San Diego Local Agency Formation Commission files notice of completion after the terms and conditions of MWD, Water Authority, and Otay are satisfied.</td>
<td>Future proposed action</td>
</tr>
</tbody>
</table>

In July 2010, the Board established preliminary terms and conditions for the Peaceful Valley Ranch annexation, based on the Water Authority’s Annexation Policies and Procedures. The preliminary informal conditions consist of the following: 1) the annexation shall be in accordance with the Water Authority Act, San Diego Local Agency Formation Commission (LAFCO) procedures and MWD’s Administrative Code; 2) Otay’s base period allocation demand will not be increased to account for the increased demand associated with the annexation as long as the Water Authority Water Shortage and Drought Response Plan remains activated; and 3) an annexation fee will be paid to the Water Authority upon completion of the annexation. In regard to the first condition, each of the agencies’ requirements will be satisfied through the annexation approval process. Preliminary condition number two will no longer apply, because
the Water Shortage and Drought Response Plan was deactivated in April 2011. The third preliminary condition will be included in the final terms and conditions and will be fulfilled as part of the LAFCO approval process.

Discussion
Otay and the property owner have met the required conditions associated with final approval of the proposed annexation. The initial staff evaluation, based on the Water Authority’s Annexation Policies and Procedures, is included in the tables contained in Attachments 2 and 3. Those conditions that were remaining and have now been fulfilled are shown in italics in the table

In July 2008, the County’s Board of Supervisors approved the proposed project. As the lead agency under CEQA, the County of San Diego prepared and certified a Final Environmental Impact Report (EIR) for the project, and filed a Notice of Determination (NOD) in July 2008. As a Responsible Agency under CEQA, the Water Authority Board should consider the information provided in the certified Final EIR, Findings of Fact, the Statement of Overriding Considerations (SOC) and the Mitigation Monitoring and Reporting Program prepared by the County, issue findings and file an NOD within five working days of the Board's approval. The environmental documents were provided to the Board on a CD under separate mailing on January 13, 2012.

Staff is recommending Board approval of Otay Water District’s proposed Peaceful Valley Ranch annexation request, and setting final terms and conditions included in Resolution 2012-__ (Attachment 1).

Prepared by: Lesley Dobalian, Water Resources Specialist
Reviewed by: Ken Weinberg, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager

Attachments: 1:Proposed Water Authority Resolution 2012-_____
           1A: Otay Resolution 3992, Legal Description, and Annexation Map
           1B: MWD Resolutions 9133 and 9134
           2: Table 1 - Compliance with Water Authority Annexation Policies
           3: Table 2 - Compliance with Water Authority Annexation Policy #2
           4: Otay’s conservation and local supply use requirements
           5: Letter from applicant committing to fully meet Otay’s conservation and local
              supply use requirements and continued groundwater use on the property
RESOLUTION NO. 2012-

RESOLUTION OF THE BOARD OF DIRECTORS OF THE SAN DIEGO COUNTY WATER AUTHORITY SETTING FINAL TERMS AND CONDITIONS AND APPROVING THE CONCURRENT ANNEXATION OF TERRITORY TO SAID AGENCIES AND MAKING ENVIRONMENTAL FINDINGS RELATING THERETO (PEACEFUL VALLEY RANCH ANNEXATION)

WHEREAS, pursuant to Section 10(d) of the County Water Authority Act, the Board of Directors of the Otay Water District adopted Resolution No. 3992, requesting concurrent annexation from the San Diego County Water Authority and Metropolitan Water District of the lands described in Resolution No. 3992, and known as the PEACEFUL VALLEY RANCH ANNEXATION; and

WHEREAS, a copy of Otay Water District Resolution No. 3992, is attached (Attachment 1.A); and

WHEREAS, the land description contained in Otay Water District Resolution No. 3992 contains a 8.3 acre parcel (portion of parcel 4 of Parcel Map No. 16190) that is not part of the Peaceful Valley Ranch development and will be processed for annexation under separate action at a later date; and

WHEREAS, pursuant to Section 10(d) of the County Water Authority Act, the Board of Directors of the San Diego County Water Authority may grant or deny the application and, in granting the application, may fix terms and conditions upon which the territory may be annexed to the San Diego County Water Authority; and

WHEREAS, the Board of Directors of the San Diego County Water Authority adopted Annexation Policies in February 2006 that provide criteria for the evaluation of potential annexations and conditions that may be applied; and

WHEREAS, the Board of Directors of the San Diego County Water Authority approved Procedures for Implementation of the San Diego County Water Authority’s Annexation Policy #2: Protection of Member Agency Supply Reliability in April 2010 that provide guidance and direction in determining if approval of a proposed annexation will have an adverse effect on member agency supply reliability; and

WHEREAS, by Resolution No. 2010-11, adopted July 22, 2010, the Board of Directors of the San Diego County Water Authority granted preliminary informal terms and conditions for the PEACEFUL VALLEY RANCH ANNEXATION, and requested Metropolitan Water District of Southern California grant conditional approval and give notice of intent to impose water standby charges; and
WHEREAS, on July 12, 2011, the Board of Directors of the Metropolitan Water District granted conditional approval and by Resolution 9124 gave notice of intent to impose water standby charges for the PEACEFUL VALLEY RANCH ANNEXATION; and

WHEREAS, by Resolution No. 2011-17 on August 25, 2011, the Board of Directors of the San Diego County Water Authority requested Metropolitan Water District of Southern California adopt formal terms and conditions for the PEACEFUL VALLEY RANCH ANNEXATION; and

WHEREAS, by Resolutions 9133 and 9134 on December 13, 2011, the Board of Directors of the Metropolitan Water District of Southern California consented to the annexation, fixed terms and conditions, and adopted a water standby charge for the PEACEFUL VALLEY RANCH ANNEXATION (Attachment 1.B); and

WHEREAS, pursuant to the provisions of the California Environmental Quality Act (CEQA) and the state CEQA Guidelines, the San Diego County Board of Supervisors, acting as Lead Agency, prepared and processed a Final Environmental Impact Report (Final EIR) for the proposed PEACEFUL VALLEY RANCH MAJOR SUBDIVISION project. The Final EIR was certified and the project approved by the Lead Agency on July 24, 2008. The Lead Agency also approved the Findings of Fact, the Statement of Overriding Considerations (SOC) and the Mitigation Monitoring and Reporting Program (MMRP). The San Diego County Water Authority Board of Directors, as a Responsible Agency under CEQA, is required to certify that it has reviewed and considered the information contained in the certified Final EIR, Findings of Fact, SOC and MMRP prior to approval of the formal terms and conditions for the annexation; and

WHEREAS, it is in the interests of the San Diego County Water Authority to set formal terms and conditions provided by the Metropolitan Water District of Southern California for the annexation of the properties described in Attachment 1.A.

NOW, THEREFORE, the Board of Directors RESOLVES the following:

1. That it has considered the information provided in the certified Final EIR, Findings of Fact, SOC, and MMRP and finds that no further environmental analysis is required for the action of the San Diego County Water Authority, and hereby adopts the Lead Agency’s Findings of Fact, SOC, and MMRP for all impacts related to the annexation.

2. That subject to the following terms and conditions, to grant the application of the governing body of Otay Water District for consent to annex the PEACEFUL VALLEY RANCH to the San Diego County Water Authority and to establish the following conditions of such annexation:

   a. That the terms and conditions as ordered by Board of Directors of the Metropolitan Water District of Southern California shown on Attachment 1.B, be a condition for the concurrent annexation to said Metropolitan Water District of Southern California and the San Diego County Water Authority, of
the PEACEFUL VALLEY RANCH, as described in Otay Water District Resolution No. 3992, excluding 8.3 acre parcel which is portion of parcel 4 of Parcel Map No. 16190 (Attachment 1.A).

b. All necessary certificates, statements, maps, and other documents required to be filed by or on behalf of the Otay Water District to effectuate the annexation shall be filed on or before December 31, 2012.

c. Prior to filing a request for a Certificate of Completion of the annexation proceedings with San Diego Local Agency Formation Commission, Otay Water District shall submit a certified copy of the San Diego Local Agency Formation Commission’s resolution approving the annexation to the San Diego County Water Authority, and shall pay to the San Diego County Water Authority the sum of $446,379.06, along with the annexation charge for the Metropolitan Water District of Southern California, calculated based on the current rate, in accordance with Metropolitan’s Administrative Code Section 3300.

d. Pursuant to Section 5.2 of the County Water Authority Act, the San Diego County Water Authority shall impose standby charges to the properties to be annexed and the property owners shall sign a consent agreement regarding the payment of standby charges.

e. That the property owner acknowledges and agrees to participate in any required Proposition 218 action, and will not oppose the imposition of any special taxes, fees, charges, and assessments currently applicable to the San Diego County Water Authority and any applicable service area.

3. That the General Manager is authorized and directed to forward certified copies of this resolution to the Metropolitan Water District of Southern California, and Otay Water District.

4. That the General Manager be directed to file a Notice of Determination as provided in Section 15096 of the State CEQA Guidelines.

PASSED, APPROVED, AND ADOPTED on this twenty-sixth day of January 2012.

Ayes:
Noes:
Abstain:
Absent:
Michael T. Hogan,
Chair

ATTEST:

_________________________
Richard K. Smith,
Secretary

I, Doria F. Lore, Clerk of the Board of the San Diego County Water Authority, certify that the vote above is correct and this Resolution No. 2012-_____ was duly adopted at the meeting of the Board of Directors on the date stated above.

_________________________
Doria F. Lore
Clerk of the Board
RESOLUTION NO. 3992

A RESOLUTION OF THE BOARD OF DIRECTORS OF OTAY WATER DISTRICT FIXING TERMS AND CONDITIONS FOR THE ANNEXATION TO OTAY WATER DISTRICT IMPROVEMENT DISTRICT NO. 9 OF THOSE LANDS DESCRIBED AS "PEACEFUL VALLEY RANCH ANNEXATION" AND ANNEXING SAID PROPERTY TO OTAY WATER DISTRICT IMPROVEMENT DISTRICT NO. 9 (WO 9560/DIV. 5)

WHEREAS, a request has been made by the owners and parties that have an interest in the land described in Exhibit "A." attached hereto, for annexation of said land to Otay Water District Improvement District No 9 of the Otay Water District pursuant to California Water Code Section 72670 et seq.; and

WHEREAS, pursuant to Section 72680.1 of said Water Code, the Board of Directors may proceed and act thereon without notice and hearing.

NOW, THEREFORE, BE IT RESOLVED as follows:

1. A description of the area proposed to be annexed is set forth on a map filed with the Secretary of the District which map shall govern for all details as to the area proposed to be annexed.

2. The purpose of the proposed annexation is to provide water service to the territory to be annexed.

3. The Board of Directors hereby finds and determines that the area proposed to be annexed to Otay Water District and Improvement District No 9 will be benefited thereby and that Otay Water District Improvement District No 9 will also be benefited and not injured by such annexation because the
property to be annexed will benefit from the water facilities in Improvement District No. 9 and the property already within Improvement District No. 9 will now have a larger base to finance the water improvements.

4. The Board of Directors hereby declares that the annexation of said property is subject to owner first meeting the following terms and conditions:

(a) Final annexation by San Diego County Water Authority "SDCWA" and Metropolitan Water District of Southern California "MWD"

(b) That the owners for said annexation shall pay to Otay Water District the following:

1. Standard District Administration fee in the amount of $593.00;

2. State Board of Equalization filing fees in the amount of $2,500.00 ($2,000 for the Streeter property - 152.4 acres and $500 for the Stoddard property - 8.3 acres);

3. An Annexation fee of $1,154 per EDU to be collected at the time the meter is purchased;

4. Other meter-related costs; and

5. All other applicable local or state agency fees

(c) The property to be annexed shall be subject to taxation after annexation thereof for the purposes of the improvement district, including
the payment of principal and interest on bonds 
other obligations of the improvement 
district, authorized and outstanding at the time 
annexation, the same as if the annexed 
property had always been a part of the 
 improvement district 

5. The Board of Directors of the Otay Water District does 
hereby declare the property described in Exhibit "A" to be 
annexed to Improvement District No. 9 of the Otay Water Dis-

trect, conditioned upon final annexation by SDCWA and MWD. 

6. The Board of Directors further finds and determines 
that there are no exchanges of property tax revenues to be made 
pursuant to California Revenue and Taxation Code Section 95 et 
seq., as a result of such annexation. 

PASSED, APPROVED AND ADOPTED by the Board of Directors of 
the Otay Water District at a regular meeting held this 3rd day of 
September, 2003

AYES: Directors Breitfelder, Bonilla, Lopez, Croucher and Lewis 
NOES: 
ABSTAIN: 
ABSENT: 

ATTEST: 

[Signature] 
President 

[Signature] 
District Secretary
STATE OF CALIFORNIA
COUNTY OF SAN DIEGO

I, Connie Rathbone, Assistant District Secretary of the OTAY WATER DISTRICT do hereby certify that the foregoing is a true and correct copy of Resolution No 3992, duly adopted by the Board of Directors of the OTAY WATER DISTRICT at a Board meeting, held the 3rd day of September, 2003

Connie Rathbone
Assistant District Secretary of the Otay Water District and the Board of Directors Thereof
EXHIBIT "A"
LEGAL DESCRIPTION

ANNEXATION PARCEL
PEACEFUL VALLEY RANCH

That certain parcel of land in the County of San Diego, State of California, being a portion of Fractional Section 10, Township 17 South, Range 1 East, San Bernardino Meridian according to Official Plat thereof described as follows:

COMMENCING at the northeast corner of said Fractional Section 10; thence along the easterly line of said Section South 00°24'58" East 1312.81 feet to the TRUE POINT OF BEGINNING; thence continuing along said easterly line of said Section South 00°24'58" West 1312.81 feet; thence continuing along said easterly line South 00°25'56" East 1806.43 feet; thence along the southerly line of Parcels 2 and 3 of Parcel Map No. 16190, filed in the Office of the County Recorder of San Diego County on August 16, 1990, North 88°42'00" West 3115.99 feet; thence along the westerly line of Parcels 2 and 4 of said Parcel Map North 02°09'30" East 688.81 feet to the beginning of a non-tangent curve concave northwesterly and having a radius of 725.00 feet, a radial line of said curve from said point bears North 06°38'00" West; thence leaving said westerly line along said curve easterly and northeasterly 344.96 feet through a central angle of 27°15'44"; thence tangent from said curve North 55°46'15" East 68.41 feet to the beginning of a tangent curve concave southeasterly and having a radius of 300.00 feet; thence along said curve northeasterly and easterly 163.46 feet through a central angle of 31°13'10"; thence non-tangent from said curve North 02°09'30" East 602.46 feet to the northerly line of said Parcel 4; thence along said northerly line North 84°45'02" East 1010.71 feet; thence North 00°42'22" East 1293.00 feet; thence North 83°49'37" East 1512.40 feet to the TRUE POINT OF BEGINNING

CONTAINING: 152.4 Acres Gross and Net.

SUBJECT TO all Covenants, Rights, Rights-of-Way and Easements of Record

EXHIBIT "B" attached and by this reference made a part hereof

Prepared by me or under my direction

Stephen R. Hawxhurst, LS 7355

263 of 564
EXHIBIT "A"
LEGAL DESCRIPTION

ANNEXATION PARCEL
PEACEFUL VALLEY RANCH

That certain parcel of land in the County of San Diego, State of California being a portion of Fractional Section 10, Township 17 South, Range 1 East, San Bernardino Meridian according to Official Plat thereof described as follows:

COMMENCING at the northeast corner of said Fractional Section 10; thence along the easterly line of said Section South 00°24'58" East 2625.62 feet; thence South 84°40'09" West 1535.75 feet; thence South 84°45'02" West 1010.71 feet to the TRUE POINT OF BEGINNING; thence South 02°09'30" West 602.46 feet to a point on a non-tangent curve concave southeasterly and having a radius of 300.00 feet, a radial line of said curve from said point bears South 03°00'35" East; thence along said curve westerly 163.46 feet through a central angle of 31°13'10"; thence tangent from said curve South 55°46'15" West 68.41 feet to the beginning of a tangent curve concave northwesterly and having a radius of 725.00 feet; thence along said curve westerly 344.97 feet through a central angle of 27°15'44"; thence non-tangent from said curve North 02°09'30" East 764.74 feet; thence North 84°45'02" East East 525.53 feet to the TRUE POINT OF BEGINNING

CONTAINING: 8.3 Acres Gross and Net

SUBJECT TO all Covenants, Rights, Rights-of-Way and Easements of Record.

EXHIBIT "B" attached and by this reference made a part hereof

Prepared by me or under my direction.

Stephen R. Hawxhurst, LS 7355

[License Number]

265 of 564
RESOLUTION 9133

RESOLUTION OF THE BOARD OF DIRECTORS OF
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
CONSENTING TO SAN DIEGO COUNTY WATER AUTHORITY'S
PEACEFUL VALLEY RANCH ANNEXATION
AND FIXING THE TERMS AND CONDITIONS OF SAID ANNEXATION TO
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

A. WHEREAS, the Board of Directors of the San Diego County Water Authority (SDCWA), a
municipal water district, situated in the county of San Diego, state of California, pursuant to Resolution
No. 2010-11, in accordance with the provisions of the Metropolitan Water District Act, has applied to the Board
of Directors of The Metropolitan Water District of Southern California (Metropolitan) for consent to annex
thereto certain uninhabited territory situated in the county of San Diego referred to as Peaceful Valley Ranch
Annexation, more particularly described in an application to the San Diego County Local Agency Formation
Commission (LAFCO), concurrently with the annexation thereof to SDCWA, such annexation to Metropolitan to
be upon such terms and conditions as may be fixed by the Board of Directors of Metropolitan; and

B. WHEREAS, completion of said annexation shall be conditioned upon approval by LAFCO; and

C. WHEREAS, pursuant to the provisions of the California Environmental Quality Act (CEQA), the
County of San Diego Board of Supervisors, acting as Lead Agency, certified the Peaceful Valley Ranch Project
(Project) Final Environmental Impact Report (Final EIR), adopted the Findings of Fact (findings), Statement of
Overriding Considerations (SOC), and Mitigation Monitoring and Reporting Program (MMRP) and approved the
Project on July 10, 2008, for the development of the proposed annexation parcel(s). Metropolitan, as
Responsible Agency under CEQA, is required to certify that it has reviewed and considered the information
contained in the Final EIR and MMRP, and adopt the Lead Agency's findings and SOC prior to approval of the
formal terms and conditions for the Peaceful Valley Ranch Annexation; and

D. WHEREAS, it appears to this Board of Directors that such application should be granted, subject
to the terms and conditions hereinafter set forth; and

E. NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of Metropolitan, acting as
Responsible Agency, has reviewed and considered the information in the Final EIR, findings, SOC, and MMRP
and adopted the Lead Agency's findings and SOC prior to approval of the final terms and conditions for the
Peaceful Valley Ranch Annexation; and subject to the following terms and conditions, does hereby grant the
application of the governing body of the San Diego County Water Authority for consent to annex the Peaceful
Valley Ranch Annexation to Metropolitan and does hereby fix the terms and conditions of such annexation;

F. BE IT FURTHER RESOLVED that the Board of Directors of Metropolitan, subject to the
following terms and conditions, does hereby grant the application of the governing body of SDCWA for consent
to annex Peaceful Valley Ranch Annexation to Metropolitan and does hereby fix the terms and conditions of
such annexation:

Section 1. The annexation of said area to SDCWA shall be made concurrently with the
annexation thereof to Metropolitan, and all necessary certificates, statements, maps, and other documents
required to be filed by or on behalf of SDCWA to effectuate the annexation shall be filed on or before
December 31, 2012.
Section 2. Prior to filing a request for a Certificate of Completion of the annexation proceedings with LAFCO, SDCWA shall submit a certified copy of LAFCO’s resolution approving the annexation to the member agency, and shall pay to Metropolitan in cash approximately $620,238.80, if the annexation is completed by December 31, 2011. The annexation fee of $5,000 for processing this annexation was received prior to approval. The annexation charge is calculated by the per-acre method based on the net acreage. If the annexation is completed during the 2012 calendar year, the annexation charge will be calculated based on the then current rate, in accordance with Metropolitan’s Administrative Code Section 3300.

Section 3. a. Metropolitan shall be under no obligation to provide, construct, operate, or maintain feeder pipelines, structures, connections, and other facilities required for the delivery of water to said area from works owned or operated by Metropolitan.

b. SDCWA shall not be entitled to demand that Metropolitan deliver water to SDCWA for use, directly or indirectly, within said area, except for domestic or municipal use therein.

c. The delivery of all water by Metropolitan, regardless of the nature and time of use of such water shall be subject to the water service regulations, including rates promulgated from time to time by Metropolitan.

d. Except upon the terms and conditions specifically approved by the Board of Directors of Metropolitan, water sold and delivered by Metropolitan shall not be used in any manner which intentionally or avoidably results in the direct or indirect benefit of areas outside Metropolitan, including use of such water outside Metropolitan or use thereof within Metropolitan in substitution for other water outside Metropolitan.

Section 4. The area within the newly created window area, in accordance to MWD Administrative Code Section 3201, shall be monitored by the local water purveyor, currently Otay Municipal Water District, for illegal connections or other illicit use of water outside of the service area boundaries.

G. BE IT FURTHER RESOLVED that the Board Executive Secretary is directed to transmit forthwith to the governing body of SDCWA a certified copy of this resolution.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California at its meeting held December 13, 2011.

[Signature]
Board Executive Secretary
The Metropolitan Water District of Southern California
Section 8. That the General Manager is hereby authorized and directed to take all necessary action to secure the collection of the water standby charges by the appropriate county officials, including payment of the reasonable cost of collection.

Section 9. That the General Manager and General Counsel are hereby authorized to do all things necessary and desirable to accomplish the purposes of this resolution, including, without limitation, the commencement or defense of litigation.

Section 10. That if any provision of this resolution or the application to any member agency, property or person whatsoever is held invalid, that invalidity shall not affect the other provisions or applications of this resolution which can be given effect without the invalid portion or application, and to that end the provisions of this resolution are severable.

I HEREBY CERTIFY that the foregoing is a full, true and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California, at its meeting held on December 13, 2011.

[Signature]
Board Executive Secretary
The Metropolitan Water District
of Southern California
RESOLUTION 9134

RESOLUTION OF THE BOARD OF DIRECTORS
OF THE METROPOLITAN WATER DISTRICT OF
SOUTHERN CALIFORNIA
FIXING AND ADOPTING WATER STANDBY CHARGE
CONTINGENT UPON SAN DIEGO COUNTY WATER AUTHORITY’S
PEACEFUL VALLEY RANCH ANNEXATION

WHEREAS, pursuant to Resolution 9124, The Metropolitan Water District of Southern California’s ("Metropolitan") Resolution of Intention to Impose Water Standby Charge, adopted by the Board of Directors (the "Board") of Metropolitan at its meeting held July 12, 2011, the Board gave notice to the public and to each member public agency of Metropolitan of the intention of the Board to consider and take action on the General Manager’s recommendation to impose a water charge for fiscal year 2011/12 on the property described in the Engineer’s Report, dated April 2011 (the "Engineer’s Report"), which was prepared by a registered professional engineer certified by the state of California and was attached to Resolution 9124;

WHEREAS, the owner of the parcel identified in the Engineer’s Report has applied for annexation into the San Diego County Water Authority (“SDCWA”) and Metropolitan;

WHEREAS, upon annexation, Metropolitan water will be available to such property and such parcels will receive the benefit of the projects provided in part with proceeds of Metropolitan water standby charges, as described in the Engineer’s Report;

WHEREAS, SDCWA has requested that Metropolitan impose water standby charges on such property at the rate specified in the Engineer’s Report and provided herein, following annexation of such property into Metropolitan;

WHEREAS, Resolution 9124 provided that the Board would meet in regular session to hold a public protest hearing at which interested parties could present their views regarding the proposed water standby charges and the Engineer’s Report;

WHEREAS, pursuant to the terms of Resolution 9124, the Board Executive Secretary provided written notice in accordance with the requirements of Article XIII D, Section 4 of the California Constitution of the proposed water standby charge by mail to the record owner of the property identified in the Engineer’s Report of such public hearing, and the notice included an assessment ballot whereby the owner could indicate his or her name, reasonable identification of his or her parcel, and his or her support for or opposition to the proposed water standby charge;

WHEREAS, the Board conducted in conformance with Resolution 9124 a public hearing. The hearing was held August 16, 2011, at which interested parties were given the opportunity to present their views regarding the proposed water standby charge and the Engineer’s Report and to protest the charges, if they so desired, and the Board duly considered any such protests and other views presented to it at the public hearing; and
WHEREAS, prior to the conclusion of the public hearing the Board Executive Secretary reviewed the assessment ballots submitted, and it was found that no majority protest (as defined in Article XIII D, Section 4 of the California Constitution) exists;

NOW THEREFORE, the Board of Directors of The Metropolitan Water District of Southern California does hereby resolve, determine and order as follows:

Section 1. That the Board of Metropolitan, pursuant to the Engineer’s Report, finds that the land described in said Engineer’s Report upon annexation to Metropolitan will be benefited as described in such report and on that basis, hereby fixes and adopts a water standby charge for fiscal year 2011/12 on such lands to which Metropolitan water is made available for any purpose, whether water is actually used or not.

Section 2. That the water standby charge per acre of land, or per parcel of land less than an acre, as shown in the Engineer’s Report, shall be $11.51 which is equal to the amount of Metropolitan’s existing water standby charge on other properties located within the territory of SDCWA.

Section 3. That no water standby charge on any parcel exceeds the reasonable cost of the proportional special benefit conferred on that parcel, as shown in the Engineer’s Report. The Engineer’s Report separates the special benefits from the general benefits and identifies each of the parcels on which a special benefit is conferred.

Section 4. That the water standby charge shall be collected on the tax rolls, together with the ad valorem property taxes, which are levied by Metropolitan for the payment of pre-1978 voter-approved indebtedness. Any amounts so collected shall be applied as a credit against SDCWA’s obligation to pay its readiness-to-serve charge for fiscal year 2011/12. After such member agency’s readiness-to-serve charge allocation is fully satisfied, any additional collections shall be credited to other outstanding obligations of such member agency to Metropolitan or future readiness-to-serve obligations of such agency.

Section 5. That the water standby charge is fixed and adopted contingent upon completion of annexation of the land described in the Engineer’s Report. If such annexation is not completed in time to permit imposition of standby charges for fiscal year 2011/12, Metropolitan may levy standby charges at the rate stated in this resolution beginning in a subsequent fiscal year.

Section 6. That in the event that the water standby charge, or any portion thereof, is determined to be an unauthorized or invalid fee, charge or assessment by a final judgment in any proceeding at law or in equity, which judgment is not subject to appeal, or if the collection of the water standby charge shall be permanently enjoined and appeals of such injunction have been declined or exhausted, or if Metropolitan shall determine to rescind or revoke the water standby charge, then no further water standby charge shall be collected within the territory described in the Engineer’s Report and SDCWA shall pay its readiness-to-serve charge obligation to Metropolitan in full, as if imposition of such water standby charges had never been sought.

Section 7. That pursuant to the provisions of the California Environmental Quality Act (CEQA), the County of San Diego Board of Supervisors, acting as Lead Agency, certified a Final Environmental Impact Report (Final EIR) and approved the project on July 10, 2008, for the development of the proposed annexation parcel(s) (i.e., Peaceful Valley Ranch Project), and that the Board of Directors of Metropolitan, as Responsible Agency under CEQA, has certified that it reviewed and considered the information contained in the Final EIR and in the Mitigation Monitoring and Reporting Program, and has adopted the Lead Agency’s Finding of Fact and Statement of Overriding Considerations prior to approval of fixing and adopting water standby charges for the Peaceful Valley Ranch Annexation.
## Compliance with Water Authority Annexation Policies
### January 18, 2012

<table>
<thead>
<tr>
<th>Policy No.</th>
<th>Water Authority Annexation Policy</th>
<th>Summary of Policy</th>
<th>Water Authority Staff Evaluation Has Policy Been Satisfied? (If “no”, potential condition has been identified)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relationship to San Diego Local Agency Formation Commission (LAFCO) and Metropolitan Water District of Southern California (Metropolitan) Policies</td>
<td>Any annexation shall be in accordance with the County Water Authority Act and applicable provisions of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code Section 56000 et seq.). Annexation shall not conflict with Metropolitan Administrative Code, Division III.</td>
<td>Yes  No (Include as final condition) Compliance is met through the following actions: 1. Water Authority approval in accordance with the County Water Authority Act. 2. MWD approval in accordance with the Metropolitan Administrative Code, Division III. 3. LAFCO approval in accordance with applicable provisions of the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (California Government Code Section 56000 et seq.).</td>
</tr>
<tr>
<td>2</td>
<td>Protection of Member Agency Supply Reliability</td>
<td>The Water Authority shall evaluate the adequacy of water supplies and facilities to meet the needs of the proposed annexed territory based on adopted Water Authority facilities and supply plans, including without limitation the 2004 Water Facilities Master Plan and the 2005 Urban Water Management Plan.</td>
<td>Yes X No (Refer to Attachment 3 to the Board memo, Compliance with Water Authority Annexation Policy #2).</td>
</tr>
<tr>
<td>3A</td>
<td>Conservation and Local Supply Use Requirements</td>
<td>The Board may condition an annexation to require developments and development projects in the annexed territory to: 1. Utilize recycled water in accordance with California Water Code; 2. Incorporate water conserving design and improvements within subdivisions, both residential and commercial and; 3. Incorporate water conserving design and improvements in building, grading, landscaping, and other similar development and construction plans; 4. Require maintenance of water conserving landscape through CC&amp;Rs.</td>
<td>Yes X No Recycled water is not available in the region of the project and there are no plans to extend recycled water infrastructure to the region, thus making the use of recycled water impractical. Otay’s Code of Ordinances section 27.05, related to conservation and local supply use requirements, is consistent with this policy (Attachment 4 to Board memo, section 27.05 Conservation and Local Supply Use Requirements). The owner/applicant for the proposed annexation has committed to complying with the proposed conditions by way of a letter dated June 15, 2010 (Attachment 5 to Board memo).</td>
</tr>
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## Compliance with Water Authority Annexation Policies

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<tbody>
<tr>
<td>3B</td>
<td>Conservation and Local Supply Use Requirements</td>
<td>Member agency with jurisdiction over the proposed annexation shall submit evidence of the following prior to Board approval: 1. Regulatory plan to require all new developments within proposed annexing territories and member agency’s service area to incorporate water conserving design and improvements based on current Water Authority water-use-efficiency policies. 2. Regulatory plan to require all new developments within proposed annexing territories to use recycled water, or explain why such use in infeasible.</td>
<td>Yes X No 1. On January 6, 2010, Otay amended section 27 of their Code of Ordinances related to conservation and local supply use requirements consistent with Water Authority policy (Attachment 4 to Board memo). 2. Recycled water is not available in the region of the project and there are no plans at this time to extend recycled water infrastructure to the region, thus making the use of recycled water impractical.</td>
<td></td>
</tr>
<tr>
<td>3B</td>
<td>Conservation and Local Supply Use Requirements</td>
<td>Member agency with jurisdiction over the proposed annexation shall submit evidence of the following prior to Board approval: Member agency is signatory to and in substantial compliance with the (CUWCC) Memorandum of Understanding (MOU).</td>
<td>Yes X No Otay became a signatory to the MOU in September 1991, and is in substantial compliance with the MOU.</td>
<td></td>
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## Compliance with Water Authority Annexation Policies

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| 3B         | Conservation and Local Supply Use Requirements | Member agency with jurisdiction over the proposed annexation shall submit evidence of the following prior to Board approval:  
1. Member agency has accounted for groundwater and surface water supplies available to the annexing territory in water management plans.  
2. Member agency is maximizing recycled water use and groundwater throughout its service area or has conducted feasibility studies that have determined recycled water infeasible. | Yes X No  Otay relies on imported water to satisfy all of its potable water demands and much of its non-potable demands. There is no surface water available in Otay’s service area. According to Otay’s 2010 Urban Water Management Plan and its 2007 Integrated Resources Plan, Otay is investigating the potential for developing local groundwater supplies.  
Under a Major Use Permit from the County of San Diego for the proposed project, limited groundwater will be permitted to irrigate the private equestrian field. (22 AFY at build-out) The owner/applicant for the proposed annexation committed to use groundwater to the extent practicable by way of a letter on June 15, 2010 (Attachment 5 to Board memo).  
Otay is working to expand recycled water use in its service area. Ultimately, recycled water is expected to represent about 15 percent of the Otay’s total water supply. | |
| 3B         | Conservation and Local Supply Use Requirements | Member agency with jurisdiction over the proposed annexation shall submit evidence of the following prior to Board approval:  
1. Member agency is offering Water Authority and Metropolitan sponsored water conservation programs to new development and encouraging participation. | Yes X No  Otay co-funds and participates in Water Authority and Metropolitan sponsored water conservation programs that are available to existing and new developments. | |
| 4          | Annexation Fee                      | Annexing territory shall pay an annexation fee in an amount set by the Board. | Yes No (Include as final condition)  
Payment of annexation fee will be established as final condition associated with approval of annexation. |
| 5          | Priority given to Annexations to Member Agency | Priority shall be given to proposals for annexation to an existing member agency. | Yes X No  The proposed annexation is to the Otay, which is an existing Water Authority member agency. |
## Compliance with Water Authority Annexation Policies

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<td>6</td>
<td>Concurrent annexation to Metropolitan, Water Authority and Member Agency</td>
<td>Proposals for annexation to a member agency shall be processed concurrently with an application for annexation to the Water Authority and Metropolitan.</td>
<td>Yes ✗ No The property is already within Otay’s service area. Otay Resolution No. 3992 states that annexation to Otay’s Improvement District No. 9 to receive water service is conditioned upon final annexation by both the Water Authority and MWD (Attachment 1.A to Board memo).</td>
</tr>
<tr>
<td>7</td>
<td>Facilities necessary to connect annexing Territory or New Member Agency</td>
<td>Facilities and works necessary to connect annexed territory or new member agency to Water Authority facilities and works shall be provided at the cost of the annexed territory or new member agency, as determined by the Board.</td>
<td>Yes ✗ No Otay Resolution No. 3992 states that facilities necessary to connect annexed territory to Water Authority facilities shall be provided at the cost of the annexing territory.</td>
</tr>
<tr>
<td>8</td>
<td>Environmental Compliance</td>
<td>Annexation to the Water Authority is a project subject to the California Environmental Quality Act (CEQA).</td>
<td>Yes ✗ No As the lead agency for the project, the County of San Diego Department of Planning and Land Use (County) filed a Notice of Determination (NOD) that a Final Environmental Impact Report (EIR) was prepared and certified pursuant to CEQA provisions. The County determined that the project will have a significant impact on the environment and mitigation measures were made a condition of the project approval. As a Responsible Agency under CEQA, the Board may rely on this environmental review as part of final approval of the annexation. A copy of the Final EIR and associated documents will be submitted to the Board for their review prior to final approval of the annexation.</td>
</tr>
<tr>
<td>9</td>
<td>Consistent with Land-Use Approvals</td>
<td>The member agency with jurisdiction over the annexing territory shall provide certification from the city with jurisdiction over the annexing territory that the annexation is consistent with and supports the timing, location, and development intensity of the city’s general plan and applicable specific plans.</td>
<td>Yes ✗ No The Peaceful Valley Ranch is located in an unincorporated area of San Diego County. On July 23, 2008, the County adopted a resolution conditionally approving the Peaceful Valley Ranch project’s Tentative Map No. 534RPL consistent with the San Diego County General Plan and Zoning Ordinance.</td>
</tr>
<tr>
<td>10</td>
<td>Total annexation of Ownership Lands</td>
<td>All parcels within an area proposed for annexation under single ownership or development control shall be annexed concurrently unless the member agency and city with jurisdiction over the annexing territory provide evidence that partial annexation is consistent with land use policies of the city.</td>
<td>Yes ✗ No The entire approximately 152.4-acre territory is being annexed concurrently.</td>
</tr>
</tbody>
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## Compliance with Water Authority Annexation Policies

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</table>
| **11**     | Avoid formation of Islands/Windows| Unless the Board determines that Water Authority’s interests would not be adversely affected, “windows” and “islands” shall not be created by an annexation. | Yes X  No  
The proposed annexation would result in creation of window areas within the Water Authority and Metropolitan service area. The areas that would create windows are under different ownership from the applicant. The Stoddard property is interested in annexation at a later time. Back in July 2004, the applicant contacted the other property owners that would result in creation of windows to inform them of the request to annex, and none of the owners were interested in annexation at that time. In July 2010, Otay contacted the property owners, who are still not interested in annexation of their lands.  
Staff is recommending that a determination be made that the creation of window areas within the Water Authority’s service area would not adversely affect the Water Authority’s interests. Otay has made an effort to eliminate the formation of windows through contacting the landowners. The majority of the annexing property is co-terminus to the Water Authority service area. In addition, to prevent use of imported supplies outside the Water Authority’s service area that could occur with the creation of windows, Otay has stated that they conduct continuous monitoring of their facilities to preclude illegal tapping of mains. |
| **12**     | Administrative Costs             | Prior to acceptance by the Water Authority of an application for annexation, the applicant shall deposit an administrative fee to cover costs incurred by the Water Authority as a result of annexation proceedings. | Yes X  No  
The administrative fee of $3,000 was provided to the Water Authority. |
| **13**     | Annexation of Tribal Lands       | Indian tribal lands may be annexed in compliance with Water Authority annexation policies. In addition, a contract shall be entered into and additional conditions may apply. | Not Applicable |
### April 2010 Procedures: Potential Adverse Effect Situations

<table>
<thead>
<tr>
<th>Potential Regional Adverse Effect</th>
<th>Reason for Potential Regional Adverse Effect and Possible Mitigation Measures</th>
<th>Staff Evaluation based on Situations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annexing territory demands not included in the Water Authority’s UWMP</td>
<td>Supplies have not been planned in UWMP to meet annexation demands. If Water Authority cannot identify additional supplies, member agency develops supplies, potentially offset project.</td>
<td>Yes</td>
</tr>
<tr>
<td>Actual demands exceeding forecasted UWMP demands</td>
<td>Supplies may not be adequate to meet demands of annexation and region. If Water Authority cannot identify additional supplies, member agency develops supplies, potentially offset project.</td>
<td>Yes</td>
</tr>
<tr>
<td>Water Shortage and Drought Response Plan activated, due to uncertain supplies or shortages</td>
<td>Increasing demands due to annexation may cause further member agency cuts or exceedance of allocation from MWD. Member agency allocation base period demand would not be increased due to annexation.</td>
<td>Yes</td>
</tr>
<tr>
<td>Existing facilities insufficient to provide average annual and peak deliveries</td>
<td>Increasing demands due to annexation further jeopardizes system reliability. Identified on case-by-case basis.</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Yes = Potential Regional Adverse Effect is present. No = Potential Regional Adverse Effect is not present. X = Potential Regional Adverse Effect is not applicable or has been mitigated.
### Compliance with Water Authority Annexation Policy # 2
January 18, 2012

<table>
<thead>
<tr>
<th>April 2010 Procedures: Potential Adverse Effect Situations</th>
<th>Staff Evaluation based on Situations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Potential Regional Adverse Effect</strong></td>
<td><strong>Reason for Potential Regional Adverse Effect and Possible Mitigation Measures</strong></td>
</tr>
<tr>
<td>Annexing territory demands not included in the Water Authority’s UWMP</td>
<td>Supplies have not been planned in UWMP to meet annexation demands. If Water Authority cannot identify additional supplies, member agency develops supplies, potentially offset project.</td>
</tr>
<tr>
<td>Actual demands exceeding forecasted UWMP demands</td>
<td>Supplies may not be adequate to meet demands of annexation and region. If Water Authority cannot identify additional supplies, member agency develops supplies, potentially offset project.</td>
</tr>
<tr>
<td>Water Shortage and Drought Response Plan activated, due to uncertain supplies or shortages</td>
<td>Increasing demands due to annexation may cause further member agency cuts or exceedance of allocation from MWD. Member agency allocation base period demand would not be increased due to annexation.</td>
</tr>
<tr>
<td>Existing facilities insufficient to provide average annual and peak deliveries</td>
<td>Increasing demands due to annexation further jeopardizes system reliability. Identified on case-by-case basis.</td>
</tr>
</tbody>
</table>

*The 70 acre-feet/year projected water demands associated with the proposed annexation was included in the 2010 UWMP as a potential near term annexation.*

*Actual demands are not exceeding forecasted UWMP demands.*

*The Water Authority Water Shortage and Drought Response Plan (WSDRP) is not activated.*

*Existing facilities are sufficient to provide average annual and peak deliveries.*
SECTION 27 REQUIREMENTS AND LIMITATIONS FOR OBTAINING WATER SERVICE

27.01 REQUIREMENT FOR WATER/SEWER PERMIT AND PAYMENT OF FEES, CHARGES, AND DEPOSITS

A. Requirement for Water/Sewer Permits. Water meters shall not be installed nor water service furnished until an application, in the form of a water/sewer permit, has been executed by the customer at the District office.

B. Requirement for Payment of Fees, Charges and Deposits. Payment of all required fees, charges and deposits shall be made by the customer at the time the water meter is purchased. A customer requesting water service shall pay the fees, charges, and deposits as set forth in Section 28 of this Code.

C. Requirement for a Building Permit. A customer requesting permanent water service shall be required to present a valid building permit for the property issued by the appropriate governmental agency, except that a building permit is not required by a customer requesting permanent water service to: 1) install and maintain landscaping prior to the construction of a building; 2) perform mass grading operations; or 3) to satisfy conditions imposed by other government agencies, including a single meter for grading for four lots or less which are part of the same parcel map. Government agencies shall be exempt from the requirement of presenting a valid building permit.

D. Requirement for a Service Lateral. The customer requesting water service shall either have an existing service lateral or purchase a new lateral installation at the time of the meter purchase.

E. Commercial Parcels - 5,000 square feet or Larger Irrigated Landscape. When a customer requests water service on a parcel of land with irrigated landscape equal to 5,000 square feet or more, a separate meter will be required for irrigation purposes on the site.

F. Reclaimed Water Service Areas. In areas designated as reclaimed water service areas, the customer shall be required to install a separate reclaimed water service lateral and meter to supply irrigation to the parcel.

G. Second Meter For Indoor Use. Any customer who obtained a single meter prior to October 17, 1990, a second meter for indoor use may be obtained, without paying water capacity fees, San Diego County Water Authority fees and applicable zone charges on the second meter, if the following criteria are met:
1. The additional meter is solely for the purpose of isolating current domestic (indoor) water use from that used for outdoor landscaping. The additional meter shall be on a separate lateral.

2. All costs of on-site plumbing changes, including approved back-flow prevention devices, will be the responsibility of the customer.

3. The customer acknowledges that adding a second meter will result in a second water bill and associated monthly system fee.

4. The customer will be required to pay all fees and charges prior to meter installation.

27.02 SIZE OF WATER METER

A water meter shall be sized to ensure that the maximum demand (in gallons per minute) will not exceed 80% of the manufacturer's recommended maximum flow rate, as shown in Section 27.03. In no case shall the water meter size be less than ¾-inch. The size of the water meter and service lateral required for water service shall be determined by the General Manager as follows:

A. Detached Single-Family Residential Dwelling Unit. The customer may submit calculated maximum demand (in gallons per minute), provided that maximum demand must be more than twenty four (24) gallons per minute.

B. Apartments, Condominiums, Mobile Home Parks and other Multiple Family Residential Dwelling Units with Individual Meters. The calculated maximum demand shall be per Section 27.02A.

C. Business, Commercial, Industrial, Apartments, Condominiums, Mobile Home Parks and other Multiple-Family Residential Dwelling Units. The customer shall submit building plans signed by a licensed building architect. The plans shall list the number of fixture units, the parcel size (in acres), and the calculated maximum demand (in gallons per minute) to be placed on each water meter.

D. Irrigation. The customer shall submit irrigation plans signed by a licensed landscape architect. The plans shall indicate the calculated maximum demand (in gallons per minute) to be placed on each water meter and the total area to be irrigated (in square feet). The plans must also be in compliance with the requirements of Section 27.05.

E. Other. In the case of other types of service not included above, the customer shall submit information as
requested by the General Manager. Any customer may request and purchase a separate meter to isolate landscaping from indoor use.

F. Requirement for Multiple Meters. The General Manager may require multiple meters when it is in the best interest of the District.

27.03 MANUFACTURERS RECOMMENDED MAXIMUM FLOW RATE FOR DISTRICT METERS

Customers are cautioned to control the rates of flow of water through District meters. Operation of a meter at flows in excess of the manufacturer's recommendations will cause severe damage to operating parts. Rated capacities for meters used in this District are as follows:

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Ordinary Meters</th>
<th>Manufacturer's Recommended Maximum Rate in U. S. Gallons per Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Inches</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/4</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>1-1/2</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>530</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1350</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2700</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>3500</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>6500</td>
<td></td>
</tr>
</tbody>
</table>

COMPOUND METERS  
(Multi-family, Apartments etc.)

<table>
<thead>
<tr>
<th>Meter Size</th>
<th>Manufacturer's Recommended Maximum Rate in U. S. Gallons per Minute</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>285</td>
</tr>
<tr>
<td>3</td>
<td>480</td>
</tr>
<tr>
<td>4</td>
<td>750</td>
</tr>
<tr>
<td>6</td>
<td>1700</td>
</tr>
</tbody>
</table>

27.04 USE OF SUBMETERS FOR RESALE OR DISTRIBUTION OF WATER

Owners or operators of mobile home parks, apartments, condominium complexes, industrial complexes and land used for agricultural purposes may resell water furnished by the District through the use of a submetering system under the following conditions: (1) owners and operators shall comply with State law (California Code of Regulations Section 4090) prohibiting any surcharge on the water rate; (2) the water system on the private property side of the master meter, including the submeters, shall be solely the responsibility of the owner or operator; and (3) the owner or operator shall clearly delineate on the bill that any cost associated
with the submeters is a cost imposed by the property owner or operator and not by Otay Water District.

27.05 CONSERVATION AND LOCAL SUPPLY USE REQUIREMENTS

The requirements below apply to all new residential and commercial developments or redevelopments. The landscape requirements also apply to any re-landscaping that is subject to review by the District, the County of San Diego, City of Chula Vista or the City of San Diego.

1. Indoor Fixtures and Appliances. All water fixtures and appliances installed, including the ones in the following list, must be high-efficiency:

   - Toilets and urinals
   - Faucets
   - Showerheads
   - Clothes Washers
   - Dishwashers

   “High-efficiency” means fixtures and appliances that comply with the most efficient specifications under the EPA WaterSense® or Energy Star programs,¹ as in effect at the time installation commences.

2. Landscape requirements. Only “Smart” irrigation controllers² may be installed and only low-water use plants may be used in non recreational landscapes. All landscapes must also be designed and managed consistent with requirements of the local agency within which the property is located, be it the County of San Diego, the City of Chula Vista or the City of San Diego.

   a. Installed smart irrigation controllers shall be properly programmed/scheduled according to the manufacturer’s instructions and/or site specific conditions based on soil type, plant type, irrigation type, weather and/or reference evapotranspiration data.

   b. Two irrigation schedules shall be prepared, one for the initial establishment period of three months or until summer hardened, and one for the established landscape, which incorporates the specific water needs of the plants and turf throughout the calendar year. The schedules shall be continuously available on site to those responsible for the landscape maintenance and posted at the smart controller.

¹ Certified EPA WaterSense products, and Energy Star products, are at least 20% more efficient than the applicable federal standards.
² Smart Irrigation Controller means a controller that uses real time, soil moisture or weather data to automatically adjust irrigation run-times. Furthermore, to qualify as a Smart Irrigation Controller, the device must be certified by the Irrigation Association and/or the EPA WaterSense program.
c. Any Covenants, Conditions, and Restrictions (CC&Rs) pertaining to a new subdivision/development shall not limit or prohibit the use and maintenance of low water use plant materials and the use of artificial turf, and shall require property owners to design and maintain their landscapes consistent with the applicable City and County’s regulations.

d. Dedicated irrigation meters shall be installed in:
   • All parks and common areas with 5,000 square feet or more of irrigated landscape
   • Commercial sites with 5,000 square feet or more of irrigated landscape

e. In compliance with Section 23.03 of this Code of Ordinance, pressure regulators must be installed when and where appropriate to maximize the life expectancy and efficiency of the irrigation system.

5. New commercial developments must install separate, dual-distribution systems for potable and recycled water.

6. The requirements of this Section shall not be interpreted in any way to limit the owner’s obligation to comply with any other applicable federal, state, or local laws or regulations.
June 15, 2010

Mr. Robert Kennedy
Associate Civil Engineer
Otay Water District
2554 Sweetwater Springs Road
Spring Valley, CA 91978-2004

RE: PEACEFUL VALLEY RANCH ANNEXATION

Dear Bob:

As project manager for and on behalf of Peaceful Valley Ranch LLC (PVR LLC), owner of the Peaceful Valley Ranch project, this letter is to confirm the commitment of PVR LLC to fully meet the Otay Water District's ordinance on conservation and local supply use requirements as described in section 27.05 of the Otay Water District Code of Regulations.

Additionally, Peaceful Valley Ranch LLC will utilize ground water to the fullest extent practical, within the limitations of the Peaceful Valley Ranch Major Use Permit.

Sincerely,

MOSER VENTURES INC.
For and on behalf of Peaceful Valley Ranch LLC

Dennis M. Moser
President

cc: Streeter Parker, PVR LLC
January 18, 2012

Attention: Water Planning Committee

Update on Review of the Water Authority’s Water Shortage and Drought Response Allocation Methodology. (Information)

Purpose
To provide an update on development of proposed refinements to the Water Authority Water Shortage and Drought Response Plan Allocation Methodology

Background
During the 2007-2011 shortage management period, the Metropolitan Water District allocated supplies to its member agencies, including the Water Authority, from July 2009 to April 2011. During this period, the Water Authority activated the mandatory cutback stage of its Water Shortage and Drought Response Plan (WSDRP), allocating supplies to its member agencies consistent with the allocation methodology contained in the WSDRP. The allocation methodology had been developed through a year long process that included extensive input from a member agency technical advisory committee and the Water Planning Committee. The Board approved the methodology through adoption of the WSDRP in March 2006. In the concluding summary section of the WSDRP, it is acknowledged that elements of the plan may need to be modified in the future to meet changing conditions. In December 2008, the Board approved minor revisions to the allocation methodology to address alignment issues with Metropolitan’s 2008 Water Supply Allocation Plan (WSAP).

Through implementation of the methodology during the past shortage management period, staff and member agencies identified specific elements of the methodology that could be refined to improve the method. Conditions have also changed since adoption of the methodology in 2006, specifically in the area of conservation, which requires review and potential refinements to the method. In addition, the allocation methodology needs to be modified to ensure it is aligned with recent modifications to Metropolitan’s WSAP to provide an equitable allocation of supplies. Staff has been working with member agency staff to identify the specific areas of potential refinements to the method along with proposals for Committee consideration.

Discussion
The purpose of the allocation methodology review is to examine specific elements of the Board approved methodology for potential refinements. The approach is to maintain the basic policies and principles that form the foundation for the methodology and not make wholesale changes to the method at this time.

To aid staff in the development of proposed refinements to the methodology, a series of member agency meetings have been held to gain input. The meetings kicked off in May 2011, with discussion and support for the specific elements to be reviewed. The meetings were then postponed until Metropolitan approved adjustments to its WSAP in September 2011. Staff met with the member agencies four times over the October – January time period.
Elements of the methodology under review and a brief description as to why it needs to be addressed are included below:

<table>
<thead>
<tr>
<th>Allocation Methodology Element</th>
<th>Concern with Current Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Period</td>
<td>Definition needs to be clarified to exclude non-allocation years to avoid penalizing agencies for reducing demands.</td>
</tr>
<tr>
<td>Loss of Local Supply Adjustment</td>
<td>Method may not sufficiently accomplish the goal of not penalizing agencies for developing local supplies. It is also inconsistent with Metropolitan’s WSAP.</td>
</tr>
<tr>
<td>Growth Adjustment</td>
<td>Method links growth to meters and the link is eliminated during levels of drought ordinance (meter moratoriums). When population is used as indicator for growth, it may not capture non-residential sector growth.</td>
</tr>
<tr>
<td>Conservation Adjustment</td>
<td>Method uses savings from BMP device-based conservation, which no longer encompasses the entire realm of savings. In the future, conservation savings is going to be monitored through compliance with SBX7-7 target.</td>
</tr>
<tr>
<td>Retail Reliability Adjustment</td>
<td>The trigger at a 30% cutback is unlikely to be reached often, taking into account Metropolitan and Water Authority supply and storage programs. At lesser shortage levels, member agencies could experience large disparity between levels of retail reliability.</td>
</tr>
<tr>
<td>Alignment with MWD WSAP</td>
<td>Method may not equitably allocate supplies to member agencies when taking into account the effect the modified WSAP has on the Water Authority’s allocation from MWD.</td>
</tr>
<tr>
<td>Carryover Storage Program Allocation</td>
<td>A method to allocate CSP supplies needs to be developed that exempts Special Agricultural Water Rate customers from receiving CSP deliveries.</td>
</tr>
</tbody>
</table>

At the February 9, 2012, Water Planning Committee Workshop, staff will provide details on the proposed refinements to the allocation methodology to address each of the concerns above. Incorporating input received from the Committee at the Workshop, staff will return in March 2012 with recommended refinements for Board consideration.

Prepared by: Dana L. Friehauf, Principal Water Resources Specialist
Reviewed by: Ken Weinberg, Director of Water Resources
January 18, 2012

Attention: Water Planning Committee

Status Report on the draft Water Purchase Agreement for the Carlsbad Desalination Project (Discussion)

Purpose
The purpose of this report is to provide an update on activities related to the Board approved Term Sheet between the Water Authority and Poseidon Resources (Channelside L.P.) regarding the development of a draft Water Purchase Agreement (WPA) with Poseidon Resources.

Background
In the July 2010 meeting, the Board approved a Term Sheet between the Water Authority and Poseidon Resources regarding the preparation of a WPA for 56,000 acre-feet per year from the Carlsbad Seawater Desalination Project. Since that time, Water Authority staff and Poseidon have worked on meeting certain conditions precedent to negotiation and consideration of a WPA as well as conducting the required financial, technical and corporate due diligence activities. All conditions precedent to negotiation of a WPA were fulfilled in September 2011 and Water Authority staff provided Poseidon a draft WPA in November 2011. The first face-to-face negotiating session between the parties also occurred in November 2011.

Concurrently with development of a draft WPA and associated due diligence activities, Water Authority staff and Poseidon have continued to refine the facilities requirements needed to connect the proposed desalinated water conveyance pipeline to existing Water Authority facilities for introduction into the regional aqueduct system. The extent and cost of any modifications to existing Water Authority facilities will be known prior to Board consideration of a WPA with Poseidon.

Discussion
Status of the draft Water Purchase Agreement
Implementation of the Carlsbad Desalination Project by Poseidon involves three project agreements between Poseidon and its contractors. There are separate agreements between Poseidon and the joint venture of Kiewit C Infrastructure West Co. and JF Shea Construction for the design and construction of the plant and desalinated water conveyance pipeline and between Poseidon and Israel Desalination Engineers (IDE) for the operation of the plant. IDE is also sub-contractor to Kiewit-Shea for the design of the advance water treatment processes. Because the Water Authority will be relying on water from the desalination plant for a portion of its supply, it is necessary for the Water Authority to be assured that the project will be completed as proposed and will reliably provide water under the proposed contract terms. Water Authority staff and consultants have been reviewing Poseidon’s three project related agreements which ultimately must align with similar provision in the WPA.
Following the initial session of negotiations with Poseidon regarding the draft WPA, the Water Authority negotiating team prepared a second draft to respond to issues and comments raised regarding the first draft and to begin to align the draft WPA with Poseidon’s construction and operations agreements where appropriate. Changes to the second draft were discussed with the Board’s Carlsbad Desalination Project Advisory Group at its January 11, 2012 meeting, and the revised draft WPA was provided to Poseidon on January 17, 2012. Poseidon is currently reviewing the second draft and a second negotiating session is being planned for mid-February.

Water Authority Distribution System Improvements
As previously reported to the Board, the connection of the proposed desalinated water conveyance pipeline to the water authority’s existing Pipeline 3 and reoperation of Pipeline 3 to deliver water north to the Twin Oaks Valley Water Treatment Plant (TOVWTP) has required a number of technical studies to better define the needed improvements and refine cost estimates. These technical studies, their costs, and cost responsibilities between the Water Authority and Poseidon are addressed in detail in an accompanying Board memo to the water Planning Committee on this same agenda.

Work began on the condition assessment of Pipeline 3 during December 2011 and is expected to be completed in February 2012, at which time staff will be able to determine the extent of improvements needed to reoperate the pipeline to convey desalinated seawater to the TOVWTP. Other activities related to the TOVWTP improvements and water quality and blending studies are proceeding concurrently.

Schedule of Future Activities
Staff is continuing financial and project due diligence activities. A staff workshop is scheduled for late January 2012 with IDE and Poseidon to go over, in detail, the plant operations and maintenance agreement. Certain requirements by the Water Authority maintenance and repair of the plant as well as operating protocols will need to be included in Poseidon’s agreement with IDE. Additionally, activities regarding the preparation of financial and other project documents as part of the bond rating process as well as required oversight by the California Pollution Control Financing Agency – the ultimate issuer of the Private Activity Bonds – are proceeding concurrently with these other activities. In addition, staff is evaluating the potential financial impacts to the current rate and charge structure and possible alternatives.

Water Authority staff has been working on a comprehensive schedule leading to consideration of a WPA by the Board, including two Board workshops following release for public review of a final draft WPA. The schedule also incorporates the 60-day review period adopted by the Board for member agency consideration of purchasing Carlsbad Desalination supplies from the Water Authority as a member agency local supply. A detailed schedule will be presented to the Water Planning Committee at its January 27, 2012 meeting that will result in the release of a final draft WPA in the spring, Board workshops in May and June, and consideration of approval in the June-July timeframe.

Prepared by: Ken Weinberg, Director of Water Resources
Reviewed by: Sandra L. Kerl, Deputy General Manager
Approved by: Maureen A. Stapleton, General Manager
January 18, 2012

Attention: Water Planning Committee

Budget Revisions and Contract Amendments for the Carlsbad Desalination Project (Action)

Purpose
The purpose of this report is to request Board action to revise the Water Authority CIP budget and approve amendments to consultant contracts in order to support the development of a Water Purchase Agreement between the Water Authority and Poseidon Resources (Channelside L.P.).

Staff recommendation
1) Approve the consultant contract amendments listed on Tables 1 and 2 (Attachment 1 and Attachment 2).
2) Increase the current Capital Improvement Program (CIP) 2 year appropriation and life budget for the Carlsbad Desalination Project by $2,783,904 and amend the project name and description to reflect the current WPA negotiation.

Alternative
Do not approve consultant contract amendments and CIP budget revisions.

Fiscal Impact
In total, staff recommendation will increase the amount of the contracts by $3,074,564. These funds were not anticipated nor budgeted in the FY2012 and FY2013 multi-year budget. However, monies in the Pay-Go fund are available to be used for this purpose. The Carlsbad Desalination Project CIP budget will increase from $2,080,000 to $4,863,904, increasing the overall CIP budget by $2,783,904. These actions impact multiple rate categories.

Background
The Carlsbad Desalination Project (Project) is a fully-permitted seawater desalination plant and conveyance pipeline currently being developed by Poseidon Resources (Poseidon), a private investor owned company that develops water and wastewater infrastructure. The Project has been in development since 1998. The Project was incorporated into the 2003 Water Facilities Master Plan, the 2005 Update of the Urban Water Management Plan (UWMP) and the Water Authority’s 2010 update of the UWMP. The Project has obtained all required permits and environmental clearances and, when completed, will provide a highly reliable local supply of 56,000 acre-feet (AF) per year for the region. According to the projections contained in the 2010 UWMP, in 2020, the Project would account for approximately seven percent of the total projected regional supply and 32 percent of all locally generated water in San Diego County.

At its July 22, 2010 meeting, the Board approved a Term Sheet between the Water Authority and Poseidon and directed staff to prepare a water purchase agreement based on its provisions. At its August 25, 2011 meeting, the Board approved an agreement with the City of Carlsbad, Carlsbad Municipal Water District and Carlsbad Housing and Redevelopment Commission regarding a
Framework for Cooperation in the implementation of the Carlsbad Desalination Project. On September 11, 2011, the Carlsbad City Council also approved the Framework for Cooperation agreement, which satisfied the final condition precedent to the start of negotiations between the Water Authority and Poseidon on a final draft water purchase agreement.

Discussion

WPA negotiations support/technical and corporate due diligence

Because of the complex and technical nature of the Project and the transaction, specialized legal, financial and engineering expertise is required to conduct Project due diligence and to assist staff in the preparation and negotiation of a final Water Purchase Agreement (WPA). The outside consultant firms that have been assisting the negotiating team include: Clean Energy Capital Advisors LLC (CEC), SAIC Energy, Environment and Infrastructure (SAIC), and special legal counsel from Hawkins Delafield and Wood LLP (HDW). Since the approval by the Board of the Term Sheet with Poseidon in July 2010, staff, along with these consultants, have been conducting both technical and corporate due diligence activities, further defining the operational integration of the project into the Water Authority’s aqueduct system, determining the financial impacts of the proposed project as well as understanding the corporate structure behind Poseidon. Additionally, staff, working alongside HDW, CEC and SAIC, prepared an initial draft of a WPA based on the July 22, 2010 Term Sheet that served as the basis for initiating negotiations with Poseidon in early November 2011. Staff, in conjunction with HDW, CEC and SAIC, prepared a second draft of the WPA that was provided to Poseidon on January 17, 2012. A negotiated draft WPA is necessary for Poseidon to obtain a preliminary bond rating from the financial rating agencies for its proposed sale of tax exempt Private Activity Bonds (PABs).

Due to Project complexity, the length of time between approval of the Term Sheet in July 2010 and completion of the final condition precedent to start of the negotiations in late 2011, the legal and technical consultant contracts need to be amended for time and budget. The work to be completed includes continued corporate and technical due diligence, WPA negotiations and the legal work connected with drafting the WPA and associated implementation agreements. These proposed amendment amounts are summarized in Table 1 (Attachment 1).

Connection to Water Authority Aqueduct System – Capital Facility Due Diligence

As previously reported by staff to the Board, significant physical improvements to existing Water Authority facilities must be made to accept the desalinated seawater and introduce that water into the regional conveyance system for delivery to Water Authority member agencies. Desalinated water from the plant will be conveyed via a new 54-inch pipeline to a connection point in San Marcos where the new conveyance pipeline will connect to the Water Authority’s Second Aqueduct. From there, the current plan is for the water to be conveyed north in existing Pipeline 3 to the Twin Oaks Valley Water Treatment Plant (TOVWTP) where the water will be blended with TOVWTP product water in the plant’s existing clear well storage tanks. From there, the now blended supply will flow back into the aqueduct for distribution. In order to confirm and define the facilities that will be required to convey the desalinated water as well as the cost of those facilities, a
number of engineering assessments and evaluations are required. Because this capital facility due diligence work, related to the desalination plant connection to the aqueduct system, would not occur in absence of consideration of the Carlsbad Desalination Project Water Purchase Agreement, Poseidon has agreed to reimburse the Water Authority for the third party costs to support this effort. The work effort includes the following:

- **Condition assessment of existing Pipeline 3:** The proposed plan to convey desalinated water to the TOVWTP will result in a reversed flow direction and higher pressures for Pipeline 3 (P3). An assessment of P3, along with additional hydraulic analysis is required to determine what will be required to rehabilitate the pipeline to support this operation. An initial basis of design will then be prepared to define the rehabilitation/relining for Pipeline 3 that will be required to support the Project.

- **TOVWTP Improvements:** Improvements will be required at the TOVWTP to convey water into and out of the clear well storage tanks. Improvements to the TOVWTP site are contemplated to be carried out under the existing TOVWTP service contract between the Water Authority and CH2M Hill. Consultant support is needed to better define these improvements and represent the Water Authority as the owner.

- **Conveyance Pipeline:** As the Water Authority will ultimately own and maintain the new 54-inch pipeline to be constructed from the desalination plant to the Water Authority’s aqueduct, it is essential that the Water Authority ensures that the pipeline is designed and constructed to Water Authority standards.

- **Water Quality:** Blending studies are needed to ensure that the desalinated water does not cause unanticipated impacts to the water quality of the existing aqueduct treated water supply, specifically as it relates to maintaining a required disinfection residual.

Table 2 (Attachment 2) shows a description of the work and the individual contract amendment amounts staff is seeking. Poseidon has agreed to deposit reimbursement to the Water Authority for the total contract amounts shown on Table 2, as the work progresses. To date, the Water Authority has received deposits from Poseidon totaling $214,790 for this work. It should be noted that due to the compressed nature of the project schedule, work associated with the condition assessment of P3, water quality and some of the work related to the conveyance pipeline was initiated using existing as-needed or similar contracts. As such, the specific requested contract amendments for AECOM (P3 assessment), Carollo (Conveyance Pipeline design review) and CH2M Hill (water quality blending study) are needed to restore contract budgets for other previously anticipated tasks that were utilized for the Carlsbad project.

**Budget Revisions**

The recommended increase to the CIP Budget is shown on Table 3 (Attachment 3). The CIP budget for the Carlsbad Desalination Aqueduct Improvements Project (K0300) was established in the adopted 2 year budget for fiscal years 2010 and 2011. This budget did not contemplate the scope of the current WPA negotiation and due diligence activities. The budget therefore needs to be
increased to support the Project through WPA execution and financial closing. Staff also plans to revise the project title and description to reflect the current WPA negotiation. The current budget for the project, $2,080,000 will be increased by $2,783,904 to a total budget of $4,863,904 to support the consultant costs and staff resources that will be required. Of this total budget, Poseidon is committed to provide reimbursement of all infrastructure related consultant contracts supporting pre-WPA approval activities as well as extraordinary expenses incurred by the Water Authority related to the planning and assessment of facilities required to accept and convey deliveries of desalinated product water. Extraordinary expenses include overtime labor expenses, aqueduct shutdown material costs, a proportionate share of CIP overhead and expenses related to initial planning and design reviews. The total reimbursement amount is estimated at $1,611,376 through WPA approval.

Finally, the requested amendments are intended to provide sufficient scope and budget to support Water Authority activities pertaining to project negotiations and the development of the Project through WPA approval and financial close. Additional consultant and staff resources and corresponding increases to the CIP budget will be required to support design, construction and implementation of the Project. Staff plans to return to the Board with an update on these estimated costs prior to Board consideration of the WPA.

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

Attachments:

1) Table 1 – Carlsbad Desalination Project-WPA Approval Consultant Expenditures (Negotiations Support / Due Diligence)
2) Table 2 – Carlsbad Desalination Project-WPA Approval Consultant Expenditures (Reimbursable by Poseidon)
3) Table 3 – Carlsbad Desalination Project-CIP Budget Increase (K0300)
<table>
<thead>
<tr>
<th>Consultant</th>
<th>Task Description</th>
<th>Total amount expended as of 12/31/11</th>
<th>Projected expenditures to complete WPA/Financial Close</th>
<th>Total amount - all tasks</th>
<th>January Board Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawkins Delafield Wood LLP</td>
<td>WPA legal services</td>
<td>$1,087,400</td>
<td>$700,000</td>
<td>$1,787,400</td>
<td>No amendment; Report to Board</td>
</tr>
<tr>
<td>Hawkins Delafield Wood LLP</td>
<td>Incorporate Conveyance Pipeline into WPA</td>
<td>$250,000</td>
<td>$250,000</td>
<td>$250,000</td>
<td>No amendment; Report to Board</td>
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<tr>
<td>Clean Energy Capital Advisors LLC</td>
<td>Negotiations Support</td>
<td>$766,634</td>
<td>$635,000</td>
<td>$1,401,634</td>
<td>Amend existing contract with Clean Energy Capital for $652,000</td>
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<tr>
<td>SAIC Energy Environment and Infrastructure</td>
<td>Negotiations support / technical due diligence</td>
<td>$191,282</td>
<td>$397,788</td>
<td>$589,070</td>
<td>Amend existing contract with SAIC for $340,000</td>
</tr>
</tbody>
</table>

**Totals:** $2,045,316  $1,982,788  $4,028,104  Total amendments: $992,000
<table>
<thead>
<tr>
<th>Consultant</th>
<th>Task Description</th>
<th>Total Contract Amount</th>
<th>Staff Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECOM</td>
<td>P3 Investigation</td>
<td>$188,059</td>
<td>Approve Amendment 2 with AECOM for $188,059 to restore funds to as-needed contract</td>
</tr>
<tr>
<td>Franklin G. DeFazio, Inc.</td>
<td>Hydraulic transient analysis</td>
<td>$40,000</td>
<td>Note: Contract amendment amount for this work is included in separate WP Committee action this month to amend this contract</td>
</tr>
<tr>
<td>Jacobs Engineering</td>
<td>Facility Planning Support</td>
<td>$50,000</td>
<td>Amend existing contract with Jacobs Engineering for $50,000</td>
</tr>
<tr>
<td>CH2M Hill</td>
<td>Water quality blending study</td>
<td>$130,451</td>
<td>Amend existing contract with CH2M Hill for $130,451 to restore funds to Master Plan contract</td>
</tr>
<tr>
<td>CH2M Hill</td>
<td>TOYWTP Improvements - Initial Concept</td>
<td>$300,000</td>
<td>Amend existing TOYWTP service contract with CH2M Hill Constructors, Inc. for $300,000 to cover initial DB design effort</td>
</tr>
<tr>
<td>Carollo Engineers</td>
<td>Conveyance pipeline design review</td>
<td>$54,128</td>
<td>Approve Amendment 2 with Carollo Engineers for $54,128 to restore funds to as-needed contract</td>
</tr>
<tr>
<td>Carollo Engineers</td>
<td>Design review/Owner’s Rep services</td>
<td>$127,157</td>
<td>Approve Amendment 3 with Carollo Engineers for $127,157 to restore funds to as-needed contract</td>
</tr>
<tr>
<td>SAIC Energy Environment and Infrastructure</td>
<td>Incorporate Conveyance Pipeline into WPA</td>
<td>$201,981</td>
<td>Amend existing contract with SAIC for $201,981</td>
</tr>
</tbody>
</table>

**Totals:** $1,091,776 | **Total amendments:** $1,051,776 (1)

(1) This total for contract amendments does not include the contract amendment for Franklin G. DeFazio ($40,000 for the Carlsbad project) that is part of a separate Water Planning Committee action.
### Table 3
Carlsbad Desalination Project - CIP Budget Increase (K0300) Through WPA Approval

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
<th>Reimbursable by Poseidon (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIP Costs (June 2009 through July 2010) (1)</td>
<td>$180,033</td>
<td>$137,000</td>
</tr>
<tr>
<td>CIP Costs (August 2010 through December 2011)</td>
<td>$558,307</td>
<td>$208,600</td>
</tr>
<tr>
<td>Estimate of Future Expenses to Support WPA Approval (Capital Facility Due Diligence)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water Authority Labor Expenses</td>
<td>$700,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Consultant Contracts (See Tables 1 and 2)</td>
<td>$3,074,564</td>
<td>$1,091,776</td>
</tr>
<tr>
<td>Pipeline 3 aerial and utility mapping (3)</td>
<td>$81,000</td>
<td>$81,000</td>
</tr>
<tr>
<td>CIP Overhead Costs</td>
<td>$270,000</td>
<td>$83,000</td>
</tr>
<tr>
<td><strong>Subtotal - Future Expenses</strong></td>
<td><strong>$4,125,564</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Total Budget Requirement</strong></td>
<td><strong>$4,863,904</strong></td>
<td><strong>$1,611,376 (Total)</strong></td>
</tr>
<tr>
<td><strong>Less Current Budget Amount</strong></td>
<td><strong>$2,080,000</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Budget Adjustment Required</strong></td>
<td><strong>$2,783,904</strong></td>
<td></td>
</tr>
</tbody>
</table>

(1) Includes labor expenses and consultant costs for initial planning and design reviews of a proposed new flow control facility and aqueduct connection as previously envisioned when the Project was member agency local project, prior to Board approval of the July 2010 Term Sheet between the Water Authority and Poseidon.

(2) The Total Budget Requirement includes a reimbursable component paid by Poseidon. Poseidon provides reimbursement of all consultant contracts supporting pre-WPA Approval activities ($1,091,776 estimated) and extraordinary expenses incurred by the Water Authority related to the planning and assessment of facilities required to accept and convey deliveries of desalinated product water. These extraordinary expenses include overtime labor expenses ($39,000 estimated), aqueduct shutdown material costs ($18,000 actual), expenses related to initial FCF planning and design reviews ($288,600 actual), and a proportionate share of CIP overhead expenses ($83,000 estimated).

(3) Required to support basis of design for rehabilitation/relining of Pipeline 3.
January 18, 2012

Attention: Water Planning Committee

Amendment to professional services contract for Franklin G. DeFazio, Incorporated for hydraulic transient analysis support services. (Action)

Staff recommendation
Approve Amendment 4 for $220,000 to provide additional hydraulic analysis as-needed support services, increasing the contract amount from $686,800 to $906,800.

Alternatives
Do not approve Amendment 4 and instruct staff to perform these services.

Fiscal impact
The contract price, including Amendments 1 - 4 is $906,800. There are sufficient funds in the individual CIP project budgets. Multiple rate categories will be impacted depending upon which projects fund the individual services.

Background
Amendments 1 - 3 have been for time extensions only and the original contract amount of $686,800 has remained unchanged.

A hydraulic analysis is performed as part of the design of each new CIP project added to the aqueduct system. However, the hydraulic analysis alone does not address possible surge events from various operational conditions. A transient analysis must also be performed.

Transient analysis is a highly specialized study in hydraulic dynamics, with only a limited number of experienced practitioners in the country performing such work. Franklin G. DeFazio, Incorporated has provided the transient analysis services for several major Water Authority projects, including the Rancho Penasquitos Pressure Control and Hydroelectric facility, the San Vicente Pump Station and Surge Control Facility projects, the Mission Trails FRS II and Pipeline Tunnel projects, the San Vicente Dam Raise project, the Olivenhain Pump Station and the Twin Oaks Valley Water Treatment Plant. This firm has unique knowledge of the Water Authority system and has an existing calibrated model that represents nearly all of the Second Aqueduct untreated water system, and parts of the treated water system.

Franklin G. Defazio, Incorporated was awarded a professional services contract by the Board in August of 2006, to provide hydraulic transient support to supplement project efforts at the time, perform coordination studies, and provide on-going hydraulic transient analysis quality assurance and quality control services.

Previous Board Actions: In August 2006, the Board approved a contract to Franklin G. DeFazio, Incorporated in the amount of $686,800 for hydraulic transient analysis support services.
Discussion
At the time of award in 2006, it was anticipated that Franklin G. DeFazio, Incorporated would perform hydraulic transient services for a number of Water Authority projects and that these services would be completed within a 3-year period. Although much of the work has been completed within the original 3-year period, due to various project schedules and fiscal year appropriations, a portion of the work has been delayed. Therefore, the contract completion date has been changed to December 31, 2012. In addition, unanticipated future planning projects requiring transient analysis support, including the Carlsbad Desalination Conveyance Pipeline, have recently been identified, resulting in the request for Amendment 4 (see Table 2 of the Carlsbad Desalination Project Board Memorandum). Staff will be issuing a RFP for hydraulic transient services near the end of the year in anticipation of the expiration of the current contract.

The total cost of services proposed under Amendment 4 is $220,000, with the breakdown for the Carlsbad Desalination project and the future planning projects as follows:

<table>
<thead>
<tr>
<th>Project</th>
<th>Scope</th>
<th>Approx. Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad Desal Conveyance Pipeline</td>
<td>Evaluation of pumping north in P3</td>
<td>$ 40,000</td>
</tr>
<tr>
<td>Twin Oaks Regulatory Storage</td>
<td>Evaluation to increase operational efficiencies</td>
<td>$100,000</td>
</tr>
<tr>
<td>Pipeline 2A Pump Station</td>
<td>Expansion of Twin Oaks service area to the north</td>
<td>$ 80,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>$220,000</strong></td>
</tr>
</tbody>
</table>

Franklin G. DeFazio, Incorporated is a small business. This information is provided for statistical purposes.

Prepared by: Kathy Schuler, Principal Engineer
Reviewed by: William J. Rose, Director of Engineering
Reviewed by: Ken Weinberg, Director of Water Resources
Approved by: Frank Belock Jr., Deputy General Manager
January 18, 2012

Attention: Water Planning Committee

Work plan update on the Integrated Regional Water Management Plan (Information)

Purpose
This report provides information on the activities that will take place over the next two years to update the 2007 San Diego Integrated Regional Water Management (IRWM) Plan.

Background
The San Diego Regional Water Management Group (RWMG) – which comprises the Water Authority, the city of San Diego (City) and the county of San Diego (County) – developed the first San Diego IRWM Plan and submitted it for approval by the three governing bodies in 2007. The Water Authority was designated the lead agency for purposes of applying for grants, administering grant funding and representing the RWMG to funding agencies such as the Department of Water Resources (DWR).

The 2007 San Diego IRWM Plan is the foundation of long-term IRWM planning in the region. The plan establishes goals, targets and regional priorities to optimize water supply reliability and protect and enhance water quality while providing stewardship of our natural resources. The plan’s guiding principles and priorities provide direction on implementation of IRWM planning within the region. In addition, as the IRWM program provides financial support for projects that expand the region’s reliable local water supplies, it helps to achieve the goals established in the Water Authority’s 2010 Urban Water Management Plan. Having the plan in place has positioned the region to compete successfully for funding opportunities. In keeping with the RWMG’s original vision, the plan will continue to evolve and be updated based on future state requirements and as IRWM planning within the region evolves and matures.

DWR in 2009 formally accepted the 2007 San Diego plan, a step that was required before the San Diego IRWM planning region could apply for future IRWM grant funding from the state. Since then, DWR has awarded the region two IRWM grants, both in 2011. A $1 million Proposition 84 planning grant will cover most of the costs of updating the plan. A Proposition 84 implementation grant of $7.9 million will support 11 water-related projects by public agencies and non-profits in the San Diego region, including two sponsored by the Water Authority and two by Water Authority member agencies. These two grants followed a $25 million Proposition 50 IRWM implementation grant awarded by DWR in 2008 that supports 19 water-related projects by public agencies and non-profit organizations in the San Diego region, including three sponsored by the Water Authority and nine by Water Authority member agencies.

Discussion
As part of its Proposition 84 grant program in 2011, DWR issued new guidelines for the contents of IRWM plans. When the San Diego RWMG received the Proposition 84 planning grant, it
committed itself to updating the plan in conformance to the new state requirements by Oct. 31, 2013. Two of the most significant changes mandated by DWR require new sections on climate change impacts and integrated flood management. DWR’s plan standards ensure that IRWM plans throughout the state include specific content, but individual planning regions retain flexibility in how the issues are addressed. For example, in addition to complying with the new requirements, the San Diego RWMG decided to include in its updated plan discussions of the relationship between water management and land use planning and partnership opportunities with the San Diego Regional Water Quality Control Board to improve regulatory certainty. The 2013 plan also will examine potential expansion of funding sources for the San Diego IRWM program, establish new program priorities and develop a list of metrics to measure progress toward achieving those priorities.

The 2013 San Diego IRWM Plan will be influenced by several sources besides the standards established by DWR. It will incorporate input gathered from workgroups and stakeholders and the results of several planning studies. In addition, IRWM plans are considered umbrella plans, in that they consider and incorporate information from other planning documents in such areas as water supply, stormwater, watersheds, habitat protection, land use, water quality, flood control and recreation. These plans will represent a significant information source for the updated IRWM plan.

To assist in writing the 2013 IRWM Plan and carry out other related support services, the Water Authority, acting on behalf of the RWMG, received Board approval to hire RMC Water and Environment as a consultant in September 2011. The RWMG and RMC developed a work plan to update the plan and presented it to the San Diego IRWM Regional Advisory Committee (RAC) for review. The workplan includes organization of workgroups to help develop information and review written material in six areas: long-term program governance and financing, program priorities and plan metrics, regulatory issues, land use planning and water management, integrated flood management and climate change. Material developed by the workgroups will feed directly into the plan update and, in several cases, form appendices to the plan.

Each workgroup comprises representatives of the RWMG agencies, Water Authority member agencies and other public entities, RAC members and people from non-profit organizations and other stakeholders. Water Authority staff members from the Water Resources Department will take a lead role in each of the workgroups except integrated flood management, which is outside the Water Authority’s area of expertise. As of this time, five Water Resources staff members will be involved in the plan update.

The RWMG is planning numerous events to distribute information about the plan update and solicit input from stakeholders and the general public. Chief among these events is the first San Diego IRWM Summit, which will take place later this winter (date and location to be established). The purposes of the summit are to:

- Raise awareness of the San Diego IRWM Program.
- Gain input from stakeholders on how the IRWM program may enhance water management in the region.
• Discuss how to resolve conflicts and challenges in local watersheds through integrated planning.
• Discuss the vision for IRWM planning and priorities for the IRWM plan in the region.

The RWMG also will hold workshops on specific topics over the next 20 months. Workshops will be held in several of the region’s watersheds to gather information on local conditions and discuss issues, conflicts, objectives and priorities in the watersheds. As drafts of plan update chapters are completed, the RWMG will hold workshops as part of the bi-monthly RAC meetings to present the new material and get feedback. The public review draft of the updated plan is scheduled to be released for review and comment in June 2013. The final draft will be released in August 2013 and presented for adoption by the RWMG governing bodies, the Water Authority Board of Directors, the San Diego City Council and the San Diego County Board of Supervisors. (A table presenting the IRWM Plan Update schedule is attached.)

Prepared by: Mark Stadler, Principal Water Resources Specialist
Reviewed by: Ken Weinberg, Director of Water Resources

Attachment: 2013 San Diego IRWM Plan Update schedule
## 2013 San Diego IRWM Plan Update schedule

<table>
<thead>
<tr>
<th></th>
<th>Q1 2012</th>
<th>Q2 2012</th>
<th>Q3 2012</th>
<th>Q4 2012</th>
<th>Q1 2013</th>
<th>Q2 2013</th>
<th>Q3 2013</th>
<th>Q4 2013</th>
</tr>
</thead>
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<td>Governance &amp; finance</td>
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<td>Program priorities &amp; plan metrics</td>
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<td>Regional Board collaboration study</td>
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<td>Land use study</td>
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<td>Climate change study</td>
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<tr>
<td>Integrated flood study</td>
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<tr>
<td>Public workshops at RAC meetings</td>
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<td>Public workshops in watersheds</td>
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<td>Outreach</td>
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<tr>
<td>Special events</td>
<td>IRWM summit</td>
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</tbody>
</table>

Public workshop on draft plan
Public workshop on final draft
Plan Update adopted!
January 18, 2012

Attention: Water Planning Committee

Water supply and demand conditions. (Information)

Purpose
To provide a status report on water supply and demand conditions.

Background
Conditions are dry on the State Water Project and the Colorado River Basin for the current water year 2012, which runs from October 1, 2011 through September 30, 2012. The National Weather Service continues to report that La Niña conditions are present, and expected to last through the spring, which could continue to bring below average precipitation for the southern tier of the United States.

Discussion
State Water Project
The State Water Project (SWP) Table A allocation for calendar year 2012 remains at the initial 60 percent. Last year’s final allocation was 80 percent of the State Water Contractors’ requested amounts, having been increased several times from the initial allocation of 25 percent due to favorable hydrology conditions.

Hydrologic conditions on the State Water Project are well below average to date. On January 17, 2012, the Northern Sierra 8-Station Precipitation Index was only 31 percent of average, at 6.9 inches. The 8-Station Index is tracking as the driest year on record, compared with last year at this time when it was tracking at the wettest year on record. The California Department of Water Resources conducted its first manual snow survey of the season on January 3, 2012. Snowpack was only 19 percent of normal for the date statewide. Snow water equivalents (electronic readings) on January 13 are shown in Table 1. River runoff is another important indicator of the state’s water supply. Runoff from October 1 through December 31, 2011 for the Sacramento River was only 49 percent of average. As of January 1st, the 2012 water year runoff forecast for the Sacramento River is just 66 percent of average.

Reservoir storage is still above average statewide, due largely to last year’s wet conditions across the State. Table 2 shows reservoir storage in Oroville and San Luis reservoirs.

Last year’s favorable hydrologic conditions and higher than usual Delta outflow also likely contributed to improving the endangered Delta smelt population. According to the California

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>13%</td>
</tr>
<tr>
<td>Central</td>
<td>9%</td>
</tr>
<tr>
<td>South</td>
<td>19%</td>
</tr>
<tr>
<td>Statewide</td>
<td>11%</td>
</tr>
</tbody>
</table>

Table 1. Snow Water Equivalents - Jan. 13, 2012

<table>
<thead>
<tr>
<th>Region</th>
<th>Percent Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>San Luis</td>
<td>1.95</td>
</tr>
<tr>
<td>Oroville</td>
<td>2.52</td>
</tr>
</tbody>
</table>

Percent of Capacity
<table>
<thead>
<tr>
<th></th>
<th>San Luis</th>
<th>Oroville</th>
</tr>
</thead>
<tbody>
<tr>
<td>96%</td>
<td></td>
<td>71%</td>
</tr>
</tbody>
</table>

| Percent of Average | San Luis | Oroville |
|                   | 133%     | 111%     |

Table 2. SWP Reservoir Storage Levels
Jan. 9, 2012
Department of Fish and Game on December 22, 2011, Delta smelt abundance in 2011 was greater than it had been since 2001. However, state biologists cautioned that smelt were still found at a fraction of historical abundance.

**Colorado River**

Hydrologic conditions on the Upper Colorado River Basin have also not been faring as well as last year at this time. Colorado River supply conditions on January 9, 2012 are as follows:

- **Upper Colorado Basin precipitation**: 77 percent of average
- **Snowpack conditions**: 61 percent of average
- **Lake Powell unregulated inflow observed in December**: 99 percent of normal
- **Projected water year 2012 Lake Powell unregulated inflow**: 79 percent of normal

The total system contents as of January 8, 2012 are 65% of capacity, or 38.6 million acre-feet (MAF). Last year at this time, total system contents were 54% of capacity, or 32.3 MAF. Due to dry conditions to date, the US Bureau of Reclamation no longer forecasts any potential surplus for 2013, as it did last year while assuming average conditions.

**Metropolitan Water District of Southern California**

The Metropolitan Water District of Southern California (MWD) reported on supply and demand conditions in its monthly Water Surplus and Drought Management (WSDM) report, dated January 10, 2012. Table 3 provides MWD’s projected supply and demand balance for calendar year 2012, assuming a 60 percent SWP Table A allocation. Under this scenario, MWD could have available approximately 337,000 acre-feet (AF) to store, bringing its dry-year storage balance to close to potentially 2.7 MAF at the end of calendar year 2012. As supply and demand conditions change throughout the year, MWD will update the estimated end of year storage balance accordingly.

<table>
<thead>
<tr>
<th>Supply/Demand</th>
<th>Acre-Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colorado River Aqueduct Supply*</td>
<td>902,000</td>
</tr>
<tr>
<td>State Water Project Supply</td>
<td>1,148,000</td>
</tr>
<tr>
<td>Total Supply</td>
<td>2,050,000</td>
</tr>
<tr>
<td>Estimated Member Agency Demand (includes obligations and losses)</td>
<td>1,713,000</td>
</tr>
<tr>
<td><strong>Net Supplies Available to Store</strong></td>
<td>337,000</td>
</tr>
</tbody>
</table>

*Includes the Water Authority’s QSA deliveries

**Local Supply and Demand Conditions**

After a very wet start to the water year in the month of November, December and January have been dry and cool in the county. Accumulated total precipitation for two stations in San Diego County is shown in Table 4.

<table>
<thead>
<tr>
<th>Station</th>
<th>Inches</th>
<th>Percent Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lindberg Field</td>
<td>4.44</td>
<td>118%</td>
</tr>
<tr>
<td>Ramona Airport</td>
<td>4.31</td>
<td>80%</td>
</tr>
</tbody>
</table>

Total local reservoir storage including the Water Authority’s carryover storage on January 3, 2012 was approximately 339,900 AF, about 6,000 AF less than this time last year. Storage levels reflect withdrawals that occurred during this period, along with increases due to runoff.
The Water Authority had the following dry-year supplies in storage through November 30, 2011:

- Water Authority local carryover storage: 21,000 AF
- Water Authority Semitropic groundwater storage bank: 16,117 AF

**Summary**

Following a wet water year in 2011, the 2012 water year is turning out to be dry on the State Water Project and the Colorado River Basin. Although it is still relatively early in the water year, the National Weather Service is predicting below average precipitation for the southwest through remainder of the winter. Despite the drier conditions to date, key reservoir storage levels are still above average across the state due to last year’s favorable hydrology. Staff will continue to monitor and report on supply conditions to the Board.

Prepared by: Lesley Dobalian, Water Resources Specialist
Reviewed by: Ken Weinberg, Director of Water Resources
Attention: Water Planning Committee

Water Resources Report

Purpose
This report includes the following exhibits for November and December 2011:

- 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)

<table>
<thead>
<tr>
<th>Station</th>
<th>November 2011 / December 2011</th>
<th>2011-2012 WATER YEAR (October 2011 through September 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Actual</td>
<td>Normal</td>
</tr>
<tr>
<td>Lindbergh Field (N.O.A.A.)</td>
<td>3.12 / 0.86</td>
<td>1.01 / 1.53</td>
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<tr>
<td>Lake Cuyamaca (Helix W.D.)</td>
<td>5.86 / 1.83</td>
<td>3.26 / 4.89</td>
</tr>
<tr>
<td>Lake Henshaw (Vista I.D.)</td>
<td>3.71 / 0.92</td>
<td>2.21 / 3.94</td>
</tr>
</tbody>
</table>

*Accumulated through December 2011.

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

**Water Deliveries to Member Agencies**

(acre-feet)

### NOVEMBER 2011

<table>
<thead>
<tr>
<th>MEMBER AGENCY</th>
<th>November 2011</th>
<th>November 2010</th>
<th>12 Months Ended November 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>1,060.5</td>
<td>1,116.0</td>
<td>15,931.8</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>58.2</td>
<td>84.1</td>
<td>1,083.1</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>1,403.8</td>
<td>1,558.6</td>
<td>13,110.0</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>557.1</td>
<td>752.5</td>
<td>11,399.6</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>2,154.0</td>
<td>4,194.8</td>
<td>20,030.0</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
<td>210.4</td>
<td>246.2</td>
<td>3,354.8</td>
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<tr>
<td>National City, City of</td>
<td>310.3</td>
<td>-</td>
<td>2,070.3</td>
</tr>
<tr>
<td>Oceanside, City of</td>
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<td>1,453.2</td>
<td>22,546.8</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>919.2</td>
<td>1,231.8</td>
<td>18,837.2</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>1,883.7</td>
<td>2,141.5</td>
<td>30,105.5</td>
</tr>
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<td>Padre Dam M.W.D.</td>
<td>675.6</td>
<td>822.1</td>
<td>11,343.3</td>
</tr>
<tr>
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<td>4.8</td>
<td>5.9</td>
<td>44.3</td>
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<tr>
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<td>799.5</td>
<td>10,449.9</td>
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<td>1,228.9</td>
<td>18,858.5</td>
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<td>Ramona M.W.D.</td>
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<td>6,245.1</td>
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<tr>
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<td>312.0</td>
<td>384.2</td>
<td>5,874.5</td>
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<td>16,035.5</td>
<td>169,059.5</td>
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<td>152.9</td>
<td>2,429.0</td>
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<td>4,948.0</td>
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<td>1,066.1</td>
<td>15,639.7</td>
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<td>Valley Center M.W.D.</td>
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<td>1,597.5</td>
<td>25,627.1</td>
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<tr>
<td>Vista I.D.</td>
<td>1,121.8</td>
<td>1,233.4</td>
<td>12,293.6</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>2.3</td>
<td>42.0</td>
<td>1,239.0</td>
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</table>

**Deliveries To SDCWA Agencies**

<table>
<thead>
<tr>
<th>Deliveries To SDCWA Agencies</th>
<th>28,930.9</th>
<th>36,752.3</th>
<th>430,789.8</th>
<th>450,746.1</th>
</tr>
</thead>
</table>

**Less: Deliveries to SDCWA Storage**

| Less: Deliveries to SDCWA Storage | 569.8 | 922.4 | 5,699.9 | 3,124.4 |

### TOTAL MEMBER AGENCY DELIVERIES

| TOTAL MEMBER AGENCY DELIVERIES | 28,361.1 | 35,829.9 | 425,089.9 | 447,621.7 |

**NOTES:**

- **Deliveries to SDCWA Storage** consists of deliveries to CWA El Capitan, Lower Otay, San Vicente and Sweetwater accounts.
- **Deliveries from SDCWA Storage** consists of storage drafts from the same accounts that have been sold to San Diego and Sweetwater Authority.

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PRIMA Water Resources Department
MONTHLY WATER RESOURCES REPORT
Water Deliveries to Member Agencies
(acre-feet)

DECEMBER 2011

<table>
<thead>
<tr>
<th>MEMBER AGENCY</th>
<th>December 2011</th>
<th>12 Months Ended December 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2011</td>
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<tr>
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<td>1,087.0</td>
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<tr>
<td>Escondido, City of</td>
<td>869.7</td>
<td>13,377.6</td>
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<tr>
<td>Fallbrook P.U.D.</td>
<td>776.4</td>
<td>11,656.4</td>
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<tr>
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<td>2,121.4</td>
<td>19,162.2</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
<td>212.2</td>
<td>3,384.4</td>
</tr>
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<td>National City, City of</td>
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<td>2,256.2</td>
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<tr>
<td>Oceanside, City of</td>
<td>1,496.8</td>
<td>22,734.8</td>
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<td>18,972.2</td>
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<tr>
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<td>10,324.4</td>
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<tr>
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<tr>
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<td>165,536.3</td>
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<td>15,800.0</td>
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<td>11,773.6</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>-</td>
<td>1,183.2</td>
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<td>428,719.1</td>
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<tr>
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<td>422,782.9</td>
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<tr>
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<tr>
<td>Deliveries From SDCWA Storage</td>
<td>285.4</td>
<td>18,752.9</td>
</tr>
</tbody>
</table>

NOTES: Deliveries to SDCWA Storage consists of deliveries to CWA El Capitan, Lower Otay, San Vicente and Sweetwater accounts. Deliveries from SDCWA Storage consists of storage drafts from the same accounts that have been sold to San Diego and Sweetwater Authority.
## NOVEMBER 2011

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

**Imported Source**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>S.D.C.W.A.</th>
<th>Surface Water</th>
<th>Groundwater</th>
<th>Reclaimed Water</th>
<th>November Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>955.5</td>
<td>1,182.0</td>
<td>-</td>
<td>-</td>
<td>245.0</td>
</tr>
<tr>
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<td>58.2</td>
<td>84.1</td>
<td>-</td>
<td>-</td>
<td>1.4</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>1,312.9</td>
<td>1,501.5</td>
<td>-</td>
<td>-</td>
<td>11.4</td>
</tr>
<tr>
<td>Fallbrook P.U.D.¹</td>
<td>541.8</td>
<td>752.5</td>
<td>-</td>
<td>11.9</td>
<td>24.5</td>
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<tr>
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<td>2,137.1</td>
<td>2,389.1</td>
<td>-</td>
<td>12.0</td>
<td>15.6</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
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<td>246.2</td>
<td>-</td>
<td>36.2</td>
<td>60.2</td>
</tr>
<tr>
<td>National City, City of</td>
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<td>-</td>
<td>312.5</td>
<td>250.9</td>
<td>219.6</td>
</tr>
<tr>
<td>Oceanside, City of</td>
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<td>1,453.2</td>
<td>-</td>
<td>333.2</td>
<td>349.3</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>919.2</td>
<td>1,231.8</td>
<td>-</td>
<td>194.5</td>
<td>83.8</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>1,883.7</td>
<td>2,141.5</td>
<td>-</td>
<td>264.8</td>
<td>220.6</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>672.5</td>
<td>805.5</td>
<td>-</td>
<td>79.5</td>
<td>74.3</td>
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<tr>
<td>Pendleton M.R.³</td>
<td>73.2</td>
<td>49.9</td>
<td>-</td>
<td>16.1</td>
<td>31.5</td>
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<td>580.0</td>
<td>509.0</td>
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<td>825.6</td>
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<td>-</td>
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<td>86.9</td>
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<tr>
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<td>318.2</td>
<td>394.7</td>
<td>-</td>
<td>16.1</td>
<td>31.5</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>312.0</td>
<td>384.2</td>
<td>-</td>
<td>229.6</td>
<td>285.6</td>
</tr>
<tr>
<td>San Diego, City of</td>
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<td>470.4</td>
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<td>152.9</td>
<td>65.0</td>
<td>20.1</td>
<td>409.0</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>350.9</td>
<td>258.5</td>
<td>34.2</td>
<td>14.3</td>
<td>399.4</td>
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<tr>
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<td>-</td>
<td>786.2</td>
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<td>-</td>
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</tr>
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<td>1,597.5</td>
<td>-</td>
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<td>1,080.4</td>
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<tr>
<td>Vista I.D.</td>
<td>1,121.8</td>
<td>1,233.4</td>
<td>-</td>
<td>1,121.8</td>
<td>1,233.4</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>2.3</td>
<td>42.0</td>
<td>-</td>
<td>-</td>
<td>89.8</td>
</tr>
</tbody>
</table>

**TOTAL USE**

| 2011       | 32,670.8  | 1,607.6    | 1,866.1    | 1,637.9    | 1,488.6    | 1,691.1    | 1,421.8    | 32,745.8   | 37,447.3  |

**PERCENT CHANGE**

-15% -14% 10% 19% -13%

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1De Luz figures included in Fallbrook P.U.D. total.
2Brackish groundwater use included in groundwater totals.
3Pendleton’s imported water use includes water delivered by South Coast Water District.
<table>
<thead>
<tr>
<th>AGENCY</th>
<th>Imported Source S.D.C.W.A.</th>
<th></th>
<th>Surface Water</th>
<th></th>
<th>Groundwater</th>
<th></th>
<th>Reclaimed Water</th>
<th></th>
<th>December Totals</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>1,059.0</td>
<td>1,005.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>123.5</td>
<td>137.5</td>
<td>1,182.5</td>
<td>1,143.3</td>
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<td>Del Mar, City of</td>
<td>63.0</td>
<td>59.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>1.0</td>
<td>64.2</td>
<td>60.1</td>
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<td>261.7</td>
<td>-</td>
<td>7.4</td>
<td>4.7</td>
<td>1,501.8</td>
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<tr>
<td>Fallbrook P.U.D.¹</td>
<td>737.5</td>
<td>550.3</td>
<td>-</td>
<td>-</td>
<td>12.2</td>
<td>-</td>
<td>24.6</td>
<td>22.6</td>
<td>774.3</td>
<td>572.9</td>
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<tr>
<td>Helix W.D.</td>
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<td>128.9</td>
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<td>9.1</td>
<td>14.9</td>
<td>-</td>
<td>-</td>
<td>2,293.5</td>
<td>2,158.7</td>
</tr>
<tr>
<td>Lakeside W.D.</td>
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<td>53.8</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
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<td>-</td>
<td>61.1</td>
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<td>1,086.9</td>
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<tr>
<td>Otay W.D.</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>104.2</td>
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<td>2,087.9</td>
<td>2,126.1</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>37.9</td>
<td>41.1</td>
<td>716.1</td>
<td>777.3</td>
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<td>Pendleton M.R.³</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>600.5</td>
<td>562.8</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>1,140.0</td>
<td>819.4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>37.9</td>
<td>41.1</td>
<td>716.1</td>
<td>777.3</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>318.2</td>
<td>313.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>18.6</td>
<td>27.7</td>
<td>336.8</td>
<td>336.2</td>
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<td>296.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>185.3</td>
<td>185.3</td>
<td>488.1</td>
<td>481.3</td>
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<tr>
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<td>11,854.4</td>
<td>4,094.9</td>
<td>269.1</td>
<td>115.4</td>
<td>-</td>
<td>300.0</td>
<td>284.6</td>
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<td>12,408.1</td>
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<tr>
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<td>153.2</td>
<td>179.4</td>
<td>267.9</td>
<td>238.7</td>
<td>-</td>
<td>22.1</td>
<td>18.4</td>
<td>443.2</td>
<td>436.5</td>
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<tr>
<td>Santa Fe I.D.</td>
<td>162.2</td>
<td>158.4</td>
<td>274.9</td>
<td>156.6</td>
<td>-</td>
<td>17.7</td>
<td>9.3</td>
<td>454.8</td>
<td>324.3</td>
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<tr>
<td>South Bay I.D.²</td>
<td>797.1</td>
<td>-</td>
<td>893.1</td>
<td>-</td>
<td>204.3</td>
<td>-</td>
<td>-</td>
<td>797.1</td>
<td>1,097.4</td>
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<tr>
<td>Vallecitos W.D.</td>
<td>1,052.4</td>
<td>892.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,052.4</td>
<td>892.0</td>
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<td>1,490.1</td>
<td>1,122.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>30.0</td>
<td>38.1</td>
<td>1,520.1</td>
<td>1,160.1</td>
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<td>569.2</td>
<td>1,089.2</td>
<td>651.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1,220.2</td>
<td>1,089.2</td>
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<tr>
<td>Yuima M.W.D.</td>
<td>-</td>
<td>55.8</td>
<td>-</td>
<td>-</td>
<td>118.0</td>
<td>133.1</td>
<td>-</td>
<td>-</td>
<td>118.0</td>
<td>188.9</td>
</tr>
<tr>
<td><strong>TOTAL USE</strong></td>
<td><strong>25,642.0</strong></td>
<td><strong>27,381.6</strong></td>
<td><strong>5,865.6</strong></td>
<td><strong>1,952.2</strong></td>
<td><strong>1,329.8</strong></td>
<td><strong>1,433.5</strong></td>
<td><strong>1,022.6</strong></td>
<td><strong>1,169.9</strong></td>
<td><strong>33,860.0</strong></td>
<td><strong>31,937.2</strong></td>
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<tr>
<td><strong>PERCENT CHANGE</strong></td>
<td><strong>-6%</strong></td>
<td><strong>200%</strong></td>
<td><strong>-7%</strong></td>
<td><strong>-13%</strong></td>
<td><strong>-13%</strong></td>
<td><strong>6%</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹De Luz figures included in Fallbrook P.U.D. total.
²Brackish groundwater use included in groundwater totals.
³Pendleton's imported water use includes water delivered by South Coast Water District.
## MONTHLY WATER RESOURCES REPORT
### Reservoir Storage

**NOVEMBER 2011**

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Reservoir</th>
<th>Capacity</th>
<th>NOVEMBER 2011 % of</th>
<th>NOVEMBER 2010 % of</th>
<th>Change During Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>Maerkle</td>
<td>600</td>
<td>349 58%</td>
<td>394 66%</td>
<td>112</td>
</tr>
<tr>
<td>Escondido, City of 1</td>
<td>Dixon</td>
<td>2,606</td>
<td>2,474 95%</td>
<td>2,454 94%</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>Wohlford</td>
<td>6,506</td>
<td>2,114 32%</td>
<td>1,994 31%</td>
<td>24</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>9,112</td>
<td>4,588 50%</td>
<td>4,448 49%</td>
<td>159</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>Red Mountain</td>
<td>1,335</td>
<td>545 41%</td>
<td>759 57%</td>
<td>(8)</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>Cuyamaca</td>
<td>8,195</td>
<td>747 9%</td>
<td>696 8%</td>
<td>82</td>
</tr>
<tr>
<td></td>
<td>Jennings</td>
<td>9,790</td>
<td>9,049 92%</td>
<td>7,876 80%</td>
<td>88</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>17,985</td>
<td>9,796 54%</td>
<td>8,572 48%</td>
<td>170</td>
</tr>
<tr>
<td>Poway, City of 2</td>
<td></td>
<td>3,330</td>
<td>3,144 94%</td>
<td>3,000 90%</td>
<td>186</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>Beck</td>
<td>625</td>
<td>206 33%</td>
<td>262 42%</td>
<td>42</td>
</tr>
<tr>
<td></td>
<td>Morro Hill</td>
<td>465</td>
<td>1 0%</td>
<td>116 25%</td>
<td>-</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>1,090</td>
<td>207 19%</td>
<td>378 35%</td>
<td>42</td>
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<tr>
<td>Ramona M.W.D.</td>
<td>Ramona</td>
<td>12,000</td>
<td>2,866 24%</td>
<td>2,642 22%</td>
<td>21</td>
</tr>
<tr>
<td>San Diego, City of 2</td>
<td>Barrett</td>
<td>34,806</td>
<td>28,894 83%</td>
<td>31,969 92%</td>
<td>(207)</td>
</tr>
<tr>
<td></td>
<td>El Capitan</td>
<td>112,807</td>
<td>74,983 66%</td>
<td>57,099 51%</td>
<td>507</td>
</tr>
<tr>
<td></td>
<td>Hodges</td>
<td>30,251</td>
<td>24,029 79%</td>
<td>13,001 43%</td>
<td>771</td>
</tr>
<tr>
<td></td>
<td>Lower Otay</td>
<td>49,849</td>
<td>35,339 71%</td>
<td>30,770 62%</td>
<td>143</td>
</tr>
<tr>
<td></td>
<td>Miramar</td>
<td>6,682</td>
<td>5,493 82%</td>
<td>5,535 83%</td>
<td>(70)</td>
</tr>
<tr>
<td></td>
<td>Morena</td>
<td>50,694</td>
<td>12,013 24%</td>
<td>7,508 15%</td>
<td>233</td>
</tr>
<tr>
<td></td>
<td>Murray</td>
<td>4,684</td>
<td>4,207 90%</td>
<td>4,230 90%</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>San Vicente</td>
<td>89,312</td>
<td>37,114 42%</td>
<td>24,143 27%</td>
<td>312</td>
</tr>
<tr>
<td></td>
<td>Sutherland</td>
<td>29,508</td>
<td>15,201 52%</td>
<td>9,153 31%</td>
<td>(655)</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>408,593</td>
<td>237,273 58%</td>
<td>183,407 45%</td>
<td>1,127</td>
</tr>
<tr>
<td>San Diego WD/Santa Fe ID</td>
<td></td>
<td>883</td>
<td>515 58%</td>
<td>495 56%</td>
<td>(27)</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>Loveland</td>
<td>25,400</td>
<td>25,211 99%</td>
<td>14,691 58%</td>
<td>382</td>
</tr>
<tr>
<td></td>
<td>Sweetwater</td>
<td>28,079</td>
<td>11,716 42%</td>
<td>5,656 20%</td>
<td>464</td>
</tr>
<tr>
<td>Subtotal</td>
<td></td>
<td>53,479</td>
<td>36,927 69%</td>
<td>20,347 38%</td>
<td>846</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>Turner</td>
<td>1,612</td>
<td>1,475 92%</td>
<td>1,507 93%</td>
<td>-</td>
</tr>
<tr>
<td>Vista I.D. 3</td>
<td>Henshaw</td>
<td>51,774</td>
<td>7,122 14%</td>
<td>3,842 7%</td>
<td>160</td>
</tr>
<tr>
<td><strong>MEMBER AGENCY TOTAL WATER IN STORAGE</strong></td>
<td></td>
<td>561,793</td>
<td>304,808 54%</td>
<td>229,790 41%</td>
<td>2,789</td>
</tr>
<tr>
<td>SDCWA Accounts (Source: CWA Monthly Storage Reports)</td>
<td>El Capitan</td>
<td>8,238</td>
<td>13,407</td>
<td>(57)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hodges</td>
<td>0</td>
<td>0</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>L. Otay</td>
<td>6,315</td>
<td>6,563 378</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>San Vicente</td>
<td>3,603</td>
<td>12,603 29</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Sweetwater</td>
<td>3,082</td>
<td>6,013 (21)</td>
<td>-</td>
<td>-</td>
</tr>
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<td>38,586 329</td>
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<td>-</td>
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<td><strong>TOTAL WATER IN STORAGE</strong></td>
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<td>561,793</td>
<td>326,046 58%</td>
<td>268,376 48%</td>
<td>3,118</td>
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<table>
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<tr>
<th>OTHER AGENCIES</th>
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<th></th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Metropolitan Water District</td>
<td>Skinner</td>
<td>44,264</td>
<td>35,888 81%</td>
<td>38,806 88%</td>
<td>(256)</td>
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<td>DIamond Valley</td>
<td>800,000</td>
<td>774,309</td>
<td>97%</td>
<td>602,339 75%</td>
<td>8,987</td>
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<tr>
<td>State Water Project</td>
<td>Oroville</td>
<td>3,537,600</td>
<td>2,806,607 79%</td>
<td>1,637,776 46%</td>
<td>(89,195)</td>
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<tr>
<td><strong>TOTAL OTHER WATER IN STORAGE</strong></td>
<td></td>
<td>4,381,864</td>
<td>3,616,804 83%</td>
<td>2,278,921 52%</td>
<td>(80,464)</td>
</tr>
</tbody>
</table>

---

1 Excludes storage allocated to Escondido Mutual Water Co. or its rights to a portion of the unallocated water in Lake Henshaw.

2 Includes reserves subject to city's outstanding commitments to San Diego WD, and California American Mutual Water Co. (Cal-Am)

SDCWA has storage contracts in City of San Diego reservoirs in the amount of 40,000 AF, if available capacity exists.

3 Includes allocated and unallocated water in Lake Henshaw.
## MONTHLY WATER RESOURCES REPORT
### Reservoir Storage
(acre-feet)

#### DECEMBER 2011

<table>
<thead>
<tr>
<th>Member Agency</th>
<th>Reservoir</th>
<th>Capacity</th>
<th>% of Change During Month</th>
<th>DECEMBER 2011 Capacity</th>
<th>DECEMBER 2010 Capacity</th>
<th>Change During Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>Maerkle</td>
<td>600</td>
<td></td>
<td>243</td>
<td>225</td>
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<td>2,419</td>
<td>(156)</td>
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<td></td>
<td>Wohlford</td>
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<td>34%</td>
<td>2,222</td>
<td>2,517</td>
<td>(108)</td>
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<td>50%</td>
<td>4,541</td>
<td>4,936</td>
<td>(48)</td>
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<tr>
<td>Fallbrook P.I.D.</td>
<td>Red Mountain</td>
<td>1,335</td>
<td></td>
<td>588</td>
<td>716</td>
<td>43</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>Cuyamaca</td>
<td>8,195</td>
<td>10%</td>
<td>779</td>
<td>1,964</td>
<td>(32)</td>
</tr>
<tr>
<td></td>
<td>Jennings</td>
<td>9,790</td>
<td>92%</td>
<td>8,977</td>
<td>9,081</td>
<td>(72)</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<tr>
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<td>3,330</td>
<td>88%</td>
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<td>3,276</td>
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<tr>
<td>Rainbow M.W.D.</td>
<td>Beck</td>
<td>625</td>
<td>24%</td>
<td>152</td>
<td>188</td>
<td>(30)</td>
</tr>
<tr>
<td></td>
<td>Morro Hill</td>
<td>465</td>
<td>0%</td>
<td>0</td>
<td>84</td>
<td>18% (1)</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td></td>
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<td>14%</td>
<td>272</td>
<td>272</td>
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<tr>
<td>Ramona M.W.D.</td>
<td>Ramona</td>
<td>12,000</td>
<td>23%</td>
<td>2,797</td>
<td>2,756</td>
<td>(69)</td>
</tr>
<tr>
<td>San Diego, City of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Barrett</td>
<td>34,806</td>
<td>82%</td>
<td>28,536</td>
<td>34,408</td>
<td>(357)</td>
</tr>
<tr>
<td></td>
<td>El Capitan</td>
<td>112,807</td>
<td>66%</td>
<td>74,721</td>
<td>64,745</td>
<td>(262)</td>
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<tr>
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<td>Hodges</td>
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<td>23,984</td>
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<td>Lower Otay</td>
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<td>71%</td>
<td>35,317</td>
<td>32,383</td>
<td>(255)</td>
</tr>
<tr>
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<td>Miramar</td>
<td>6,682</td>
<td>81%</td>
<td>5,383</td>
<td>5,549</td>
<td>(110)</td>
</tr>
<tr>
<td></td>
<td>Morena</td>
<td>50,694</td>
<td>24%</td>
<td>11,987</td>
<td>7,527</td>
<td>(15)</td>
</tr>
<tr>
<td></td>
<td>Murray</td>
<td>4,684</td>
<td>91%</td>
<td>4,277</td>
<td>4,684</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>San Vicente</td>
<td>89,312</td>
<td>40%</td>
<td>35,417</td>
<td>29,452</td>
<td>(1,644)</td>
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<tr>
<td></td>
<td>Sutherland</td>
<td>29,508</td>
<td>49%</td>
<td>14,564</td>
<td>12,603</td>
<td>43% (638)</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>57%</td>
<td>215,335</td>
<td>234,277</td>
<td>(3,176)</td>
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<tr>
<td>San Dieguito WD/Santa Fe ID</td>
<td>San Dieguito</td>
<td>883</td>
<td>48%</td>
<td>422</td>
<td>537</td>
<td>61% (93)</td>
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<tr>
<td>Sweetwater Authority</td>
<td>Loveland</td>
<td>25,400</td>
<td>100%</td>
<td>25,400</td>
<td>17,368</td>
<td>68% (189)</td>
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<tr>
<td></td>
<td>Sweetwater</td>
<td>28,079</td>
<td>42%</td>
<td>11,912</td>
<td>7,410</td>
<td>26% (196)</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>53,479</td>
<td>70%</td>
<td>37,312</td>
<td>24,778</td>
<td>46% (385)</td>
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<tr>
<td>Valley Center M.W.D.</td>
<td>Turner</td>
<td>1,612</td>
<td>93%</td>
<td>1,507</td>
<td>1,612</td>
<td>100% (32)</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>Henshaw</td>
<td>51,774</td>
<td>12%</td>
<td>6,300</td>
<td>9,207</td>
<td>18% (822)</td>
</tr>
<tr>
<td><strong>MEMBER AGENCY TOTAL WATER IN STORAGE</strong></td>
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<td>561,793</td>
<td>54%</td>
<td>274,693</td>
<td>201,835</td>
<td>(4,153)</td>
</tr>
<tr>
<td>SDCWA Accounts (Source: CWA Monthly Storage Reports)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>El Capitan</td>
<td>8,178</td>
<td></td>
<td>13,367</td>
<td></td>
<td>(60)</td>
</tr>
<tr>
<td></td>
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<td>0</td>
<td></td>
<td>0</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>L. Otay</td>
<td>6,100</td>
<td></td>
<td>4,950</td>
<td></td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>San Vicente</td>
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<td>12,564</td>
<td></td>
<td>101</td>
</tr>
<tr>
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<tr>
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<td>(5)</td>
</tr>
<tr>
<td><strong>TOTAL WATER IN STORAGE</strong></td>
<td></td>
<td>561,793</td>
<td>57%</td>
<td>312,889</td>
<td>311,546</td>
<td>55% (4,157)</td>
</tr>
</tbody>
</table>

### OTHER AGENCIES
<table>
<thead>
<tr>
<th>Agency</th>
<th>Capacity</th>
<th>% of Capacity</th>
<th>DECEMBER 2010 Capacity</th>
<th>% of Capacity</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Water District</td>
<td>44,264</td>
<td>83%</td>
<td>39,538</td>
<td>89%</td>
<td>1,059</td>
</tr>
<tr>
<td>Diamond Valley</td>
<td>800,000</td>
<td>98%</td>
<td>632,966</td>
<td>79%</td>
<td>11,989</td>
</tr>
<tr>
<td>State Water Project</td>
<td>3,537,600</td>
<td>72%</td>
<td>2,180,485</td>
<td>62%</td>
<td>(261,522)</td>
</tr>
<tr>
<td><strong>TOTAL OTHER WATER IN STORAGE</strong></td>
<td>4,381,864</td>
<td>77%</td>
<td>2,852,989</td>
<td>65%</td>
<td>(248,474)</td>
</tr>
</tbody>
</table>

1. Excludes storage allocated to Escondido Mutual Water Co. or its rights to a portion of the unallocated water in Lake Henshaw.
2. Includes reserves subject to city's outstanding commitments to San Dieguito WD, and California American Mutual Water Co. (Cal-Am)
3. SDCWA has storage contracts in City of San Diego reservoirs in the amount of 40,000 AF, if available capacity exists.
4. Includes allocated and unallocated water in Lake Henshaw.
5. Evaporation/seepage losses estimated.
## MONTHLY WATER RESOURCES REPORT

### Tier 1 Estimated Deliveries to Member Agencies

(Figures in acre-feet)

Calendar Year 2011 through November

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>CY2011 Tier 1 Threshold</th>
<th>CYTD Firm Deliveries</th>
<th>% of Tier 1 Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>18,354.7</td>
<td>15,098.0</td>
<td>82.3%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>1,408.3</td>
<td>1,024.0</td>
<td>72.7%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>23,694.4</td>
<td>11,956.6</td>
<td>50.5%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>12,569.4</td>
<td>9,187.1</td>
<td>73.1%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>38,421.4</td>
<td>17,040.8</td>
<td>44.4%</td>
</tr>
<tr>
<td>Lakeside M.W.D.</td>
<td>4,718.2</td>
<td>3,172.2</td>
<td>67.2%</td>
</tr>
<tr>
<td>Oceanside, City of</td>
<td>28,848.1</td>
<td>21,238.0</td>
<td>73.6%</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>19,347.5</td>
<td>17,780.0</td>
<td>91.9%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>32,173.0</td>
<td>28,174.2</td>
<td>87.6%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>14,321.5</td>
<td>10,195.5</td>
<td>71.2%</td>
</tr>
<tr>
<td>Pendleton M.C.B./South Coast W.D.</td>
<td>1,141.3</td>
<td>813.1</td>
<td>71.2%</td>
</tr>
<tr>
<td>Poway, City of</td>
<td>13,575.6</td>
<td>9,862.8</td>
<td>72.7%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>23,572.1</td>
<td>15,545.9</td>
<td>66.0%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>8,101.1</td>
<td>4,495.0</td>
<td>55.5%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>7,307.0</td>
<td>5,405.2</td>
<td>74.0%</td>
</tr>
<tr>
<td>San Diego, City of</td>
<td>215,438.4</td>
<td>151,310.7</td>
<td>70.2%</td>
</tr>
<tr>
<td>San Dieguito W.D.</td>
<td>4,692.0</td>
<td>2,249.6</td>
<td>47.9%</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>7,895.9</td>
<td>4,765.7</td>
<td>60.4%</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>13,094.7</td>
<td>10,339.4</td>
<td>79.0%</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>14,641.2</td>
<td>14,396.5</td>
<td>98.3%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>26,252.9</td>
<td>17,486.4</td>
<td>66.6%</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>17,576.3</td>
<td>11,175.3</td>
<td>63.6%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>94.0</td>
<td>68.4</td>
<td>72.8%</td>
</tr>
</tbody>
</table>

**MEMBER AGENCY TOTALS**

<table>
<thead>
<tr>
<th>CY2011 Tier 1 Threshold</th>
<th>CYTD Firm Deliveries</th>
<th>% of Tier 1 Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>547,239.0</td>
<td>382,780.4</td>
<td>69.9%</td>
</tr>
</tbody>
</table>

Less: QSA deliveries calendar year to date

| Deliveries wheeled water year to date | (144,558.2) |
| Deliveries to CWA carryover storage year to date | (284.6) |
| Deliveries from CWA storage year to date | (5,375.3) |
| Replenishment Program deliveries year to date | (22,126.3) |

**Estimated Tier 1 deliveries calendar year to date**

<table>
<thead>
<tr>
<th>CY2011 Tier 1 Threshold</th>
<th>CYTD Firm Deliveries</th>
<th>% of Tier 1 Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,950.1</td>
<td>36.2%</td>
<td></td>
</tr>
</tbody>
</table>

---

1. Tier 1 threshold is equal to all firm deliveries up to 90% of a member agency’s historic maximum year firm demand
2. Firm deliveries are net of IAWP certifications received.
3. Includes forced deliveries and deliveries made through temporary carryover storage agreements.
4. Includes sales from Water Authority storage accounts.
5. Metropolitan reactivated its Replenishment Program in mid-2011 for a temporary period. Replenishment deliveries are exempt from the Tier 1 limit.
## MONTHLY WATER RESOURCES REPORT

**Tier 1 Estimated Deliveries to Member Agencies**

*(Figures in acre-feet)*

**Calendar Year 2011 through December**

<table>
<thead>
<tr>
<th>AGENCY</th>
<th>CY2011 Tier 1 Threshold</th>
<th>CYTD Firm Deliveries</th>
<th>% of Tier 1 Threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carlsbad M.W.D.</td>
<td>18,354.7</td>
<td>16,058.0</td>
<td>87.5%</td>
</tr>
<tr>
<td>Del Mar, City of</td>
<td>1,408.3</td>
<td>1,087.0</td>
<td>77.2%</td>
</tr>
<tr>
<td>Escondido, City of</td>
<td>23,694.4</td>
<td>12,826.3</td>
<td>54.1%</td>
</tr>
<tr>
<td>Fallbrook P.U.D.</td>
<td>12,569.4</td>
<td>9,890.0</td>
<td>78.7%</td>
</tr>
<tr>
<td>Helix W.D.</td>
<td>38,421.4</td>
<td>19,162.2</td>
<td>49.9%</td>
</tr>
<tr>
<td>Lakeside M.W.D.</td>
<td>4,718.2</td>
<td>3,384.4</td>
<td>71.7%</td>
</tr>
<tr>
<td>Oceanside, City of</td>
<td>28,848.1</td>
<td>22,734.8</td>
<td>78.8%</td>
</tr>
<tr>
<td>Olivenhain M.W.D.</td>
<td>19,347.5</td>
<td>18,877.5</td>
<td>97.6%</td>
</tr>
<tr>
<td>Otay W.D.</td>
<td>32,173.0</td>
<td>30,157.9</td>
<td>93.7%</td>
</tr>
<tr>
<td>Padre Dam M.W.D.</td>
<td>14,321.5</td>
<td>10,854.0</td>
<td>75.8%</td>
</tr>
<tr>
<td>Pendleton M.C.B./South Coast W.D.</td>
<td>1,141.3</td>
<td>900.2</td>
<td>78.9%</td>
</tr>
<tr>
<td>Poway, City of</td>
<td>13,575.6</td>
<td>10,286.5</td>
<td>75.8%</td>
</tr>
<tr>
<td>Rainbow M.W.D.</td>
<td>23,572.1</td>
<td>16,531.2</td>
<td>70.1%</td>
</tr>
<tr>
<td>Ramona M.W.D.</td>
<td>8,101.1</td>
<td>4,709.6</td>
<td>58.1%</td>
</tr>
<tr>
<td>Rincon Del Diablo M.W.D.</td>
<td>7,307.0</td>
<td>5,688.9</td>
<td>77.9%</td>
</tr>
<tr>
<td>San Diego, City of</td>
<td>215,438.4</td>
<td>159,510.2</td>
<td>74.0%</td>
</tr>
<tr>
<td>San Dieguito W.D.</td>
<td>4,692.0</td>
<td>2,403.2</td>
<td>51.2%</td>
</tr>
<tr>
<td>Santa Fe I.D.</td>
<td>7,895.9</td>
<td>4,934.8</td>
<td>62.5%</td>
</tr>
<tr>
<td>Sweetwater Authority</td>
<td>13,094.7</td>
<td>11,358.3</td>
<td>86.7%</td>
</tr>
<tr>
<td>Vallecitos W.D.</td>
<td>14,641.2</td>
<td>15,445.2</td>
<td>105.5%</td>
</tr>
<tr>
<td>Valley Center M.W.D.</td>
<td>26,252.9</td>
<td>18,549.1</td>
<td>70.7%</td>
</tr>
<tr>
<td>Vista I.D.</td>
<td>17,576.3</td>
<td>11,741.8</td>
<td>66.8%</td>
</tr>
<tr>
<td>Yuima M.W.D.</td>
<td>94.0</td>
<td>68.4</td>
<td>72.8%</td>
</tr>
</tbody>
</table>

**MEMBER AGENCY TOTALS**

|                              | 547,239.0               | 407,159.5            | 74.4%                 |

Less: QSA deliveries calendar year to date

| Fallbrook wheeled water year to date | (284.6) |
| Deliveries to CWA carryover storage year to date | 5,936.2 |
| Deliveries from CWA storage year to date | (22,003.1) |
| Replenishment Program deliveries year to date | (23,236.5) |

**Estimated Tier 1 deliveries calendar year to date**

|                                | 207,606.6               | 37.9%                 |

---

1 Tier 1 threshold is equal to all firm deliveries up to 90% of a member agency’s historic maximum year firm demand
2 Firm deliveries are net of IAWP certifications received.
3 Includes forced deliveries and deliveries made through temporary carryover storage agreements.
4 Includes sales from Water Authority storage accounts.
5 Metropolitan reactivated its Replenishment Program in mid-2011 for a temporary period. Replenishment deliveries are exempt from the Tier 1 limit.
MONTHLY WATER RESOURCES REPORT
Summary of Water Authority Member Agency Operations

NOVEMBER 2011

Member Agency Deliveries (AF)

- November 2011 vs. 2010
- Previous 12 Months 2011 vs. 2010

Member Agency Water Use

- Imported 85%
- Surface 5%
- Well & Brackish Recovery 5%
- Recycled 5%

NOVEMBER 2011
Previous 12 Months

Member Agency Storage (AF)

- November 2011 vs. 2010
- Trailing 12-Month Average 2011 vs. 2010
MONTHLY WATER RESOURCES REPORT
Summary of Water Authority Member Agency Operations

DECEMBER 2011

Member Agency Deliveries (AF)

December

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>25,074</td>
<td>27,381</td>
</tr>
</tbody>
</table>

Previous 12 Months

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>422,783</td>
<td>445,554</td>
</tr>
</tbody>
</table>

Member Agency Water Use

Imported 76%

Surface 17%

Well & Brackish Recovery 4%

Recycled 3%

DECEMBER 2011

Previous 12 Months

Imported 79%

Surface 13%

Well & Brackish Recovery 4%

Recycled 4%

Member Agency Storage (AF)

December

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>300,835</td>
<td>274,693</td>
</tr>
</tbody>
</table>

Trailing 12-Month Average

<table>
<thead>
<tr>
<th>2011</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>322,147</td>
<td>241,239</td>
</tr>
</tbody>
</table>
LEGISLATION, CONSERVATION AND OUTREACH COMMITTEE

AGENDA FOR

JANUARY 26, 2012

Elsa Saxod – Chair     Marty Miller
Frank Hilliker – Vice Chair     Vincent Mudd
Jeremy Jungreis – Vice Chair     Robert Topolovac
Brian Boyle     Yen Tu
Gary Croucher     Gerald Walson
Marilyn Dailey     Mark Weston
Farrah Douglas     Tom Wornham

1. Roll call – determination of quorum.

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

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

4. Chair’s report.
   4-A Progress report on Legislation, Conservation and Outreach Committee Goals for 2011 and 2012.
   4-B Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. Legislative Issues.
   1-A Report by Carpi and Clay. (pickup packet)

III. INFORMATION

1. Quarterly Water Conservation Garden report.      Yen Tu

2. Statewide Task Force for Commercial, Institutional and Industrial Water use.      Toby Roy

IV. ADJOURNMENT

Doria F. Lore
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 18, 2012

Attention: Legislation, Conservation and Outreach Committee


Purpose
This report provides a progress report on the Legislation, Conservation and Outreach Committee’s goals that were adopted by the Board on March 24, 2011 and amended on July 20, 2011.

Background
The Legislation, Conservation and Outreach Committee is responsible for matters relating to legislation, lobbying and intergovernmental relations; community relations; media relations; water conservation programs; and the Small Contractor Outreach and Opportunities Program (SCOOP). During the next two years, the committee expects to review, discuss, and make decisions pertaining to these matters.

Previous Board action: The Board adopted the Legislation, Conservation and Outreach Committee goals for 2011 and 2012 on March 24, 2011. On July 20, 2011, the Board amended the goals to reflect issues addressed at the March 31, 2011 Board retreat.

Discussion
The attached report lists the Legislation, Conservation and Outreach Committee goals for 2011 and 2012 and provides an update on the activities taken to achieve the goals. The goals were prepared under the direction of the Legislation, Conservation and Outreach Committee Chair and Vice Chairs.

Prepared by: Jason Foster, Director of Public Outreach and Conservation
Reviewed by: Elsa Saxod, Chair, Legislation, Conservation and Outreach Committee

Progress Report on Legislative, Conservation and Outreach Committee Goals
Calendar Years 2011 and 2012

Strategic Plan Objectives

1. **Per Capita Water Consumption** – Support policies and programs that maintain average regional residential per capita water consumption at or beneath 10% below the baseline 10-year regional average. (January 2015 – SP #2)

   **Activities:** In July 2011, the LCO Committee approved and recommended to the full Board that the General Manager be authorized to enter the Water Authority into Memoranda of Understanding with nine member agencies that self-perform water conservation audits and surveys to enable those agencies to be reimbursed for providing those services.

   In July 2011, the LCO Committee approved and recommended to the full Board to authorize the General Manager to execute a professional services agreement with the Mission Resource Conservation District in the amount of $225,000 to allow for the pass-through of DWR Integrated Regional Water Management funds to support the Water Authority’s Agricultural Water Management Program.

   In August 2011, the LCO Committee approved and recommended to the full Board to authorize the General Manager to execute a professional services agreement not to exceed $420,000 with Mission Resource Conservation District to administer the WaterSmart Field Services Program.

2. **Water Conservation Ethic** – Support programs and outreach efforts that ensure 75% or more of the region’s residents hold the view of water conservation as one of their most important civic obligations. (January 2015 – SP #3)

   **Activities:** The most recent Water Authority poll on this topic showed 92% of the region’s residents agreed water conservation was an important civic duty. The LCO Committee expects to review and provide input on programs and outreach efforts to sustain this level of public support for water conservation in 2012.

3. **Issues Workshops** – Encourage committee and board members to host or participate in workshops for agency boards and other interested local officials to provide a comprehensive overview of the Water Authority issues and the region’s water supply. (December 2012 – SP #8)

   **Activities:** In place of workshops, members of the LCO Committee and Board of Directors participated in the Water Authority’s Speaker’s Bureau and Water Talks programs throughout 2011, delivering presentations about water supply, water rates, and other issues to business, civic, and other organizations and members of the general public. The speaker’s bureau made more than 50 presentations and the Water Talks program held its first two community forums during calendar year 2011.

4. **Policymaker Support** – At least 75% of the region’s local government policy makers understand the importance of connecting development with good water policy, support
the Water Authority’s long-term direction, and endorse water conservation. (December 2012 – SP #9)

Activities: Committee members, Board members and Water Authority senior management made presentations to local policymakers as part of the Speaker’s Bureau program.

5. Public Affairs – Participate in and review outreach programs that create broad public support for and awareness of issues surrounding water, water resources, and water infrastructure. (January 2015 – SP #15)

Activities: The LCO Committee reviewed the Water Authority’s social media communications efforts at its August 2011 meeting and provided input on staff’s development and launch of a “Water News” smartphone application.

Business Plan Goals

Water Conservation

1. Per Capita Water Consumption – Support programs that enable member agencies to help reduce their per capita water use so the region can reduce its water use by 8.4 gallons per capita per day by 2012 to stay on course to reach the state-mandated 2015 target of 161 gallons per capita per day. (June 2012 – BP #3)

Activities: The LCO Committee reviewed the GM’s Recommended Budget for the Public Outreach and Conservation Department for fiscal years 2012 and 2013 on June 9, 2011; the budget was approved by the full Board in late June 2011. The department’s budget contained the resources necessary to implement Board-identified “core” water conservation programs through the two-year budget period. Regional water use in 2011 trended well within the range to meet the 2015 target.

2. Short-Term Savings Programs – As needed, review and approve programs that will achieve short-term water savings to meet anticipated or mandated regional targets if the previous year’s annual gallons per capita per day target is exceeded by 5 percent or more (June 2012 – BP #4)

Activities: No such programs were necessary in 2011. Water use remained within the desired range due to a combination of outreach efforts, weather and consumer sensitivity to water rates.

Government Relations Outreach

1. Bay-Delta – In cooperation with MWD and other Southern California stakeholders, adopt a comprehensive legislative advocacy plan designed to obtain legislative and gubernatorial approval of long-term (by 2018) Bay-Delta improvements. (July 2011 – BP #1)

Activities: Water Authority directors, staff, and legislative advocates met in Sacramento in May to brief legislative leaders and members of the Governor’s administration on
Water Authority concerns regarding securing firm financial commitments to pay for a Delta fix. Staff have been active in a variety of forums on Delta issues, including BDCP Governance, Conveyance, and Finance task forces, ACWA Water Finance Task Force advisory group, California Water Plan Finance Caucus, and have provided comments on various drafts of the Delta Stewardship Council's Delta Plan.

2. **Policymaker Support** – Encourage committee and Board members to participate in programs that ensure that at least 75 percent of the region’s local government policy makers understand the importance of connecting development with good water policy, support the Water Authority’s long-term direction, and endorse water conservation. (December 2012 – BP #3)

**Activities:** See answer to Strategic Plan Item No. 4.

3. **Legislative Briefings** – Encourage committee and Board members to participate as needed as staff provide at least one briefing for each San Diego County, state, and federal legislator on the Water Authority CIP projects, regarding efforts to ensure water supply reliability, and the need to diversify the region’s water supply portfolio. (Annually – BP #4)

**Activities:** Committee and Board members attended three Legislative Roundtables in 2011, which provided a forum for Water Authority directors, staff, and representatives from member agencies and business organizations to discuss water and related issues with members of the San Diego delegation.

- May 19, 2011 – Roundtable with Congressman Duncan Hunter, 52nd District
- June 17, 2011 – Roundtable with Assemblymember Toni Atkins, 76th District, and Assemblymember Brian Jones, 77th District
- Nov. 4, 2011 – Roundtable with Assemblymember Martin Garrick, 74th District, Assemblymember Diane Harkey, 73rd District, and Assemblymember Ben Hueso, 79th District

Water Authority directors (along with staff, legislative advocates, and representative from the City of San Diego) met in Sacramento on May 11, 2011 to brief legislative leaders and members of the Governor's administration on Water Authority concerns regarding a Delta fix. Briefings were held with Natural Resources Deputy Secretary Jerry Meral, Assembly Minority Leader Connie Conway, Senate President Pro Tem Darrell Steinberg, Assembly Speaker John A. Pérez, Senate Minority Leader Robert Dutton, and Lois Wolk, Chair, Senate Governance and Finance Committee. In addition, Senator Joel Anderson, Senator Christine Kehoe, Assemblymember Toni Atkins, Assemblymember Marty Block, Assemblymember Ben Hueso, and Assemblymember Brian Jones attended a briefing held for the San Diego delegation.

4. **Federal Appropriations** – Review and support efforts to pursue and secure a federal appropriation of $1.5 million for a desalination facility at Camp Pendleton, $5 million per year for member agency recycling projects under Title XVI, and appropriations for other Water Authority projects. (October 2011 – BP #5)

**Activities:** Per the Committee’s direction, Water Authority legislative advocates in Washington, D.C. have monitored federal funding opportunities and advocated for
Water Authority and San Diego regional interests. Due to federal budget concerns and concerns about "earmarking," efforts to secure federal funding have not yet been successful.

5. **Water Bond** – Maintain $100 million in funding for local water supply infrastructure projects in the Safe, Clean and Reliable Water Supply Act of 2010 and help secure the bond’s passage. (November 2012 – BP #6)

**Activities:** The water bond is still scheduled for the November 2012 ballot and as of December 2011 still includes the $100 million for local water supply infrastructure.

6. **State Appropriations** – Review and support efforts to pursue and secure $115 million in state funding, including water bond funding, to support regional and local projects and programs: including water recycling, conservation, and seawater desalination. (January 2015 – BP#7)

**Activities:** Directors, staff, and legislative advocates continue to seek state funding for regional and local programs.

7. **WRDA Authorizations** – Review and support efforts to pursue and secure federal Water Resources Development Act authorizations for Water Authority and member agency projects. (June 2015 – BP #8)

**Activities:** The Water Authority board adopted a position of Support on HR 2664 (Napolitano) that would reauthorize federal desalination funding.

**Public Affairs Outreach**

1. **Business Support** – Review, support and participate in efforts to mobilize local business leaders and groups to provide advocacy or other support to at least two key Water Authority goals, projects or milestones. (Water Authority goals to be identified annually.) (Annually – BP #4)

**Activities:** The LCO Committee Chair, along with other committee chairs and Board officers, reviewed the development of the Water Talks community forum program. Forums are now co-hosted by local business groups around the region. Board members and senior management also made repeated presentations to business and civic groups around the region to ensure understanding and support for the Water Authority’s MWD rate challenge.

2. **Small-Business Outreach** – Adopt a small-business participation percentage target for fiscal years 2012 and 2013 based on total procurement dollars. (June 2011 – BP #5) Note: FY 2010-2011 target is 20%, with San Vicente Package 3 accounted for separately because of the unique size and nature of that contract.

**Activities:** Committee and Board adoption of a new small-business participation target has been postponed to allow the development of small-business program enhancements. Approval of a new overall SCOOP participation goal is scheduled for early 2012.
3. **Diversification Strategy Support** – Review, support and encourage Board participation in public outreach activities that achieve or sustain more than 80% public support for the water supply diversification strategies contained in the Strategic Plan; support development and implementation of new community outreach tactics to educate public about supply diversification strategies and related issues, such as community forums and mobile phone applications.  

   **Activities:** LCO Committee members oversaw the development of the 2011 public opinion poll, which found 80% of respondents supported water supply diversification. LCO Committee members and other Board members reviewed the development of the Water Talks community forum program and participated in the first two forums in 2011. The LCO Committee reviewed the development of the “Water News” smartphone application in August 2011, and helped promote the application after its launch in October 2011.

4. **Conservation Support** – Review, support and encourage Board participation in communications and community relations activities that support Conservation programs and help sustain 90 percent or greater public acceptance of water conservation as an important civic duty; support development and dissemination of messages that convey the ongoing importance of water conservation amid continuing investments in water reliability and rising water rates.  

   **Activities:** The LCO Committee encouraged the promotion and distribution of the Water Authority’s “A Homeowner’s Guide to WaterSmart Landscapes,” a hard-copy and online publication that helps show homeowners how to convert their yards into more water-efficient landscapes that reflect best practices in design, plant choices, irrigation and maintenance. The LCO Committee expects to review and provide input on additional programs in 2012.

5. **Rate Education** – Review, support and encourage Board participation in outreach activities that build 50% or greater public support among business, community leaders, and other key audiences for Board actions to adopt water rates and charges necessary to provide water reliability.  

   **Activities:** LCO Committee members oversaw the development of the 2011 public opinion poll, which found overwhelming support (80%) for the strategy of water supply reliability through diversification, but found the public was increasingly split on their support for additional rate increases to fund water supply reliability projects. While the Board adopted rates and charges for 2012 with minimal community opposition in June 2011, the LCO Committee directed staff to further refine public messages about rates and the value of water in 2012.

6. **Water Shortage and Drought Management Outreach** – Approve, as needed, water shortage and drought management marketing and advertising campaigns if Water Resources determines that water use projections may exceed regional shortage allocation targets.  

   **Activities:** No such programs were needed in 2011.
1. **Conservation Programming** – Recommend to the full Water Authority Board conservation programs for FY 2012-2013. (June 2011)

   **Activities:** The LCO Committee reviewed the GM’s Recommended Budget for the Public Outreach and Conservation Department for fiscal years 2012 and 2013 on June 9, 2011; the budget was approved by the full Board in late June 2011. The department’s budget contained the resources necessary to implement Board-identified “core” water conservation programs through the two-year budget period.

2. **Conservation Goals** – Re-evaluate long-term goals and objectives of conservation program. (December 2012)

   **Activities:** The LCO Committee Chair and Vice Chairs met in November 2011 to develop a potential timeline for conducting the re-evaluation in 2012. The timeline includes a Board workshop currently scheduled for March 2012.

3. **Sponsoring Legislation** – Adopt positions on and/or sponsor legislation that affect the Water Authority’s interests and the attainment of the Water Authority’s Strategic Plan and Business Plan goals. (Annually)

   **Activities:** The LCO Committee voted on January 27, 2011 to sponsor legislation regarding water quality standards for fluoride and artificial turf. The artificial turf bill passed the Legislature, but was vetoed by the Governor. The fluoride bill is still alive as a two-year bill. The Water Authority adopted positions on 17 bills in 2011. Sixteen of them are described in the October 19, 2011 Board memo, “Final Report on 2011 State Legislation and Legislative Positions and Status Report on Federal Legislation.” At its December 2011 meeting, the LCO Committee voted to sponsor two bills relating to advanced water purification and recycled water.

4. **Legislative Policy Guidelines** – Adopt annual Legislative Policy Guidelines that describe the Board’s policies on legislation, to assist the Water Authority’s staff and legislative advocates in advocating for the Water Authority on legislation. Add a summary to each chapter of the Legislative Policy Guidelines that makes the policy guidelines more useful to board members. (January 2011 – January 2012)

   **Activities:** The LCO Committee and full Board approved 2012 guidelines at the December 2011 Board meeting. The 2012 guidelines contain summaries of the policies in each section as requested by the LCO committee.

5. **Polling Review** – Review findings of regular public opinion polling to help develop recommended changes to outreach and other programs to help achieve Strategic Plan and Business Plan goals. (April 2011)

   **Activities:** The LCO Committee reviewed the 2011 poll’s general content in January 2011, and reviewed the findings of the poll in April 2011. The committee directed staff to consider its findings in the development of future conservation and outreach programs, and requested staff to continue polling at regular intervals.
6. **SCOOP Metrics** – Support SCOOP Committee review of best practices for measuring success of small-business participation programs; consider adoption of recommendations from SCOOP Committee review. (December 2012)

**Activities:** The Board Chair, SCOOP Chair, LCO Committee Chair, E&O Committee Chair, SCOOP Committee members and other Board members participated in SCOOP meetings in September 2011 and October 2011 to review potential enhancements to the Water Authority’s small-business participation program. The LCO Committee will review a proposed set of enhancements for adoption and recommendation to the full Board in early 2012.
January 18, 2012

Attention: Legislation, Conservation and Outreach Committee

Statewide Task Force for Commercial, Institution and Industrial Water Use. (Information)

Purpose

To provide a status report on the work of the Commercial, Institution, and Industrial (CII) Task Force.

Background

The state adopted SBX 7-7 in 2009 as part of a comprehensive package of legislation aimed to improve statewide water quality and supply management. SBX 7-7 establishes water conservation targets and other requirements in both the urban and agricultural sectors. The legislation mandates that urban water suppliers must reduce their per capita water use from a set baseline level 20 percent by 2020. Commercial, institutional and industrial (CII) water use is an important and significant component of the water used in the urban sector. The Legislature recognized the need to protect CII water uses that support California’s economy, but also recognized the need for the CII sector to use water in an efficient manner. Therefore, the legislation included a mandate that requires the Department of Water Resources (DWR), in conjunction with the California Urban Water Conservation Council (CUWCC), to form a CII Task Force to develop alternative best management practices (BMPs) for the CII sector. A report must be presented to the Legislature by April 1, 2012, which includes a review of the multiple CII sectors and provides recommendations for water use efficiency standards.

Discussion

The CII Task Force began its work on March 1, 2011. Toby Roy, a water resources manager at the Water Authority and a CUWCC board member, was selected to chair the CII Task Force. There are 28 members, who represent water agencies, environmental groups and CII water users. Representatives from the San Diego area include the San Diego County Water Authority, Department of Defense, and Industrial Environmental Association. Subcommittees have done much of the work of the CII Task Force, supported by staff and consultants from the CUWCC and DWR. Specific subcommittees were formed to consider best management practices for the following commercial or industrial sectors: food and beverage; commercial landscape; petroleum refining and the chemical industry; pharmaceuticals; and high tech. Two additional subcommittees looked at recycled water and use of metrics to track improvements in water use efficiency.

The Legislature requires the CII Task report to include, but not be limited to, the following:

1. Appropriate metrics for evaluating CII water use.
2. Evaluation of water demands for manufacturing processes, goods and cooling.
3. Evaluation of public infrastructure necessary for delivery of recycled water to the CII sectors.
4. Evaluation of institutional and economic barriers to increased recycled water use within the CII sectors.
5. Identification of technical feasibility and cost of the BMPs to achieve more efficient water use statewide in the CII sectors that is consistent with the public interest and reflects past investments in water use efficiency.

A public meeting was scheduled for January 12, 2012, to get input from the public on the draft report. The public is being given the opportunity to provide comments through January 18, 2012. The current schedule calls for the CII Task Force to complete the report by February 2012 in order to meet the legislative deadline of April 1, 2012.

The CII Task Force had numerous challenges to address the legislative requirements. There is a plethora of technical information available on CII best management practices, but almost no statewide information available to assess how water is currently being used. Although there are common best management practices across the various industries and uses, information on the statewide costs for implementing the BMPs is also unavailable. Each site is unique and cost effectiveness of implementing the BMPs must be assessed on a case-by-case basis. The report will likely include recommendations to the Legislature on the following:

1. Approaches to overcoming impediments to recycled water use. These approaches will likely include regulatory reform and ensuring adequate funding for recycled water projects.
2. Steps that can be taken to encourage businesses to implement cost-effective water use efficiency practices.
4. Standardization of water use data from water agency billing systems.

The proposed recommendations on recycled water may help some of the current legislative and regulatory efforts of recycled water suppliers to streamline the use of recycled water. Some of the data collection approaches will have an impact on water agencies throughout the state, but are likely to be implemented over a long period of time with input from the water community. Water Authority staff will continue to remain engaged in the process to help ensure the report’s recommendations and any subsequent efforts will take into account the needs and conditions of the San Diego region and the Water Authority’s member agencies.

Prepared by: Toby Roy, Water Resources Manager
Reviewed by: Meena Westford, Public Affairs Senior Manager
Reviewed by: Jason Foster, Director of Public Outreach and Conservation
January 18, 2012

**Attention: Legislation, Conservation and Outreach Committee**

**Government Relations Update (Information)**

**Discussion**
This report is an update of the Water Authority’s government relations program.

**State Budget**
Governor Brown released his budget for 2012-2013 on Thursday, January 5. The Governor’s Budget identifies a $9.2 billion gap between income and spending for fiscal year 2012-2013. The budget proposes to close the gap through cuts in welfare programs and corrections, as well as through new taxes that would be raised if the voters pass a tax increase initiative in November 2012. The new taxes would include higher rates to high-income taxpayers and an increase in the sales tax. The budget also proposes additional realignments between state and local governments.

To increase government efficiency, the budget proposes eliminating or consolidating various boards and other administrative bodies. The budget proposes to move the Colorado River Board into the Natural Resources Agency. Staff is working with other Colorado River water users, including MWD, IID, and the Coachella Valley Water District, to evaluate the effect this action would have on water operations on the Colorado River.

**The Legislature**
The Legislature opened its 2012 legislative session on January 3. Because this is the second year of a two-year legislative session, the Legislature began holding committee hearings on “two-year bills” during its first week back in session. The deadline for passage of two-year bills out of their houses of origin is the end of January. Bills that do not pass out of the house in which they were introduced in 2011 by the deadline will no longer be eligible for passage in 2012.

The 2012-2013 budget will be a major issue in the first half of 2012, as will rebalancing the 2011-2012 budget, which has fallen short of revenue projections. The Legislature included “trigger cuts” in last year’s budget, in the event revenues did not meet projections. The Legislature may allow the trigger cuts to happen automatically, or reconsider the cuts in the next few weeks.

The Legislature and the Governor are also discussing reopening the water bond measure that is scheduled for the November 2012 ballot. Some commentators suggest that the bond needs to be smaller in order to attract voters. Any rebalancing or rescheduling of the water bond will require a two-thirds vote, which may be difficult to achieve.

**Lobbyist Activities**
Jonathan Clay of Carpi and Clay will provide a separate report of the firm’s monthly activities.
Bob Giroux of Lang, Hansen, O’Malley & Miller reports that he performed the following lobbying activities on behalf of the Water Authority in December:

- Provided strategic advice and information regarding the Water Authority’s legislative interests.

John White’s activities in December included:

- Provided strategic advice and information regarding the Water Authority’s legislative interests.

**Washington, D.C.**

When President Obama and Congress reached agreement on raising the debt limit earlier this summer, they agreed to have a “Super Committee,” comprised of members of both houses, develop a plan to reduce the federal budget deficit by $1.5 trillion over the next 10 years. The Super Committee was unable to produce a report to Congress by November 23, 2011. Congress passed an appropriations bill by the end of December 2011, which will keep the federal government in operation through the rest of fiscal year 2012. A last minute battle over continuing payroll tax breaks was resolved by agreeing to extend the breaks for two months.

Ken Carpi of Carpi & Clay will provide a separate report of the firm’s monthly activities in Washington, D.C.

Prepared by: Jeffrey A. Volberg, Government Relations Manager
Reviewed by: Dennis A. Cushman, Assistant General Manager
ADMINISTRATIVE AND FINANCE COMMITTEE

AGENDA FOR

JANUARY 26, 2012

Barbara Wight – Chair    Farrah Douglas
Jim Bond – Vice Chair    Frank Hilliker
Gary Croucher – Vice Chair    Hershell Price
Gary Arant    Javier Saunders
Roger Bailey    Richard Smith
Brian Brady    Robert Topolovac
Mitch Dion    Tom Wornham

1. Roll call – determination of quorum.

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

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

4. Chair’s report.
   4-A Progress report on Administrative and Finance Committee Goals for 2011 and 2012.
   4-B Directors’ comments.

I. CONSENT CALENDAR

1. Adopt the Amended and Restated 457(b) and 401(a) Deferred Compensation Plans.
   Staff recommendation: Approve Resolution 2012-___ adopting the Amended and Restated Water Authority’s 401(a) and 457(b) deferred compensation plans, terminating The Hartford and Reliance Trust Company agreements, and appoint TIAA-CREF as recordkeeper and JP Morgan Chase as custodian for the plans and establish a qualified 457(b) Roth Program. (Action)

II. ACTION/DISCUSSION

1. Presentation on monthly Treasurer’s report.
   Staff recommendation: Note and file the monthly Treasurer’s report. (Action)
III. INFORMATION

1. Water Authority / Member Agency efficiency measures. Frank Belock
2. Controller’s report on monthly financial statements. Rod Greek
3. Board of Director’s Fourth Quarter 2011 expenses and attendance. Rod Greek
4. Board calendar.

IV. CLOSED SESSION

1. CLOSED SESSION: Conference with Labor Negotiator, Government Code §54957.6
   Agency Designated Representatives: Frank Belock, Sandy Kerl, Susan Leone
   Employee Organization: California Teamsters Public, Professional and Medical Employees Union Local 911

V. ADJOURNMENT

Doria F. Lore
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 18, 2012

Attention: Administrative and Finance Committee


Purpose
This report provides a progress report on the Administrative and Finance Committee’s goals that were adopted by the Board on March 24, 2011 and amended on July 20, 2011.

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

Previous Board action: The Board adopted the Administrative and Finance Committee goals for 2011 and 2012 on March 24, 2011. On July 20, 2011, the Board amended the goals to reflect issues addressed at the March 31, 2011 Board retreat.

Discussion
The attached report lists the Administrative and Finance Committee goals for 2011 and 2012 and provides an update on the activities taken to achieve the goals. The goals were prepared under the direction of the Administrative and Finance Committee Chair and Vice Chairs.

Prepared by: Marilyn L. Young, Director of Administrative Services
            Eric Sandler, Director of Finance
            Susan Leone, Director of Human Resources

Reviewed by: Barbara Wight, Chair, Administrative and Finance Committee

Progress Report on Administrative and Finance Committee Goals  
Calendar Years 2011 and 2012  

Business Plan Goals  

Workforce Management  
Union Agreements – Approve memoranda of understanding with bargaining groups. (July 2012 – BP # TBD)  

Activities: Data collection is being conducted. Board guidance will be requested during the January meeting of the Administrative and Finance Committee (Closed Session).  

Financial Planning  
1. Maintain Financial Integrity—The Water Authority’s existing credit ratings provide ongoing benefit to ratepayers. The committee intends to maintain the financial integrity of the Water Authority by recommending budget and rate actions consistent with existing credit ratings and Board-adopted financial policy goals. (June 2011 and June 2013 – BP #1 and 5)  

Activities: The budget and rate actions described below represented a prudent mix of expenditure reductions and revenue increases, balancing long-term credit worthiness against ratepayer impacts. Adopted rates and charges for calendar year 2012 are not expected to result in financial metrics for debt service coverage and reserve levels that meet Board-adopted policies. Deviation from these policies is considered acceptable only on a short-term basis. In addition, the Administrative and Finance Committee approved two debt refunding transactions 2011A (on June 23rd) and 2011B (on August 25th) of existing debt resulting in net present value savings of $18.7 million.  

2. Liquidity Facility – Address expiring liquidity facilities for the Water Authority’s Series 2 and 3 Commercial Paper (e.g. renegotiate, replace, etc.) (December 2012 – BP #4)  

Activities: On March 24, 2011, the Administrative and Finance Committee approved a strategy for dealing with expiring liquidity facilities which back the Water Authority’s $460 million Commercial Paper program. At this meeting the Committee also approved the renegotiation of an existing facility and the replacement of expiring facilities. On June 23, 2011, the Committee approved the issuance of a 5-year fixed-rate note to refund $100 million in Commercial Paper notes.  

Other Goals  
1. Budget – Adopt the multi-year budget for fiscal years 2012 and 2013. (June 2011)  

Activities: On January 27, 2011, the Administrative and Finance Committee provided Board input related to development of the upcoming biennial budget. After receiving the General Manager’s recommended budget on May 26th, the Committee held two special
committee meetings on June 7th and June 9th to discuss in detail both the Operating and Capital budgets, reviewing staff’s extensive responses to specific Board questions. On June 23, 2011, the Committee concluded consideration of the budget. It then recommended and the Board adopted the multi-year budget for fiscal years 2012 and 2013. The adopted budget is responsive to the “new normal” conditions with 16% reduction in total budgeted expenditures, 42% reduction in budgeted CIP expenditures, and a 16% reduction in budgeted FTE’s vs. peak staffing levels in 2008.

2. Rates – Adopt rates and charges for calendar year 2012 and calendar year 2013. (June 2011 and June 2012)

Activities: On February 24, 2011, the Administrative and Finance Committee considered a 5-year high/low rate forecast developed by staff for member agency budgeting and planning purposes. After receiving the General Manager’s recommended calendar year 2012 rates and charges on May 26, 2011, the Committee held a public hearing on June 23rd to receive public input. Key drivers of rates and charges continue to be reduced sales volumes, increases in the cost of water from MWD and IID, and increasing debt service associated with CIP borrowing. After the public hearing, the Committee recommended and the Board approved adoption of calendar year 2012 rates and charges which reflected an increase of 7.5% and 7.7% in the cost of untreated and treated water respectively.


Activities: Staff recommendation to select TIAA-CREFF to replace The Hartford as third-party Administrator of the Water Authority’s Defined Contribution Plans will come before the Administrative and Finance Committee on January 26, 2012 for approval. Staff recommendation was the result of an extensive RFP process.

4. Business Insurance - Approve business insurance renewal for general liability, property, and workers’ compensation programs. (June 2011)

Activities: Cost effective renewals for all three lines of business insurance were negotiated by staff and approved by the Administrative and Finance Committee on June 23, 2011.

5. Fiscal Sustainability—Frame, prioritize and address the various issues raised at the Board retreat related to fiscal sustainability. This includes issues such as demand growth within the service area, management of local supply development and impacts on Water Authority demand (“roll-off”), responsibility for existing long-term financial commitments, long-term water purchase contracts, rates and charges, and financial policies. (June 2012)

Activities: On November 30, 2011, the Administrative and Finance Committee was provided an introductory presentation from staff on the Fiscal Sustainability project. Policy direction for the project will be provided by a Board workgroup appointed by the Chair. A technical task force of member agency staff will provide input and
recommendations based on the workgroup’s direction. The workgroup is expected to present its findings and recommendations to the Committee for consideration and possible action by the end of calendar year 2012 for incorporation into calendar year 2014 rates and charges.

6. **Member Agency Resource Sharing** – Continue to work with member agencies to seek opportunities for sharing resources. (June 2012)

   **Activities**: Member Agencies were surveyed as to their interest in receiving assistance for certain, specific services by the Water Authority. Meetings have been held with those agencies that seem most interested. Additionally, internal procedures are being developed in order for the Water Authority to provide these services at cost. In the near future, outreach will continue towards fulfilling agencies’ identified needs. A presentation regarding the availability of the public agency clause, included in numerous Water Authority services contracts, will be provided at the January Board meeting.
January 18, 2012

Attention: Administrative and Finance Committee

Adopt the Amended and Restated 457(b) and 401(a) Deferred Compensation Plans. (Action)

Staff recommendation
Approve Resolution 2012-___ adopting the Amended and Restated Water Authority’s 401(a) and 457(b) deferred compensation plans, terminating The Hartford and Reliance Trust Company agreements, and appoint TIAA-CREF as recordkeeper and JP Morgan Chase as custodian for the plans and to establish a qualified 457(b) Roth Program.

Alternative
Do not approve selection of recommended recordkeeper and custodian.

Fiscal impact
None. The third party administrator fees are paid by plan participants.

Background
The Water Authority offers eligible employees the opportunity to participate in a 457(b) Deferred Compensation Plan and/or a 401(a) Defined Contribution Plan (collectively the Plans). The Plans are tax advantaged defined contribution retirement plans that enable participants to defer compensation on a pre-tax basis subject to IRS rules and requirements. These long-standing plans are an important component of employee retirement planning.

The Hartford and Reliance Trust Company currently service the Plans. The Hartford has served in its current role as administrator/recordkeeper for more than 15-years while Reliance Trust Company has served as trustee/custodian since 2009.

Discussion
To ensure the Plans’ services and fees are in-line with current market standards, a competitive procurement process was conducted. The Water Authority issued a Request for Proposals (RFP) and received seven proposals in response. Proposers included the Hartford, Teachers Insurance and Annuity Association – College Retirement Equities Fund (TIAA-CREF), ICMA-RC, Lincoln National Life, Metropolitan Life, Nationwide Retirement Solutions and VALIC.

After conducting interviews and a thorough review of the fees and services included in the proposals, the selection team recommended TIAA-CREF be selected to serve as the recordkeeper for the Plans. The selection committee’s recommendation was based upon the following factors:

- Highly competitive fees, which result in significant reductions in fees paid by plan participants;
Strong financial standing (TIAA-CREF is rated AAA by Moody’s & Fitch) and long history of providing this service to public sector employees;

Continued onsite counseling by highly qualified personnel; and

Access to financial/wealth planning professionals at no additional cost to participants.

TIAA-CREF is a Fortune 100 financial services organization that is the leading retirement provider for people who work in the academic, research, medical and cultural fields. TIAA-CREF serves 3.7 million active and retired employees participating at more than 15,000 institutions and has $440.7 billion in combined assets under management (as of 9/30/11). TIAA-CREF has more than 7,500 employees, and is headquartered in New York City. The organization has major operations in Charlotte, North Carolina and Denver, Colorado, as well as more than 70 local offices nationwide.

As recordkeeper of the Plans, TIAA-CREF will, among other services, provide online enrollment and account access, establish and maintain participants’ accounts, maintain payroll data, provide investment options, manage plan contributions, manage and provide direction to the custodian, facilitate transfers and distributions of plan or qualifying assets, manage participant loans, and provide educational/planning services to participants.

In addition to selecting TIAA-CREF as the recordkeeper of the Plans, JP Morgan Chase will be selected as the custodian of the Plans. The custodian’s role is to hold, safeguard, and manage the plan funds in accordance with the participants’ directions.

To provide the most comprehensive set of retirement planning options to Water Authority employees, the selection committee is recommending that a qualified 457(b) Roth Contribution Program (the Roth Plan) be established. There is no cost to the Water Authority for establishing the Roth Plan, and it provides employees with the ability to fund a Roth account. Under the Roth Plan, participants are able to make after tax contributions to the plan and make future withdrawals of funds tax free, subject to IRS rules and requirements.

The transition to TIAA-CREF is scheduled to occur on April 9, 2012. Leading up to that date, TIAA-CREF will host a series of on-site educational workshops and one-on-one meetings with employees to ensure all participants in the Plans are able to get their questions answered and are prepared for the transition.

The agreements that will be executed to complete this action are provided as attachments.

- Attachment A – Amends and Restates the Plans and constitutes an amendment and restatement in their entirety of the previously established Plans
- Attachment B – Agreement with TIAA-CREF to provide recordkeeping services, as discussed above, for each Plan.
- Attachments C & D – Agreement with JP Morgan Chase to provide custodial/safekeeping services, as discussed above, for the Plans’ assets.
- Attachment E & F – Adoption agreements for each Plan which establish the new effective date and provide Plan details.
Attachment A  Resolution 2012-_____ (Amend and Restate the Deferred Compensation Plans)
Attachment B  Recordkeeping Agreement with TIAA-CREF
Attachment C  Custodial Account Agreement for the 457(b)
Attachment D  Custodial Account Agreement for the 401(a)
Attachment E  457(b) Adoption Agreement
Attachment F  401(a) Adoption Agreement
RESOLUTION NO. 2012-_____  

AMENDED AND RESTATED RESOLUTION OF THE WATER AUTHORITY’S 401(a) and 457(b) DEFERRED COMPENSATION PLANS, TO TERMINATE THE EXISTING PLAN ADMINISTRATOR AND TRUSTEE, APPOINT A RECORDKEEPER FOR BOTH PLANS AND CUSTODIAN FOR EACH PLAN, TO ESTABLISH A QUALIFIED 457(b) ROTH CONTRIBUTION PROGRAM  

WHEREAS, the San Diego County Water Authority desires to amend and restate its Employees' Deferred Compensation Plan (Plan) as attached in Exhibits A, B, C, and D; and  

WHEREAS, the Water Authority desires to add a Qualified 457(b) Roth Contribution Program to its Plan in accordance with Internal Revenue Code 402A; and  

WHEREAS, the Hartford has been the administrator and provider of investment services for these Plans with Reliance Trust Company as Trustee of the Plans; and  

WHEREAS, the Water Authority is terminating its relationship with the Hartford and Reliance Trust Company and appointing Teachers Insurance and Annuity Association of America and College Retirement Equities Fund (TIAA CREF) as Recordkeeper of the Plans, and JP Morgan Chase as Custodian of the Plans;  

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the San Diego County Water Authority as follows:  

The General Manager is authorized to execute such documents, in a form approved by General Counsel as are necessary to:  

a. Discontinue the Hartford’s and Reliance Trust Company’s services  
b. Establish a qualified Roth Contribution Program  
c. Adopt the Amended and Restated 401(a) and 457(b) Deferred Compensation Plan Documents  
d. Appoint TIAA CREF as Recordkeeper of the Deferred Compensation Plans  
e. Appoint JP Chase Morgan as Custodian of the Deferred Compensation Plans  

PASSED, APPROVED, and ADOPTED this _____ of ________________ 2012.  

Ayes:  
Noes:  
Abstain:
Absent:

_______________________________
Michael T. Hogan,
Chair

ATTEST:

_______________________________
Richard K. Smith,
Secretary

I, Doria F. Lore, Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2012-_____ was duly adopted at the meeting of the Board of Directors on the date stated above.

_______________________________
Doria F. Lore,
Clerk of the Board
RECORDKEEPING SERVICES AGREEMENT WITH A TIAA-CREF BROKERAGE ACCOUNT

THIS AGREEMENT (“Agreement”) is entered into as of this 26th day of January 2012, or such later date as the Parties shall agree to by Notice, by and between Teachers Insurance and Annuity Association of America (“TIAA”), a corporation organized and existing under the laws of the State of New York, and San Diego County Water Authority (“Employer”). TIAA and Employer are each a “Party” to this Agreement. There are no third party beneficiaries under this Agreement.

WITNESSETH:

WHEREAS, Employer sponsors and maintains the San Diego County Water Authority Defined Contribution Plan and the San Diego Water Authority Deferred Compensation Plan (the “Plans”), for the benefit of eligible employees and their beneficiaries (“Participants”); and

WHEREAS, assets of such Plans are allocated to and invested in certain mutual funds, TIAA-CREF Brokerage Account and Teachers Insurance and Annuity Association of America-College Retirement Equities Fund (“TIAA-CREF”) annuity contracts selected by Employer and made available by Employer under the terms of the Plans for the benefit of Participants; and

WHEREAS, Employer and the administrators of the Plans appointed by Employer (the “Plan Administrators”) seek the provision of certain record keeping and common remitting services in connection with the operation and administration of the Plans; and

WHEREAS, TIAA desires to provide such services to Employer and the Plan Administrators in connection with the operation and administration of the Plans as set forth in more particularity in this Agreement.

NOW, THEREFORE, in consideration of the promises and mutual covenants, representations and warranties set forth herein, TIAA and Employer agree, as follows:

1. APPOINTMENT; ACCEPTANCE; AUTHORITY TO DIRECT OTHERS

1.1 Employer hereby appoints TIAA as a record keeper for the Plans to provide the services listed in Schedule A of this Agreement. TIAA shall provide such services in accordance with the provisions of the Plans, but TIAA shall have no discretionary control over the Plans. Schedule A is incorporated and made a part of this Agreement.
1.2 TIAA hereby accepts the appointment as a record keeper for the Plans and agrees to provide the services listed in Schedule A. TIAA shall act in good faith and exercise reasonable care in performing the services under this Agreement. Responsibility for reasonable care is limited solely to correcting processing errors resulting from malfunction of TIAA equipment, errors by its staff, or errors or omissions by its programs or employees. TIAA shall make a good faith effort to correct any error caused by its performance subject to the limitations herein set forth; provided that the Employer notifies TIAA in writing of such error and furnishes all data necessary to make such correction within sixty (60) days following the date in which the Employer is furnished with a report in which the claimed error is contained. Correcting an error includes restoring any losses caused by such error to the participant’s or beneficiary’s account. The foregoing notwithstanding, TIAA will, at the Plan Administrator’s request, make a good faith effort to correct any error brought to its attention after such time period has expired. TIAA shall in no event be liable, regardless of the form of the action, for loss of profit, goodwill, or other special consequential damages suffered by the Employer or its Plans as a result of the services provided under this Agreement. The services to be performed by TIAA under this Agreement may be performed on TIAA’s behalf wholly or in part through subsidiaries or affiliates of TIAA or through vendors designated by TIAA. TIAA shall continue to be liable for the performance of any service performed by such subsidiary, affiliate, or vendor and shall be solely responsible for paying the fees such subsidiary, affiliate or vendor charges for such service. To the extent that services under this Agreement are to be performed by a broker-dealer as determined solely by TIAA, Employer agrees that such services may be performed by TIAA-CREF Individual & Institutional Services, LLC, a wholly owned subsidiary of TIAA, and/or SunGard Institutional Brokerage, Inc. (“SunGard”).

2. NON- FIDUCIARY STATUS

Except with respect to its offering a Plan level service that delivers investment and savings advice to Plan participants as described in section 13 of Schedule A, herein, it is intended that the duties to be performed by TIAA under this Agreement be ministerial in nature and that nothing in this Agreement should be construed as granting any discretionary authority or discretionary responsibility to TIAA with respect to the Plans, the participants, or the investments under the Plans.

Notwithstanding its non-fiduciary status above, TIAA holds a fiduciary obligation for investment advice provided to Plan participants.

3. CHANGES TO ADMINISTRATIVE PROCEDURES

TIAA reserves the right to make changes to any administrative procedures in order to assure quality service; provided, that TIAA agrees to provide Employer with (i) reasonable advance notice of any changes, and (ii) the opportunity to have input into the manner in which any such changes are made and implemented.

4. DATA REQUIREMENTS; TRANSMITTAL OF DATA

TIAA and Employer shall work together to develop guidelines for data processing. Employer shall be responsible for the timely transmittal to TIAA of participant data that is materially correct and complete.
5. PERSONNEL AND RESOURCES

TIAA shall provide sufficient personnel and resources as may be necessary to perform the services contemplated under this Agreement in a thorough and professional manner. The personnel designated by TIAA to perform the services contemplated under this Agreement shall have the training and background necessary to perform such services.

6. ERRORS, OMISSIONS OR DELAYS

6.1 Each Party to this Agreement will be responsible to the other Party for their own respective errors, omissions or delays in the performance of services contemplated under this Agreement. Each Party shall notify the other Party (i) of any errors, omissions or interruptions in, or delay or unavailability of the services contemplated under this Agreement, or (ii) if it is unable to perform any of its obligations under this Agreement. Such notice shall be provided as promptly as possible but in no event later than the next business day following the occurrence of any events covered by (i) or (ii) of this paragraph. Notification under this provision shall be in such form as is required by Section 13 of this Agreement. Such notice shall not relieve the notifying Party of its obligations under this Agreement.

6.2 The Employer acknowledges that in performing the services contemplated under this Agreement, TIAA must rely exclusively on the data and information provided to TIAA by the Employer and participants, and that TIAA is not obligated to inquire into and is not responsible for the authenticity or accuracy of such data or information. If TIAA is required to repeat or reprocess any task as a result of incomplete or inaccurate information provided by a Plan, TIAA may charge a reasonable reprocessing fee. TIAA shall advise Employer of such reprocessing fee prior to charging Employer for reprocessing fee. In addition, if amounts are sent with incorrect instructions, or in amounts that do not reconcile with the instructions given, TIAA may (1) apply the amounts for which accurate instructions are given and refund any excess amounts to the Employer; or (2) if amounts are less than the instructions call for, refund the entire amounts to the Employer.

6.3 A Plan Administrator of a Plan shall review all record keeping reports and shall immediately notify TIAA of any claimed error with respect to any data or report. TIAA assumes no responsibility for verification and any report not challenged in writing by a Plan Administrator within sixty (60) days of receipt thereof shall be conclusively presumed accurate and complete. The foregoing notwithstanding, TIAA will, at the Plan Administrator’s request, make a good faith effort to correct any error brought to its attention after such time period has expired.

7. REPRESENTATIONS, WARRANTIES AND COVENANTS
7.1 Each Party represents that it is free to enter into this Agreement and that by doing so it will not breach or otherwise impair any other agreement or understanding with any other person, corporation or entity. TIAA further represents, warrants and covenants that:

a. It has full power and authority under applicable law, and has taken all action necessary, to enter into and perform this Agreement, and that the person executing this Agreement on its behalf is duly authorized and empowered to execute and deliver this Agreement;

b. This Agreement, when executed and delivered, shall constitute the valid, legal and binding obligation of TIAA, enforceable in accordance with its terms;

c. TIAA is a stock life insurance company duly organized, existing and in good standing under the laws of the State of New York; and

The Employer further represents, warrants and covenants that:

d. It has full power and authority under applicable law, and has taken all action necessary, to enter into and perform this Agreement, and that the person executing this Agreement on its behalf is duly authorized and empowered to execute and deliver this Agreement; and

e. This Agreement, when executed and delivered, shall constitute the valid, legal and binding obligation of the Employer, enforceable in accordance with its terms.

8. FEES

8.1 TIAA shall be paid an annual administrative fee of 16 basis points (.16%) from each Plan participant’s and beneficiary’s Plan account for the services provided by TIAA under this Agreement. This fee will be collected by assessing such accounts a 4 basis points (0.04%) quarterly administrative fee. Such basis points shall be deducted pro rata from the mutual funds held in such participant’s or beneficiary’s Plan account and shall be collected on behalf of TIAA each calendar quarter in arrears. The foregoing notwithstanding, if a Participant is invested in any mutual fund in which the mutual fund provider shares in the revenue derived from such fund, such revenue shall be credited to the Participant’s account on a pro-rata basis within thirty (30) days after the annual administrative fee, as described above, is deducted. With respect to the mutual funds described in Schedule B, the Employer authorizes TIAA, on its behalf, to instruct JPMorgan Chase Bank to debit the applicable participant’s or beneficiary’s accounts under the Plan in the appropriate amount. In addition, the Employer understands and accepts that TIAA may be further compensated for its services under this Agreement by payments made by providers of mutual funds, or their affiliates, used as allocation options under the Plan.

8.2 The Employer understands and accepts that in addition to charges imposed by the funds themselves, TIAA may charge administrative fees in connection with certain non-proprietary mutual funds as set forth in Schedule B of this Agreement. TIAA shall be entitled to be paid all such fees from assets held in such mutual funds under this Agreement. The Employer authorizes TIAA, on its behalf, to instruct JPMorgan Chase Bank to debit the applicable participant’s account under the Plan in the appropriate amount.
amount. In addition, the Employer understands that certain of these non-proprietary mutual funds may pay cost-sharing payments. The Employer agrees that the amount of such cost-sharing payments shall either be collected by TIAA to pay the costs of administering such non-proprietary fund on its platform or shall be used to offset the administrative fee to be charged in connection with the non-proprietary mutual fund that pays the cost-sharing payment. The current schedule of administrative fees and cost-sharing payments is listed in Schedule B. Such fees and payments are subject to change upon advance written notice from TIAA. In addition, the Employer understands and accepts that certain fees and commissions will apply to the TIAA-CREF Brokerage Accounts. Such fees and commissions shall be listed in the TIAA-CREF Self-Directed Brokerage Account Customer Agreement and, pursuant to the Agreement, such fees and commissions will be subject to change without prior notice. Certain minimum balance and minimum investment amounts may also be required pursuant to the terms of that Agreement. If such fees cannot be paid from the Self Directed Brokerage Account itself, they may be paid from the participant’s or beneficiary’s other Plan accounts pursuant to the terms of the Customer Agreement.

9. MAINTENANCE OF RECORDS

TIAA agrees that the books, records, accounts, ledgers, documents, and other compilations of data (whether written, electronic, computer related or otherwise) collected and maintained by TIAA for Employer and/or the Plans under any provision or requirement of this Agreement (the “Records”) are the property of Employer. During the term of this Agreement, TIAA will at all times cooperate with and grant Employer or its designee reasonable access to the Records during TIAA’s normal business hours. If any litigation, claim, negotiation, audit, or other action involving the Records is commenced prior to the expiration of the applicable retention period, both TIAA and Employer shall retain all Records until completion of the action and resolution of all issues resulting therefrom, or until the end of the applicable retention period, whichever is later. Upon the expiration or termination of this Agreement, TIAA shall provide Records to Employer upon such schedule and in such form or format as Employer and TIAA agree is reasonable.

10. INDEMNIFICATION

10.1 TIAA agrees to indemnify and hold harmless the Employer and its respective employees, officers, directors, agents, affiliates and subcontractors or other related persons or organizations (the “Employer Parties”) from all loss, damage, costs, charges, liability, or expense, including without limitation, reasonable attorneys’ fees, and accountants’ fees and disbursements (hereinafter referred to as “Losses”) that may be incurred by, imposed upon, or asserted against the Employer Parties, on account of any claim or action at law or in equity against the Employer Parties to the proportionate extent that it results from the negligence, errors, omissions or wrongdoing of TIAA, or its employees, officers, directors, agents, affiliates and subcontractors or other related persons or organizations (the “TIAA Parties”) in the performance of their duties and obligations hereunder. Notwithstanding the foregoing, TIAA shall not hold harmless or indemnify the Employer Parties against Losses stemming from the Employer Parties’ bad faith, negligence, or willful misconduct.
10.2 The Employer agrees to indemnify and hold harmless the TIAA Parties against Losses that may be incurred by, imposed upon, or asserted against the TIAA Parties, on account of any claim or action at law or in equity against the TIAA Parties to the proportionate extent that it results from the negligence, errors, omissions or wrongdoing of the Employer’s Parties in the performance of their duties and obligations hereunder. Notwithstanding the foregoing, the Employer shall not hold harmless or indemnify the TIAA Parties against Losses stemming from the TIAA Parties’ bad faith, negligence, or willful misconduct.

10.3 Notwithstanding anything to the contrary herein and in this Section 10, TIAA shall expressly indemnify, defend and hold harmless any of the Employer Parties from all, loss, damage, costs, charges, liability penalties, fines or expense, including without limitation, reasonable attorneys’ fees and accountants’ fees and disbursements that may be incurred by, imposed upon, or asserted against any of the Employer Parties, on account of any claim or action at law or in equity against any of the Employer Parties to the proportionate extent that it results from the negligence, errors, omissions or wrongdoing of the Custodian, its employees, agents, subcontractors and affiliates under that certain Trust Agreement for a 401(a) Plan between the Employer and JPMorgan Chase Bank, N.A., entered into on or about the date of this Agreement and that certain Trust Agreement for a 457(b) Plan entered into on or about the date of this Agreement.

10.4 If any third party threatens to commence or commences any action for which one Party (the “Indemnifying Party”) may be required to indemnify the other Party hereunder (the “Indemnified Party”), the Indemnified Party shall promptly give notice thereof to the Indemnifying Party. The Indemnifying Party shall be entitled, at its own expense and without limiting its obligations to indemnify the Indemnified Party, to assume control of the defense of such action with counsel selected by the Indemnifying Party, which counsel shall be reasonably satisfactory to the Indemnified Party. If the Indemnifying Party assumes the control of the defense, the Indemnified Party may participate in the defense of such claim at its own expense. Without the prior written consent of the Indemnified Party, which consent shall not be withheld unreasonably, the Indemnifying Party may not settle or compromise the liability of the Indemnified Party in such action, or consent to or permit the entry of any judgment in respect thereof, unless in connection with such settlement, compromise or consent the Indemnified Party receives from such claimant an unconditional release from all liability in respect of such claim.

10.5 The indemnities granted by the Parties in this Section shall survive the termination of this Agreement.

11. CONFIDENTIALITY; EMPLOYER NAME

11.1 TIAA and the Employer recognize and acknowledge that, by entering into this Agreement, each Party may have access to certain information of the other Party that is confidential and constitutes valuable, special and unique property of that other Party. The Parties agree that they will not at any time, either during or subsequent to the term of this Agreement, disclose confidential information to others, or use, copy or permit the transmittal of confidential information to others, or use, copy or permit confidential information to be copied, without the other Party’s express prior written consent. Except for disclosure by their Parties to their legal counsel, accountant or financial advisors (none of whom will be associated or affiliated in any way with
the other Party or any of its affiliates), the Parties will not disclose the terms of this Agreement to any other person, unless disclosure is required by law or otherwise authorized by this Agreement or with the consent of the non-disclosing Party. Unauthorized disclosure of the terms of this Agreement will be a material breach of this Agreement and will provide the non-breaching Party the option of pursuing remedies for breach or immediate termination of this Agreement.

11.2 All payroll, employee, and Participant information received by TIAA under this Agreement shall be treated as confidential information and shall be handled in accordance with all state and federal laws relating to such information, the terms of the Plan, and in accordance with the requirements of this Agreement.

11.3 Subject to the express written consent of the Employer, TIAA shall have the non-exclusive and non-transferable right to use the name of the Employer solely in connection with rendering services pursuant to this Agreement. Any material, including electronic, print, or other media, in which the Employer’s name may be used shall be submitted to the Employer in hard copy for review and approval prior to use by TIAA. Upon termination of the Agreement, TIAA agrees to immediately discontinue use of the Employer name.

12. WAIVER

The failure of either TIAA or the Employer at any time to require performance of any provisions hereof will in no manner affect its right at a later time to enforce such provision and will not act as a waiver thereof.

13. NOTICE

Any notices that may be required under this Agreement shall be given in writing and delivered personally or mailed by certified mail or courier service to the other Party at the following address or such other address as each Party may give notice to the other.

If to TIAA, to:
Client Agreement Team
TIAA-CREF
PO Box 1299
Charlotte, NC 28262
Attention: Product Program Director

With copies to:
Holly Kendrick
Director, Institutional Relationships
TIAA-CREF
1670 Broadway, Suite 2200
Denver, CO 80202

With copies to:
William Hurley
Managing Consultant, Institutional Relationships
TIAA-CREF
2398 E. Camelback Road, Suite 1000
Phoenix, AZ 85016

If to the Employer, to:

Susan L. Leone, SPHR
Director of Human Resources
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123

14. EFFECTIVENESS; TERMINATION

This Agreement shall become effective as of the date set forth above, or such later date as specified Employer may remove TIAA as record keeper upon ninety (90) days prior written notice to TIAA. TIAA may resign as record keeper upon one hundred twenty (120) days prior written notice to Employer.

15. APPLICABLE LAW

This Agreement shall be construed, and the provisions hereof interpreted under, in accordance with the laws of the State of California.

16. COMPLETE AGREEMENT; MODIFICATIONS

This Agreement embodies the entire agreement between the Parties and supercedes all prior agreements relating to the subject matter of this Agreement. All amendments to this Agreement must be in writing and signed by both Parties.

17. COUNTERPARTS
This Agreement may be executed simultaneously in two or more counterparts, each of which taken together shall constitute one and the same Agreement.

18. SEVERABILITY

If any provision of this Agreement shall be held or made invalid by a court decision, statute, rule or otherwise, the remainder of the Agreement shall not be affected thereby.

19. SUCCESSORS AND ASSIGNS

This Agreement will be binding upon, insure to the benefit of, and be enforceable by the respective successors of the Parties. This Agreement will not be assignable by any Party hereto without the written consent of the other Party.

20. NON-EXCLUSIVITY

Each of the Parties acknowledges and agrees that this Agreement and the arrangements described herein are intended to be non-exclusive and that each of the Parties is free to enter into similar agreements and arrangements with other entities.

(Remainder of Page Left Intentionally Blank)
IN WITNESS WHEREOF, the Parties hereto have executed and delivered this Agreement as of the date first above written.

Teachers Insurance and Annuity Association of America

By: ______________________    Date: ___________________
Print Name:
Title:

San Diego Water Authority

By: ______________________    Date: ___________________
Print Name:
Title:
SCHEDULE A
LIST OF SERVICES

1. TIAA will prepare Plan enrollment kits and shall otherwise aid in the enrollment of employees eligible to participate in a Plan.

2. TIAA shall maintain records of each Plan participant’s and beneficiary’s account balances including those amounts paid as premiums to and balances in TIAA-CREF annuity contracts. The records of each such account balance shall reflect amounts attributable to employer contributions, participant elective-deferral contributions, rollover contributions (when permitted by the applicable Plan) and transfers, and any after-tax contributions (when permitted by the applicable Plan). If a 403(b), 401(k), or 457(b) governmental plan accepts after-tax Roth Elective Deferral Contributions as permitted under Code section 402(A), TIAA shall keep records that separately account for such contributions. TIAA shall also maintain records of rollover Roth contributions, as permitted by the Employer’s plan, which shall also be accounted for separately. The records maintained pursuant to this paragraph shall be based solely on information provided to TIAA by the Plan.

3. TIAA shall arrange for contributions to and investments in a participant’s account to be allocated to the mutual funds under a Plan, in TIAA-CREF annuity contracts available under a Plan, or in a TIAA-CREF Brokerage Account as described in Schedule B, as directed by the participant or the participant’s beneficiary in the event of the participant’s death. The mutual funds, TIAA-CREF annuity contracts, and TIAA-CREF Brokerage Account chosen for the Plans are as set forth in Schedule B. All contributions shall be allocated among such options in accordance with the most recent valid instructions. Transfers among plan funding options shall be made pursuant to the instructions of the participant or beneficiary in accordance with the terms of the Plans but subject to any restrictions in the applicable mutual fund, brokerage agreement, or TIAA-CREF annuity contract. TIAA shall provide to the participant or beneficiary all of the forms necessary to enable him or her to allocate contributions or transfer amounts among the Plan funding options. In the event that Schedule B is amended to eliminate a mutual fund or a TIAA-CREF Brokerage Account as a plan funding option under the Plans, TIAA shall follow the instructions of the Plan Administrators in transferring accumulations from the eliminated mutual fund or TIAA-CREF Brokerage Account to the plan funding option chosen by the Employer as replacement(s) and no future allocations will be made to the eliminated plan funding option. TIAA will work with the Plan Administrators to develop a plan for such transfers and in communicating with the Plans’ participants and beneficiaries concerning the change in the Plans’ funding options.

4. TIAA shall send periodic record keeping reports and communications to the Plan Administrators and each Plan participant and beneficiary, including but not limited to information regarding returns and investment performance under the mutual funds and TIAA-CREF annuity contracts used to fund the participant’s account under a Plan.

5. TIAA shall send any communication that it is required to provide by mail to a participant or beneficiary to the address provided to TIAA by the Plan or by the participant or beneficiary.
6. TIAA shall, as authorized under a Plan by a Plan Administrator and subject to applicable law, administer and account for plan loans available under the terms of a Plan and shall, as authorized under a Plan by a Plan administrator and subject to applicable law, administer and account for hardship distributions.

7. TIAA shall, as authorized under a Plan by a Plan Administrator and subject to applicable law, provide for the liquidation of amounts in and make plan benefit payment distributions permitted under, the TIAA-CREF annuity contracts in a participant’s Plan account. In addition, TIAA shall, as authorized under a Plan by a Plan Administrator and subject to applicable law, provide instructions to JPMorgan Chase Bank for the liquidation of investments in and to make plan benefit payment distributions permitted under the mutual funds in a participant’s Plan account. TIAA shall, as authorized by the Plan Administrator and subject to applicable law, administer the spousal consent requirements when applicable to a Plan and have distributed Plan account balances in accordance with any Qualified Domestic Relations Order (as defined in section 414(p) of the Code) received by it or forwarded to it by a Plan and in accordance with the instructions of the Plan Administrator.

8. TIAA shall maintain records of each participant’s designated beneficiaries based on information provided by the participants or the Plan.

9. To the extent permitted under applicable law, TIAA shall see to the performance of any required withholding of income tax from distributions and withdrawals. The foregoing notwithstanding, TIAA shall not provide for the performance of withholding of income tax from distributions and withdrawals from any private tax-exempt Code section 457(b), any Code section 415(m) plan or any Code section 457(f) Plan covered under this Agreement unless appropriate arrangements are made in writing with TIAA. Prior to the distribution of each participant’s benefits, TIAA shall provide the appropriate notice as required under section 402(f) of the Code, when applicable.

10. If the Plan is subject to the Employee Retirement Income Security Act of 1974, as amended (“ERISA”), TIAA shall provide the information necessary for filing the annual report (5500 Series) for the Plan with the Department of Labor (“DOL”) and shall assist the Plan Administrator in completing the filing.

11. On each day the New York Stock Exchange (the “Exchange”) is open for business (each a “Business Day”), TIAA may receive instructions from a Plan and/or Plan participant on behalf of JPMorgan Chase Bank for the purchase or redemption of shares of the mutual funds offered under the terms of the Plan (‘‘Instructions’’). Instructions which are received in “good order” (defined below) prior to the close of regular trading of the Exchange (generally 4:00 pm Eastern Time) (the “Close of Trading”) on any given Business Day, will be executed by JPMorgan Chase Bank at the net asset value determined as of the Close of Trading on such Business Day. Instructions which are received in “good order” (defined below) on such day but after the Close of Trading, will be executed by JPMorgan Chase Bank at the net asset value determined as the Close of Trading on the next Business Day following the date of receipt of the Instruction. Instructions shall be considered received in “good order” when all necessary information and monies in connection with such Instructions balance and conform to all other operating procedures, including any restrictions or limits set forth in the applicable fund prospectus or as otherwise set forth by TIAA on behalf of JPMorgan Chase Bank. The date the Instructions are executed shall be referred to as the “Participation Date”. Notwithstanding the foregoing, in the event that the Securities and Exchange Commission promulgates or amends rules under
which the foregoing procedures would be impermissible, this paragraph 11 shall be amended to provide a procedure that conforms to such rules.

12. TIAA shall deliver, or cause to be delivered to the Plan Administrator or at the direction of the Plan Administrator, directly to Plan participants and beneficiaries, all notices, prospectuses, financial statements, proxies and proxy soliciting materials received by TIAA relating to the TIAA-CREF annuity contracts or the mutual fund shares held in a participant’s Plan accounts. Proxies shall be voted by, or in accordance with, the instructions of the participants or beneficiaries. If no instructions for voting proxies applicable to mutual fund shares are received, TIAA shall not exercise the voting rights for such shares and shall not be responsible for the failure to vote, or instruct the vote on such shares.

13. TIAA shall, as authorized by a Plan Administrator, offer a Plan level service that delivers investment and savings advice to Plan participants from an independent third party advice provider. The program follows the guidelines set forth in Department of Labor ("DOL") Advisory Opinion 2001-09A (known as the Sun America Opinion). Ibbotson Associates, Inc. is the independent financial expert under this participant advice program. The advice service will be delivered to participants over the phone, through the web, and by TIAA-CREF consultants in the field. TIAA accepts fiduciary responsibility for the provision of advice under this program.

14. TIAA shall, at such times as the Plan Administrators and TIAA shall agree, provide reports to the Plan Administrators concerning employee elective deferrals in order to aid in their compliance with the applicable limits on employee elective deferrals in sections 402(g), 457(e) and 414(v) of the Code, as applicable.
**SCHEDULE B**

**Plan Funding Options**

**TIAA-CREF Mutual Funds**

<table>
<thead>
<tr>
<th>FUND NAME</th>
<th>SHARES CLASS</th>
<th>TIKKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA-CREF High-Yield Fund</td>
<td>Institutional</td>
<td>TIHYX</td>
</tr>
<tr>
<td>TIAA-CREF Social Choice Equity Fund</td>
<td>Institutional</td>
<td>TISCX</td>
</tr>
</tbody>
</table>

**Non-Proprietary Mutual Funds, Servicing Fees and Revenue Sharing Payments**

- **Becker Value Equity Institutional** BVEIX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 10 basis points.*

- **DFA Inflation-Protection Securities I** DIPSX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **DFA International Value I** DFIVX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **DFA Real Estate Securities I** DFREX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **DFA US Targeted Value Portfolio Institutional** DFFVX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **Hartford Capital Appreciation HLS IA** HIACX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **Hartford International OPP HLS IA** HIAOX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **JPMorgan Mid Cap Value Instl** FLMVX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 10 basis points.*

- **MFS Massachusetts Investors Gr Stk I** MGTIX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **PIMCO Total Return Fund Inst Class** PTTRX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*

- **Vanguard 500 Index Fund Signal** VIFSX  
  *The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.*
Vanguard Mid Cap Growth Fund Investor VMGRX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Mid-Cap Index Fund Signal VMISX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Small Gap Growth Index Admiral VSGAX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Small-Cap Index Fund Signal VSISX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement Income Fund Investor VTINX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2010 Fund Investor VTENX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2015 Fund Investor VTXVX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2020 Fund Investor VTWNX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2025 Fund Investor VTTVX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2030 Fund Investor VTHRX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2035 Fund Investor VTTHX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2040 Fund Investor VFORX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2045 Fund Investor VTIVX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Target Retirement 2050 Fund Investor VFIFX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Total Bond Market Index Fund Signal VBTSX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

Vanguard Total International Stock Index Fund Signal VTSGX

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.
Stable Value Fund

Putnam Stable Value

The annual 12b-1 and revenue sharing TIAA shall receive for services rendered is 0 basis points.

TIAA-CREF Brokerage Account

Notwithstanding any other provision of the Agreement to which this Schedule is attached to the contrary, the following provisions shall apply to the TIAA-CREF Brokerage Account. If so directed by the Employer and subject to TIAA’s acceptance of a properly executed TIAA-CREF Retirement Plan Self-Directed Brokerage Account Application of a Plan participant or Beneficiary, all or a portion of the assets of the accounts of a Plan shall be segregated into individual TIAA-CREF Brokerage Accounts established for the benefit of Plan participants and Beneficiaries. Pursuant to the terms of the applicable Plan, each participant or Beneficiary shall have the power to direct the investment and reinvestment of assets in the TIAA-CREF Brokerage Account established for his or her benefit, subject to such administrative rules and procedures as TIAA may establish. Pursuant to the terms of the applicable Plan, participants and Beneficiaries shall provide instructions regarding the investment of the TIAA-CREF Brokerage Account directly to the broker appointed for purposes of executing transactions under the account. For 403(b) Plans, investments in the TIAA-CREF Brokerage Account shall be limited to mutual funds in accordance with Internal Revenue Code Section 403(b)(7).

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For this Stable Value Fund refer to the following document for valuation information:

PUTNAM FIDUCIARY TRUST COMPANY,

INVESTMENT FUNDS FOR PENSION AND PROFIT SHARING TRUSTS

Declaration of Trust

Fifth Amendment and Restatement

(Effective As of March 18, 2008)
SCHEDULE C

TIAA warrants that all of the services under this Agreement will be delivered appropriately and to the satisfaction of the Employer. If any defect or error occurs, the Employer should identify the issue and TIAA will make a good faith effort to rectify the situation without any additional cost to the Employer.

TIAA backs this satisfaction guarantee with a financial commitment as follows:

- Subject to the Legal Qualifiers as stated below, if the Employer’s identified issue goes unresolved, the Employer should provide TIAA with evidence that TIAA did not rectify the situation to the satisfaction of the Employer.

In addition to the foregoing satisfaction guarantee, TIAA sets overall corporate goals for service standards as detailed in the chart below. **Attainment of these goals is not monitored on a per-plan basis for purposes of the comprehensive satisfaction guarantee discussed herein, but on a corporate level, to ensure that TIAA continues to deliver the high quality services that our institutional clients and plan participants expect.**

**Performance Guarantees:**

<table>
<thead>
<tr>
<th>Service</th>
<th>Quantifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quarterly Review Statements</td>
<td>Mailed 5 business days after end of quarter</td>
</tr>
<tr>
<td>Remittance Processing</td>
<td>If money and data are received in good order before close of business on the New York Stock Exchange, usually 4:00PM ET, we process on that business day (trade date)</td>
</tr>
<tr>
<td>QDRO Processing</td>
<td>Six to eight weeks after receipt of complete information, including any court or other required third-party verification</td>
</tr>
<tr>
<td>Plan Start-up; Systems Configuration</td>
<td>Agreed Plan Start Date</td>
</tr>
<tr>
<td>Individual Web Access</td>
<td>Available 97% of the time on an annual basis, excluding regularly scheduled maintenance</td>
</tr>
<tr>
<td>Administrator Web Access</td>
<td>Available 97% of the time on an annual basis, excluding regularly</td>
</tr>
<tr>
<td>Service</td>
<td>Quantifier</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td>scheduled maintenance</td>
<td></td>
</tr>
<tr>
<td>On site annual enrollment/education</td>
<td>• Number of annual ½ hour individual meetings: 260</td>
</tr>
<tr>
<td></td>
<td>• Number of annual group seminars:              4</td>
</tr>
<tr>
<td></td>
<td>• Annual number of on-site service hours:       270</td>
</tr>
<tr>
<td></td>
<td>• Annual number of on-site service days:        32</td>
</tr>
<tr>
<td></td>
<td>• During normal business hours</td>
</tr>
</tbody>
</table>
### Comprehensive Financial Planning for individuals

- Instrumental to this level is our cash flow based planning approach. This approach considers the total financial picture and delivers a comprehensive overview of critical considerations – such as tax obligations, estate holdings, and ability to achieve multiple goals simultaneously. Employees will be eligible to receive a full Financial Plan through this comprehensive level of service.

### Plan Reporting

- Provide reports as needed or on a quarterly basis at the Plan/Client level.

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**Legal Qualifiers**

TIAA shall be entitled to a grace period to cure any matter of noncompliance referenced in this paragraph, such that the cure period shall be equal to the period of time noted in the applicable quantifier above. If after the expiration of any such cure period TIAA remains in noncompliance, penalties may apply effective as of the beginning of the applicable grace period.

Notwithstanding the foregoing, TIAA’s obligations and liabilities shall be limited to the following limitations:

(a) The National Contact Center (NCC) shall be available to respond to telephone calls Monday through Friday (excluding holidays observed by TIAA) from 8 a.m. to 10 p.m. Eastern Time and Saturdays from 9 a.m. to 5 p.m. Eastern Time. All calls to the NCC will be recorded to help ensure they are handled properly. Calls may be monitored for training, review and other business purposes. TIAA shall also provide Plan participants toll-free access to the Automated Telephone Service (ATS) modules. The ATS shall be available seven days a week and 24 hours a day, except during maintenance downtime and except at other times due to a failure of telecommunication, electrical, and/or computer systems, or other similar situations. TIAA shall use its best efforts to remedy any such failure. TIAA shall provide Employer with at least 24 hours’ advance notice in the event of a scheduled material maintenance of the ATS expected to result in the unavailability of the ATS to the Employer participants for any material period of time, and to the extent reasonably feasible, TIAA shall facilitate notification to participants in the plans of such unavailability via the web site.

(b) TIAA shall be excused from liability for any errors, omissions or inaccuracies arising as a result of the failure to receive accurate and complete records from the Employer or any
current or prior service provider(s); provided, however, TIAA shall not be excused from liability to the extent that TIAA has actual knowledge that such data is erroneous or, in the exercise of ordinary business prudence, would have such actual knowledge. In the event TIAA is not supplied with all information necessary to accurately compute the minimum distribution for any individual(s), TIAA shall, to the extent permissible under law of the terms of the annuity contract, calculate the payment using single life and recalculated annually options in the initial year and all subsequent years for that individual(s).

(d) The Employer shall be solely responsible for the timeliness, accuracy and completeness of the data that it (or its agent) submits to TIAA, and for any adverse consequences that may result from errors or inaccuracies caused by the inaccuracy or incompleteness of such data; provided, however, TIAA shall not be excused from liability to the extent that TIAA has actual knowledge that such data is erroneous and does not take reasonable action to notify the Employer to obtain corrected data. Subject to the foregoing, TIAA may fully rely on data received, and shall have no obligation to review it or verify its accuracy.

(e) The Employer agrees to promptly provide any information reasonably requested by TIAA to enable the fulfillment of its responsibilities under this Agreement, and to sign miscellaneous certifications and other documentation related to the purposes expressed herein. TIAA shall have no obligation to perform any of the services described in or contemplated under this Agreement, unless and until a reasonable period of time after all information it reasonably may request has been provided by the Employer.

(f) The Employer agrees that TIAA’s performance may deviate from the established expectations from time to time due to causes beyond TIAA’s reasonable control, e.g., TIAA’s receipt of poor or incomplete data, the periodic failure of information or communications systems (except where such failures are attributable to TIAA’s negligence or willful misconduct), the operation of the capital markets, computer or operational system failures (except where such system failures are attributable to TIAA’s negligence or willful misconduct in maintaining such systems), “Acts of God,” fire, flood, civil or labor disturbance, war, terrorism, act of any governmental authority or other act or threat of any authority (de jure or de facto), legal constraint, fraud or forgery, inability to obtain or interruption of external communications facilities, or any cause beyond the reasonable control of TIAA or other unusual circumstances.
CUSTODIAL ACCOUNT AGREEMENT FOR A NON-TRUSTEED GOVERNMENTAL 457(b) PLAN WITH A TIAA-CREF BROKERAGE ACCOUNT

This Custodial Account Agreement (“Agreement”) between JPMorgan Chase Bank, N.A. (“Custodian”) and San Diego County Water Authority (“Employer”) as Sponsor of the San Diego Water Authority Deferred Compensation Plan (“Plan”), a plan designed to meet the requirements of Section 457(b) of the Internal Revenue Code of 1986, as amended (“Code”) as applicable to governmental sponsors (as defined in Code Section 457(g)(1)).

WHEREAS, in accordance with Code Section 457(g)(3), the Plan will be funded in part with annuity contracts issued by Teachers Insurance and Annuity Association of America and College Retirement Equities Fund (“TIAA-CREF”); and

WHEREAS, in accordance with Code Section 457(g)(3), the Plan will be funded in part with a custodial account designed to meet the requirements of Code sections 401(f)(2) and the assets in such custodial account shall be invested solely in Mutual Fund Shares, as defined in Article II below, other funds chosen by the Employer as listed in Appendix A and in a participant directed Brokerage Account as described in Section 5.1(b) below; and

WHEREAS, the Plan provides that the Plan’s participants (and beneficiaries of deceased participants) have the right to direct the Employer as to the investment of amounts credited to their individual accounts under the Plan by selecting from among the Mutual Fund Shares, other funds and a TIAA-CREF Brokerage Account made available to them under the Plan by the Employer;

WHEREAS, the Employer has appointed Teachers Insurance and Annuity Association of America as record keeper for the Plan (“Record Keeper”) pursuant to which Record Keeper serves as Employer’s agent for purposes of keeping Plan records; and

WHEREAS, the Employer has requested that the Custodian provide certain custodial services for the portion of the Plan’s assets invested in Mutual Fund Shares, other funds and a TIAA-CREF Brokerage Accounts described in Appendix A of this Agreement, which custodial services are required to satisfy the requirements of Code sections 401(f)(2) and 457(b) and the Custodian has agreed to provide such services as set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, it is hereby agreed as follows:

ARTICLE I. EFFECTIVE DATE

1.1 The effective date of this Agreement will be January 26, 2012, or such later date as the Parties shall agree to by Notice. This agreement will remain in effect until terminated pursuant to Article X.
ARTICLE II. DEFINITIONS

2.1 “APPLICABLE LAW” means any statute, whether national, state or local, applicable in the United States or any other country, any other law, rule, regulation or interpretation of any governmental entity, any applicable common law, and any decree, injunction, judgment, order, ruling, or writ of any governmental entity.

2.2 “BENEFICIARY” means the beneficiary(ies) of a deceased participant and an alternate payee of a participant pursuant to a qualified domestic relations order (as defined in section 414(p) of the Code) (“Qualified Domestic Relations Order”).

2.3 “CUSTODIAN INDEMNITEES” means the Custodian, and its nominees, directors, officers, employees and agents.

2.4 “INSTRUCTIONS” means instructions which: (i) contain all necessary information required by the Custodian to enable the Custodian to carry out the Instructions; (ii) are received by the Custodian in writing or via the Custodian’s electronic instruction system, SWIFT, telephone, facsimile or such other methods as are for the time being agreed by the Record Keeper and the Custodian; and (iii) the Custodian believes in good faith have been given by the Record Keeper or are transmitted by the Record Keeper with proper testing or authentication pursuant to terms and conditions which the Custodian may specify.

2.5 “MUTUAL FUND” means an open-end investment company registered under the Investment Company Act of 1940, as amended.

2.6 “MUTUAL FUND SHARES” means securities issued by a Mutual Fund.

ARTICLE III. SERVICES TO BE PROVIDED BY CUSTODIAN

3.1 The Custodian shall receive such sums of money or Mutual Fund Shares and shares of other funds acceptable to the Custodian as shall from time to time be paid or delivered to the Custodian under this Agreement. The Custodian shall hold in Plan participant accounts all such assets, together with all the property purchased therewith and the proceeds thereof and the earnings and income thereon. The Custodian shall not be responsible for, or have any duty to enforce, the collection of any contributions or assets to be paid or transferred to it under the Plan or for verifying whether contributions or transfers to it are permissible under the Plan. The Custodian shall not be responsible for investment choices directed by the Employer or by Plan participants or Beneficiaries under the Plan.

3.2 The Custodian shall disburse Plan loan proceeds, distributions on account of unforeseeable emergency and other distributions as directed by the Record Keeper. The Custodian shall distribute Plan account balances in accordance with any Qualified Domestic Relations Order in accordance with the Instructions of the Record Keeper. No amounts may be paid or made available to any distributee before the time provided in Code section 457(d). The Record Keeper shall be responsible for determining that
(a) each distribution satisfies the requirements of the Plan and Applicable Law, including Code section 457(d); (b) the disbursement of loan proceeds has been authorized in accordance with the Plan and Applicable Law; and (c) distributions pursuant to a domestic relations order have been authorized in accordance with the Plan and Applicable Law.

3.3 To the extent permitted under Applicable Law, the Custodian shall be the payer (within the meaning of applicable United States Treasury Department regulations) of benefits in the custodial account under the Plan held pursuant to this Agreement. As payer, it shall perform any required withholding of federal and state income tax from distributions and withdrawals and deposit the same with the appropriate tax authorities as and when directed by the Record Keeper. The Record Keeper shall be responsible for preparing and filing all reports of withheld taxes with the participant or Beneficiary and all applicable federal and state tax authorities.

3.4 The Custodian agrees that all records maintained by it for the Plan shall be open to inspection and audit at reasonable times by agents or representatives of the Employer and that such records will be preserved and maintained in accordance with Applicable Law. The Custodian may charge, and the Employer shall agree to pay, the reasonable cost of any services and materials used by the Custodian in supplying assistance in connection with any such inspection.

3.5 The services to be performed by the Custodian under this Agreement may be performed on the Custodian’s behalf wholly or in part through subsidiaries or affiliates of the Custodian or through vendors designated by the Custodian. The Custodian will continue to be liable for the performance of its duties hereunder.

ARTICLE IV. INSTRUCTIONS

4.1 (a) The Employer authorizes the Custodian to accept and act upon any Instructions received by the Custodian from the Record Keeper without inquiry. The Record Keeper shall receive instructions from participants and Beneficiaries with respect to the investment of their Plan accounts. It shall aggregate such instructions and will provide Instructions to the Custodian to place net purchase and redemption orders with respect to each Mutual Fund investment option selected for the Plan as follows:

(b) Except as provided in Appendix A with respect to TIAA-CREF Brokerage Accounts, each participant and Beneficiary shall submit investment directions and changes in investment directions with respect to his or her Plan account to the Record Keeper, which shall aggregate such directions placed each day with respect to the various investment alternatives in accordance with its agreement with the Employer. The Custodian shall invest the assets of the Plan accounts only when, if and in the manner directed by the Record Keeper and shall not be under any obligation to invest or otherwise manage any of such assets. It shall be the duty of the Custodian to act strictly in accordance with the Record Keeper’s directions. In the event that the Custodian fails to receive a proper Instruction, the assets shall be invested in a money market Mutual Fund or in such other Mutual Fund investment option selected by the Employer or left uninvested, in any case as selected...
by the Employer, until the Custodian receives a proper Instruction from the Record Keeper. The Custodian shall, as directed by the Record Keeper, liquidate investments when necessary to: (i) comply with participants' and Beneficiaries' instructions or to change investments; (ii) make plan benefit payment distributions; (iii) disburse loan proceeds; (iv) make distributions on account of unforeseeable emergencies; (v) reallocate forfeitures under the Plan; or (vi) pay expenses, fees, or taxes. The Record Keeper shall be responsible for determining that such liquidation is permitted under the prospectuses for the Mutual Funds in the participant's or Beneficiary's Plan account.

(c) Unless otherwise expressly provided, all Instructions will continue in full force and effect until canceled or superseded.

(d) The Custodian may (in its sole discretion and without affecting any part of this Section 4.1) seek clarification or confirmation of an Instruction from the Record Keeper and may decline to act upon an Instruction if it does not receive clarification or confirmation satisfactory to it. The Record Keeper may (in its sole discretion and without affecting any part of this Section 4.1) seek clarification or confirmation of an Instruction from the Employer and may decline to act on an Instruction if it does not receive clarification or confirmation satisfactory to it. The Custodian will not be liable for any loss arising from any delay while either it or the Record Keeper seeks such clarification or confirmation.

(e) In executing or paying a payment order the Custodian may rely upon the identifying number (e.g., Fedwire routing number or account) of any party as instructed in the payment order. The Record Keeper assumes full responsibility for any inconsistency between the name and identifying number of any party in payment orders issued to the Custodian in Employer's name.

4.2 Any Instructions delivered to the Custodian by telephone will promptly thereafter be confirmed in writing by the Record Keeper. Each confirmation is to be clearly marked “Confirmation”. The Custodian will not be liable for having followed such Instructions notwithstanding the failure of the Record Keeper to send such confirmation in writing or the failure of such confirmation to conform to the telephone Instructions received. Either party may record any of their telephonic communications. The Record Keeper will comply with any security procedures reasonably required by the Custodian from time to time with respect to verification of Instructions. The Record Keeper will be responsible for safeguarding any test keys, identification codes or other security devices that the Custodian will make available to the Record Keeper.

4.3 The Custodian need not act upon Instructions which it reasonably believes to be contrary to law, regulation or market practice and the Custodian will be under no duty to investigate whether any Instructions comply with Applicable Law or market practice.

4.4 The Custodian has established cut-off times for receipt of Instructions, which will be made available to the Employer and the Record Keeper. If the Custodian receives an Instruction after its established cut-off time, the Custodian will attempt to act upon the Instruction on the day requested if the Custodian deems it practicable to do so or otherwise as soon as practicable on the next business day.
ARTICLE V. DUTIES OF THE EMPLOYER

5.1 The Employer shall be solely responsible for the following:

(a) The tax and legal aspects of the Plan.

(b) To select and monitor the funding options for the Plan, it being understood that the Custodian has no authority or responsibility for choosing such funding options. The funding options shall consist of Mutual Funds and a TIAA-CREF Brokerage Account as described in Appendix A. The funding options chosen for the Plan are set forth in Appendix A to this Agreement. Such funding options may be changed from time to time by the parties attaching a new Appendix A hereto.

(c) To evaluate the suitability of the Plan documents and maintain the Plan’s conformance with applicable provisions of the Code and the regulations thereunder, including, if applicable, any filings required under Applicable Law.

(d) To represent and defend the Plan in an Internal Revenue Service audit or examination and any appeals or litigation relating thereto and any other examinations, audits or legal proceedings relating to the Plan.

(e) To provide the Custodian, in a timely manner, accurate data, as requested and in the form requested by Custodian, in order to establish and maintain the records necessary for the fulfillment of the Custodian’s duties hereunder. The Custodian shall not be responsible in the event that such information is inaccurate. If the Custodian is required to repeat or reprocess any task as a result of incomplete or inaccurate information provided by the Employer, the Custodian may charge the Employer a reasonable reprocessing fee. In addition, if amounts are sent to the Custodian with incorrect Instructions, or in amounts that do not reconcile with the Instructions given, the Custodian may: (1) apply the amounts for which accurate Instructions are given and refund any excess amounts to the Employer; or (2) if amounts are less than the Instructions call for, refund the entire amount to the Employer.

5.2 The Employer shall review all reports and shall immediately notify the Record Keeper in writing of any claimed error with respect to any data or report. The Custodian assumes no responsibility for verification and any report not challenged in writing to the Record Keeper within sixty (60) days of receipt thereof shall be conclusively presumed accurate and complete. The Record Keeper shall promptly notify the Custodian of any claimed error by the Employer.

ARTICLE VI. THE POWERS OF CUSTODIAN AS CUSTODIAN

6.1 The Custodian, in its capacity as custodian, shall have the following powers, which shall not apply to assets held in any TIAA-CREF Brokerage Account:
(a) To vote in person, or in proxy, or to refrain from voting in respect to any Mutual Fund shares or other funds held in a participant’s or Beneficiary’s Plan account, in accordance with Section 11.2 of this Agreement, and to enter into any voting trust or similar agreement in respect thereto;

(b) To exercise conversion and subscription rights pertaining to any property held in a Plan account;

(c) With respect to any investment, to consent or object to any action or non-action of any corporation, or of the directors, officers or stockholders of any corporation;

(d) To register securities in its name or in the name of any nominee with or without indication of the capacity in which the securities shall be held, or to hold securities in bearer form and to deposit any securities or other property in a depository or clearing corporation;

(e) To employ as many agents and counsel as are reasonably necessary for the purpose of properly performing its duties under this Agreement, and, as part of its expenses under this Agreement, to pay their reasonable expenses and compensation; and

(f) To make, execute and deliver, as custodian, any and all conveyances, waivers, releases or other instruments in writing necessary or desirable for the accomplishment of any of the powers listed in this Agreement.

6.2 The Custodian shall have no duties or responsibilities as custodian other than those specified in this Agreement or under Applicable Law and no implied covenant or obligation shall be read into this Agreement against the Custodian. Notwithstanding any reference herein to the Plan, or to the provisions thereof, it is expressly agreed that the Custodian is not a party to the Plan and shall have no responsibility to apply or administer the terms of the Plan.

6.3 The Custodian shall have no duty to advise any person of the investment, tax or other consequences resulting from that person’s actions or inactions, or of its own actions in following the directions of such person, or its failing to act in the absence of such directions.

ARTICLE VII. STANDARD OF CARE; PROTECTION OF CUSTODIAN

7.1 The Custodian shall use due care in providing the services hereunder. Responsibility for due care is limited solely to correcting processing errors resulting from malfunction of the Custodian’s equipment, error by its staff, or error by its programs. The Custodian shall make a good faith effort to correct any error caused by its performance subject to the limitations herein set forth; provided that the Employer notifies the Record Keeper in writing of such error and furnishes all data necessary to make such correction within sixty (60) days following the date in which the Employer is furnished with a report in which the claimed error is contained. The Record Keeper shall promptly notify the Custodian of such claimed error. The Custodian Indemnitees shall in no event be liable, regardless of the form of the
action, for loss of profit, goodwill, or other special or consequential damages suffered by the Employer, Plan representatives, the Record Keeper or Plan participants or Beneficiaries as a result of the services provided under this Agreement. The Custodian Indemnitees shall not be liable for any error or omission resulting, directly or indirectly, from failure of the Employer, or its agents, including, but not limited to, the Record Keeper (other than the Custodian and/or its affiliates or hired vendors), to properly perform any of its responsibilities under this Agreement or the Plan. The Employer shall indemnify the Custodian Indemnitees against, and hold them harmless from, any loss, claim or expense (including reasonable attorneys’ fees) that may be imposed on, incurred by or asserted against the Custodian Indemnitees in connection with or arising out of the Custodian’s performance under this Agreement, provided the Custodian has not acted with negligence or engaged in fraud or willful misconduct in connection with the liabilities in question. Additionally, the Employer shall indemnify and save harmless the Custodian for and from any loss, claim or expense (including reasonable attorneys’ fees) arising by reason of any breach of any statutory or other duty owed to the Plan by the Employer or the Record Keeper, whether or not the Custodian may also be considered liable for the Employer’s or Record Keeper’s breach under the provision of Applicable Law.

7.2 The Custodian will maintain and update from time to time business continuation and disaster recovery procedures with respect to its custody business that it determines from time to time meet reasonable commercial standards. The Custodian will have no liability, however, for any damage, loss, expense or liability of any nature that the Employer, Record Keeper, participants or Beneficiaries may suffer or incur, caused by an act of God, fire, flood, civil or labor disturbance, war, act of any governmental authority or other act or threat of any authority (de jure or de facto), legal constraint, fraud or forgery, malfunction of equipment or software (except where such malfunction is attributable to the Custodian’s negligence in maintaining the equipment or software), failure of or the effect of rules or operations of any external funds transfer system, inability to obtain or interruption of external communications facilities, or any cause beyond the reasonable control of the Custodian (including without limitation, the non-availability of appropriate foreign exchange).

ARTICLE VIII. RESIGNATION AND REMOVAL OF CUSTODIAN

8.1 The Custodian may resign as custodian at any time upon sixty (60) days prior written notice to the Employer.

8.2 The Custodian may be removed as custodian at any time upon sixty (60) days prior written notice from the Employer.

8.3 Upon the resignation or removal of the Custodian, the Employer shall promptly appoint a successor, provided that in the event of resignation of the Custodian, the Custodian may appoint a successor in its notice of resignation subject to the consent of the Employer. If the Employer does not consent to the successor designated by the Custodian, the Employer must designate a different successor. Any successor custodian appointed herein shall be a bank or other person eligible to serve as a custodian in accordance with Code Section 401(f)(2). Upon receipt by the Custodian of a written acceptance of such successor custodian, such successor custodian shall assume all of the duties and responsibilities of the Custodian hereunder.
appointment by the successor, the Custodian shall promptly transfer and pay over to such successor the assets of the custodial account. The Custodian is authorized, however, to reserve from the assets to be transferred such sum of money or other property, as it may deem advisable, for the payment of all of its fees, compensation, costs and expenses under this Agreement as Custodian. The Custodian shall not be liable for the acts or omissions of the successor whether or not it appoints the successor.

ARTICLE IX. FEES

9.1 The Employer understands and agrees that the Custodian may be compensated for its services under this Agreement by payments made by providers of Mutual Funds, or their affiliates, used under the Plan. This shall include sharing, on a periodic basis, in the revenue derived by such Mutual Fund providers. The Employer acknowledges that the Record Keeper has provided information relating to such fees and may obtain further information upon request by the Employer to the Record Keeper.

9.2 The Employer directs the Custodian, on instructions from and on behalf of the Record Keeper, to collect the administrative fees set forth in the Record Keeping Agreement between the Record Keeper and Employer, as sponsor of the Plan, as such agreement may be amended from time to time. Such fees shall be paid from Plan assets and are subject to change upon advance written notice from the Record Keeper to the Employer as set forth in the Record Keeping Agreement.

ARTICLE X. AMENDMENT AND TERMINATION

10.1 The parties shall have the right at any time to amend or terminate this Agreement by an instrument in writing and no change in the scope of the services hereunder shall be permitted or undertaken unless agreed to by the parties in such a written amendment.

10.2 No amendment shall authorize any part of a Plan participant or Beneficiary’s account to be used for, or diverted to, purposes other than for the exclusive benefit of the participant or his or her beneficiaries except to the extent such amendment is permitted under the Code.

10.3 Termination of a participant’s Plan account shall be effected by a distribution of all assets in the account as directed by the Record Keeper.

10.4 The Custodian’s rights, protections, and remedies under this Agreement shall survive the termination of this Agreement.

ARTICLE XI. MISCELLANEOUS PROVISIONS

11.1 (a) The Employer represents and warrants that (i) it has full authority and power, and has obtained all necessary authorizations and consents, to use the Custodian as its custodian in accordance with the terms of this Agreement; (ii) assuming execution and delivery of this Agreement by the Custodian,
this Agreement is the Employer’s legal, valid and binding obligation, enforceable in accordance with its terms and it has full power and authority to enter into and has taken all necessary corporate action to authorize the execution of this Agreement; (iii) it has not relied on any oral or written representation made by the Custodian or any person on its behalf, and acknowledges that this Agreement sets out to the fullest extent the duties of the Custodian; and (iv) it is a resident of the United States and shall notify the Custodian of any changes in residency.

(b) The Custodian represents and warrants that (i) assuming execution and delivery of this Agreement by the Employer, this Agreement is the Custodian’s legal, valid and binding obligation, enforceable in accordance with its terms; (ii) Custodian is a bank eligible to serve as custodian in accordance with Code section 401(f)(2); and (iii) it has full power and authority to enter into and has taken all necessary corporate action to authorize the execution of this Agreement.

The Custodian and Employer may rely upon the representations made in this Section 11.1. The Employer shall indemnify the Custodian and the Custodian shall indemnify the Employer, against all losses, liability, claims, or demands arising directly or indirectly from any such representations.

11.2 At the time of mailing of notice of each annual or special stockholders’ meeting of any Mutual Fund, the Record Keeper shall send a copy of the notice and all proxy solicitation materials to each participant or Beneficiary who has shares of such Mutual Funds credited to his or her individual account excluding Mutual Funds held in any TIAA-CREF Brokerage Account together with a voting direction form for return to the Custodian or its designee. These materials shall clearly explain to the participants and Beneficiaries that the Custodian will not vote shares for which it receives no voting directions. Each participant and Beneficiary shall have the right to send instructions to the Record Keeper directing the Custodian as to the manner in which the Custodian is to vote the shares credited to his or her accounts (both vested and unvested) excluding Mutual Funds held in any TIAA-CREF Brokerage Account. The Custodian shall vote the shares as directed by the Record Keeper. The Custodian shall not vote shares for which it has received no directions. With respect to all rights other than the right to vote, the Custodian shall follow the directions of the Record Keeper. The Custodian shall have no duty to solicit direction from participants and Beneficiaries.

11.3 The Plan accounts shall be held for the exclusive benefit of all persons who shall be entitled to receive payments under the Plan. It shall be prohibited at any time for any part of the accounts (other than such amounts as are required or permitted to be used to pay Plan expenses) to be used for, or diverted to, purposes other than the exclusive benefit of Plan participants and their beneficiaries except as otherwise permitted under the Code.

11.4 The participant’s or Beneficiary’s benefits under the Plan held pursuant to this Custodial Agreement shall be provided solely from his or her Plan account, and neither the Employer nor the Custodian shall have any other liability therefore.

11.5 No right or interest of a Plan participant or Beneficiary in a Plan account under this Agreement shall be (a) assignable or transferable in any manner, (b) subject to any lien, or (c) liable for, or subject to any obligation or liability of any person except as otherwise permitted under the Code. The preceding sentence shall not apply to an assignment, transfer, or attachment pursuant to a Qualified Domestic
Relations Order or to a lien or levy on behalf of the Internal Revenue Service or as otherwise permitted with respect to garnishment orders issued pursuant to the Federal Debt Collection Procedures Act of 1990.

11.6 Notices required to be given by the parties hereunder shall be sufficiently given if made in writing to such address as each party shall from time to time specify in writing to the other party. Such notices shall be effective when received.

11.7 This Agreement is intended to comply with Section 457(b) of the Code and its terms shall be interpreted accordingly. Otherwise, the laws of the State of New York shall control the interpretation and performance of the terms of this Agreement. However, neither the Custodian, any of its subsidiaries or affiliates nor any mutual fund provider assumes any responsibility as to the efficacy or legal sufficiency of this Agreement under federal, state or local law. The United States District Court will have the sole and exclusive jurisdiction over any lawsuit or other judicial proceeding relating to or arising from this Agreement. The parties further hereby knowingly, voluntarily and intentionally waive, to the fullest extent permitted by Applicable Law, any right to a trial by jury with respect to any such lawsuit or judicial proceeding arising or relating to this Agreement or the transactions contemplated hereby. To the extent that in any jurisdiction the Employer may now or hereafter be entitled to claim, for itself or its assets, immunity from suit, execution, attachment (before or after judgment) or other legal process, the Employer shall not claim, and it hereby irrevocably waives, such immunity.

11.8 If any provision of this Agreement shall be held or made invalid by a court decision, statute, rule or otherwise, the remainder of this Agreement shall not be affected thereby.

11.9 This Agreement may be executed simultaneously in two or more counterparts, each of which taken together shall constitute one and the same instrument.
IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the Effective Date specified in Article I.

SAN DIEGO COUNTY WATER AUTHORITY

By: _____________________________  Print Name: ___________________________

Title: ___________________________  Date: __________________________

JPMORGAN CHASE BANK, N. A.

By: _____________________________  Print Name: ___________________________

Title: ___________________________  Date: __________________________

The undersigned shall be bound by the terms of the foregoing Agreement with respect to the duties of the Record Keeper. The undersigned shall notify the Custodian of any material change in its duties as Record Keeper under its agreement with the Employer.

TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA

By: _____________________________  Print Name: ___________________________

Title: ___________________________  Date: __________________________
APPENDIX A

Mutual Funds and Other Funds

TIAA-CREF Mutual Funds

<table>
<thead>
<tr>
<th>FUND NAME</th>
<th>SHARES CLASS</th>
<th>TICKER</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA-CREF High-Yield Fund</td>
<td>Institutional</td>
<td>TIHYX</td>
</tr>
<tr>
<td>TIAA-CREF Social Choice Equity Fund</td>
<td>Institutional</td>
<td>TISCX</td>
</tr>
</tbody>
</table>

Non-Proprietary Mutual Funds

Becker Value Equity Institutional   BVEIX
DFA Inflation-Protection Securities DIPSX
DFA International Value            DFIVX
DFA Real Estate Securities I        DFREX
DFA US Targeted Value Portfolio Institutional DFFVX
Hartford Capital Appreciation HLS IA HIACX
Hartford International OPP HLS IA   HIAOX
JPMorgan Mid Cap Value              FLMVX
MFS Massachusetts Investors Growth Stock MGTX
PIMCO Total Return Fund Inst Class  PTTTRX
Vanguard 500 Index Fund Signal      VIFSX
Vanguard Mid Cap Growth Fund Investor VMGRX
Vanguard Mid-Cap Index Fund Signal  VMISX
Vanguard Small Gap Growth Index     VSGAX
Vanguard Small-Cap Index Fund Signal VSIX
Vanguard Target Retirement Income Fund Investor VTINX
Vanguard Target Retirement 2010 Fund Investor VTXVX
Vanguard Target Retirement 2015 Fund Investor VTXVX
Vanguard Target Retirement 2020 Fund Investor VTXVX
Vanguard Target Retirement 2025 Fund Investor VTVIX
Vanguard Target Retirement 2030 Fund Investor VTHRX
Vanguard Target Retirement 2035 Fund Investor VTHRX
Vanguard Target Retirement 2040 Fund Investor VFORX
Vanguard Target Retirement 2045 Fund Investor VTIHX
Vanguard Total Bond Market Index Fund Signal VBTSX
Vanguard Total International Stock Index Fund Signal VTSGX

Stable Value Fund

Putnam Stable Value
TIAA-CREF Brokerage Account

Notwithstanding any other provision of the Agreement to which this Appendix is attached to the contrary, the following provisions shall apply to the TIAA-CREF Brokerage Account. If so directed by the Employer and subject to the Record Keeper’s acceptance of a properly executed TIAA-CREF Retirement Plan Self-Directed Brokerage Application of a Plan participant or Beneficiary, the Custodian shall segregate all or a portion of the assets of the Plan accounts into individual TIAA-CREF Brokerage Accounts established for the benefit of Plan participants and Beneficiaries. Each participant or Beneficiary shall have the power to direct the investment and reinvestment of assets in the TIAA-CREF Brokerage Account established for his or her benefit, subject to such administrative rules and procedures as the Record Keeper and the Custodian may establish. Participants and Beneficiaries shall provide instructions regarding the investment of the TIAA-CREF Brokerage Account directly to the broker appointed for purposes of executing transactions under the account. That broker shall hold custody of property held in the TIAA-CREF Brokerage Account and the Custodian shall have no responsibility for the TIAA-CREF Brokerage Account whatsoever, including, but not limited to, the acts or omissions of any such broker or the broker's failure to follow any other investment restrictions imposed by the Employer under the terms of the Plan.
CUSTODIAL ACCOUNT AGREEMENT FOR A NON-TRUSTEED GOVERNMENTAL 401(a) PLAN WITH A TIAA-CREF BROKERAGE ACCOUNT

This Custodial Account Agreement (“Agreement”) between JPMorgan Chase Bank, N.A. (“Custodian”) and the San Diego County Water Authority (“Employer”) as Sponsor of the San Diego County Water Authority Defined Contribution Plan (“Plan”), a plan designed to meet the requirements of Section 401(a) of the Internal Revenue Code of 1986, as amended (“Code”).

WHEREAS, in accordance with Code Section 401(f), the Plan will be funded in part with annuity contracts issued by Teachers Insurance and Annuity Association of America and College Retirement Equities Fund (“TIAA-CREF”); and

WHEREAS, in accordance with Code Section 401(f), the Plan will be funded in part with a custodial account designed to meet the requirements of Code section 401(f)(2) and the assets in such custodial account shall be invested solely in Mutual Fund Shares, as defined in Article II below, other funds chosen by the Employer as listed in Appendix A and in participant directed Brokerage Accounts as described in Section 5.1(b) below; and

WHEREAS, the Plan provides that the Plan’s participants (and beneficiaries of deceased participants) have the right to direct the Employer as to the investment of amounts credited to their individual accounts under the Plan by selecting from among the Mutual Fund Shares, other funds and a TIAA-CREF Brokerage Account made available to them under the Plan by the Employer; and

WHEREAS, the Employer has appointed Teachers Insurance and Annuity Association of America as record keeper for the Plan (“Record Keeper”) pursuant to which Record Keeper serves as Employer’s agent for purposes of keeping Plan records; and

WHEREAS, the Employer has requested that the Custodian provide certain custodial services for the portion of the Plan’s assets invested in Mutual Fund Shares, other funds and a TIAA-CREF Brokerage Accounts described in Appendix A of this Agreement, which custodial services are required to satisfy the requirements of Code section 401(f) and the Custodian has agreed to provide such services as set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, it is hereby agreed as follows:

ARTICLE I. EFFECTIVE DATE

1.1. The effective date of this Agreement will be January 26, 2012, or such later date as the Parties shall agree to by Notice. This agreement will remain in effect until terminated pursuant to Article X.
ARTICLE II. DEFINITIONS

2.1 “APPLICABLE LAW” means any statute, whether national, state or local, applicable in the United States or any other country, any other law, rule, regulation or interpretation of any governmental entity, any applicable common law, and any decree, injunction, judgment, order, ruling, or writ of any governmental entity.

2.2 “BENEFICIARY” means the beneficiary(ies) of a deceased participant and an alternate payee of a participant pursuant to a qualified domestic relations order (as defined in section 414(p) of the Code) (“Qualified Domestic Relations Order”).

2.3 “CUSTODIAN INDEMNITEES” means the Custodian, and its nominees, directors, officers, employees and agents.

2.4 “INSTRUCTIONS” means instructions which: (i) contain all necessary information required by the Custodian to enable the Custodian to carry out the Instructions; (ii) are received by the Custodian in writing or via the Custodian’s electronic instruction system, SWIFT, telephone, facsimile or such other methods as are for the time being agreed by the Record Keeper and the Custodian; and (iii) the Custodian believes in good faith have been given by the Record Keeper or are transmitted by the Record Keeper with proper testing or authentication pursuant to terms and conditions which the Custodian may specify.

2.5 “MUTUAL FUND” means an open-end investment company registered under the Investment Company Act of 1940, as amended.

2.6 “MUTUAL FUND SHARES” means securities issued by a Mutual Fund.

ARTICLE III. SERVICES TO BE PROVIDED BY CUSTODIAN

3.1 The Custodian shall receive such sums of money or Mutual Fund Shares and shares of other funds acceptable to the Custodian as shall from time to time be paid or delivered to the Custodian under this Agreement. The Custodian shall hold in Plan participant accounts all such assets, together with all the property purchased therewith and the proceeds thereof and the earnings and income thereon. The Custodian shall not be responsible for, or have any duty to enforce, the collection of any contributions or assets to be paid or transferred to it under the Plan or for verifying whether contributions or transfers to it are permissible under the Plan. The Custodian shall not be responsible for investment choices directed by the Employer or by Plan participants or Beneficiaries under the Plan.

3.2 The Custodian shall disburse Plan loan proceeds, hardship and other distributions as directed by the Record Keeper. The Custodian shall distribute Plan account balances in accordance with any Qualified Domestic Relations Order in accordance with the Instructions of the Record Keeper. No amounts may be paid or made available to any distributee before the time provided in the Plan. The Record Keeper
shall be responsible for determining that (a) each distribution satisfies the requirements of the Plan and Applicable Law; (b) the disbursement of loan proceeds has been authorized in accordance with the Plan and Applicable Law; and (c) distributions pursuant to a domestic relations order have been authorized in accordance with the Plan and Applicable Law.

3.3 To the extent permitted under Applicable Law, the Custodian shall be the payer (within the meaning of applicable United States Treasury Department regulations) of benefits in the custodial account under the Plan held pursuant to this Agreement. As payer, it shall perform any required withholding of federal and state income tax from distributions and withdrawals and deposit the same with the appropriate tax authorities as and when directed by the Record Keeper. The Record Keeper shall be responsible for preparing and filing all reports of withheld taxes with the participant or Beneficiary and all applicable federal and state tax authorities.

3.4 The Custodian agrees that all records maintained by it for the Plan shall be open to inspection and audit at reasonable times by agents or representatives of the Employer and that such records will be preserved and maintained in accordance with Applicable Law. The Custodian may charge, and the Employer shall agree to pay, the reasonable cost of any services and materials used by the Custodian in supplying assistance in connection with any such inspection.

3.5 The services to be performed by the Custodian under this Agreement may be performed on the Custodian’s behalf wholly or in part through subsidiaries or affiliates of the Custodian or through vendors designated by the Custodian. The Custodian will continue to be liable for the performance of its duties hereunder.

ARTICLE IV. INSTRUCTIONS

4.1 (a) The Employer authorizes the Custodian to accept and act upon any Instructions received by the Custodian from Record Keeper without inquiry. The Record Keeper shall receive instructions from participants and Beneficiaries with respect to the investment of their Plan accounts. It shall aggregate such instructions and will provide Instructions to the Custodian to place net purchase and redemption orders with respect to each Mutual Fund investment option selected for the Plan as follows:

(b) Except as provided in Appendix A with respect to TIAA-CREF Brokerage Accounts, each participant and Beneficiary shall submit investment directions and changes in investment directions with respect to his or her Plan account to the Record Keeper, which shall aggregate such directions placed each day with respect to the various investment alternatives in accordance with its agreement with the Employer. The Custodian shall invest the assets of the Plan accounts only when, if and in the manner, directed by the Record Keeper and shall not be under any obligation to invest or otherwise manage any of such assets. It shall be the duty of the Custodian to act strictly in accordance with the Record Keeper’s directions. In the event that the Custodian fails to receive a proper Instruction, the assets shall be invested in a money market Mutual Fund or in such other Mutual Fund investment option selected by the Employer or left uninvested, in any case as selected by the Employer, until the Custodian receives a proper Instruction from the Record Keeper. The Custodian shall, as directed by the Record Keeper, liquidate investments
when necessary to: (i) comply with participants’ and Beneficiaries’ instructions or to change investments; (ii) make plan benefit payment distributions; (iii) disburse loan proceeds; (iv) reallocate forfeitures under the Plan; or (v) pay expenses, fees, or taxes. The Record Keeper shall be responsible for determining that such liquidation is permitted under the prospectuses for the Mutual Funds in the participant’s or Beneficiary’s Plan account.

(c) Unless otherwise expressly provided, all Instructions will continue in full force and effect until canceled or superseded.

(d) The Custodian may (in its sole discretion and without affecting any part of this Section 4.1) seek clarification or confirmation of an Instruction from the Record Keeper and may decline to act upon an Instruction if it does not receive clarification or confirmation satisfactory to it. The Record Keeper may (in its sole discretion and without affecting any part of this Section 4.1) seek clarification or confirmation of an Instruction from the Employer and may decline to act on an Instruction if it does not receive clarification or confirmation satisfactory to it. The Custodian will not be liable for any loss arising from any delay while either it or the Record Keeper seeks such clarification or confirmation.

(e) In executing or paying a payment order the Custodian may rely upon the identifying number (e.g., Fedwire routing number or account) of any party as instructed in the payment order. The Record Keeper assumes full responsibility for any inconsistency between the name and identifying number of any party in payment orders issued to the Custodian in Employer's name.

4.2 Any Instructions delivered to the Custodian by telephone will promptly thereafter be confirmed in writing by the Record Keeper. Each confirmation is to be clearly marked “Confirmation”. The Custodian will not be liable for having followed such Instructions notwithstanding the failure of the Record Keeper to send such confirmation in writing or the failure of such confirmation to conform to the telephone Instructions received. Either party may record any of their telephonic communications. The Record Keeper will comply with any security procedures reasonably required by the Custodian from time to time with respect to verification of Instructions. The Record Keeper will be responsible for safeguarding any test keys, identification codes or other security devices that the Custodian will make available to the Record Keeper.

4.3 The Custodian need not act upon Instructions which it reasonably believes to be contrary to law, regulation or market practice and the Custodian will be under no duty to investigate whether any Instructions comply with Applicable Law or market practice.

4.4 The Custodian has established cut-off times for receipt of Instructions, which will be made available to the Employer and the Record Keeper. If the Custodian receives an Instruction after its established cut-off time, the Custodian will attempt to act upon the Instruction on the day requested if the Custodian deems it practicable to do so or otherwise as soon as practicable on the next business day.

ARTICLE V. DUTIES OF THE EMPLOYER

5.1 The Employer shall be solely responsible for the following:
(a) The tax and legal aspects of the Plan.

(b) To select and monitor the funding options for the Plan, it being understood that the Custodian has no authority or responsibility for choosing such funding options. The funding options shall consist of Mutual Funds and a TIAA-CREF Brokerage Account as described in Appendix A. The funding options chosen for the Plan are set forth in Appendix A to this Agreement. Such funding options may be changed from time to time by the parties attaching a new Appendix A hereto.

(c) To evaluate the suitability of the Plan documents and maintain the Plan’s conformance with applicable provisions of the Code and the regulations thereunder, including, if applicable, any filings required under Applicable Law.

(d) To represent and defend the Plan in an Internal Revenue Service audit or examination and any appeals or litigation relating thereto and any other examinations, audits or legal proceedings relating to the Plan.

(e) To provide the Custodian, in a timely manner, accurate data, as requested and in the form requested by Custodian, in order to establish and maintain the records necessary for the fulfillment of the Custodian’s duties hereunder. The Custodian shall not be responsible in the event that such information is inaccurate. If the Custodian is required to repeat or reprocess any task as a result of incomplete or inaccurate information provided by the Employer, the Custodian may charge the Employer a reasonable reprocessing fee. In addition, if amounts are sent to the Custodian with incorrect Instructions, or in amounts that do not reconcile with the Instructions given, the Custodian may: (1) apply the amounts for which accurate Instructions are given and refund any excess amounts to the Employer; or (2) if amounts are less than the Instructions call for, refund the entire amount to the Employer.

5.2 The Employer shall review all reports and shall immediately notify the Record Keeper in writing of any claimed error with respect to any data or report. The Custodian assumes no responsibility for verification and any report not challenged in writing to the Record Keeper within sixty (60) days of receipt thereof shall be conclusively presumed accurate and complete. The Record Keeper shall promptly notify the Custodian of any claimed error by the Employer.

ARTICLE VI. THE POWERS OF CUSTODIAN AS CUSTODIAN

6.1 The Custodian, in its capacity as custodian, shall have the following powers, which shall not apply to assets held in any TIAA-CREF Brokerage Account:

(a) To vote in person, or in proxy, or to refrain from voting in respect to any Mutual Fund shares or other funds held in a participant’s or Beneficiary’s Plan account, in accordance with Section 11.2 of this Agreement, and to enter into any voting trust or similar agreement in respect thereto;

(b) To exercise conversion and subscription rights pertaining to any property held in a Plan account;
(c) With respect to any investment, to consent or object to any action or non-action of any corporation, or of the directors, officers or stockholders of any corporation;

(d) To register securities in its name or in the name of any nominee with or without indication of the capacity in which the securities shall be held, or to hold securities in bearer form and to deposit any securities or other property in a depository or clearing corporation;

(e) To employ as many agents and counsel as are reasonably necessary for the purpose of properly performing its duties under this Agreement, and, as part of its expenses under this Agreement, to pay their reasonable expenses and compensation; and

(f) To make, execute and deliver, as custodian, any and all conveyances, waivers, releases or other instruments in writing necessary or desirable for the accomplishment of any of the powers listed in this Agreement.

6.2 The Custodian shall have no duties or responsibilities as custodian other than those specified in this Agreement or under Applicable Law and no implied covenant or obligation shall be read into this Agreement against the Custodian. Notwithstanding any reference herein to the Plan, or to the provisions thereof, it is expressly agreed that the Custodian is not a party to the Plan and shall have no responsibility to apply or administer the terms of the Plan.

6.3 The Custodian shall have no duty to advise any person of the investment, tax or other consequences resulting from that person’s actions or inactions, or of its own actions in following the directions of such person, or its failing to act in the absence of such directions.

ARTICLE VII. STANDARD OF CARE; PROTECTION OF CUSTODIAN

7.1 The Custodian shall use due care in providing the services hereunder. Responsibility for due care is limited solely to correcting processing errors resulting from malfunction of the Custodian’s equipment, error by its staff, or error by its programs. The Custodian shall make a good faith effort to correct any error caused by its performance subject to the limitations herein set forth; provided that the Employer notifies the Record Keeper in writing of such error and furnishes all data necessary to make such correction within sixty (60) days following the date in which the Employer is furnished with a report in which the claimed error is contained. The Record Keeper shall promptly notify the Custodian of such claimed error. The Custodian Indemnitees shall in no event be liable, regardless of the form of the action, for loss of profit, goodwill, or other special or consequential damages suffered by the Employer, Plan representatives, the Record Keeper or Plan participants or Beneficiaries as a result of the services provided under this Agreement. The Custodian Indemnitees shall not be liable for any error or omission resulting, directly or indirectly, from failure of the Employer, or its agents, including, but not limited to, the Record Keeper (other than the Custodian and/or its affiliates or hired vendors), to properly perform any of its responsibilities under this Agreement or the Plan. The Employer shall indemnify the Custodian Indemnitees against, and hold them harmless from, any loss, claim or expense (including reasonable attorneys’ fees) that may be imposed on, incurred by or asserted against the Custodian Indemnitees in connection with or arising out of the Custodian’s performance under this Agreement, provided the Custodian has not acted with negligence or engaged in fraud or willful
misconduct in connection with the liabilities in question. Additionally, the Employer shall indemnify and save harmless the Custodian for and from any loss, claim or expense (including reasonable attorneys’ fees) arising by reason of any breach of any statutory or other duty owed to the Plan by the Employer or the Record Keeper, whether or not the Custodian may also be considered liable for the Employer’s or Record Keeper’ breach under the provision of Applicable Law.

7.2 The Custodian will maintain and update from time to time business continuation and disaster recovery procedures with respect to its custody business that it determines from time to time meet reasonable commercial standards. The Custodian will have no liability, however, for any damage, loss, expense or liability of any nature that the Employer, Record Keeper, participants or Beneficiaries may suffer or incur, caused by an act of God, fire, flood, civil or labor disturbance, war, act of any governmental authority or other act or threat of any authority (de jure or de facto), legal constraint, fraud or forgery, malfunction of equipment or software (except where such malfunction is attributable to the Custodian’s negligence in maintaining the equipment or software), failure of or the effect of rules or operations of any external funds transfer system, inability to obtain or interruption of external communications facilities, or any cause beyond the reasonable control of the Custodian (including without limitation, the non-availability of appropriate foreign exchange).

ARTICLE VIII. RESIGNATION AND REMOVAL OF CUSTODIAN

8.1 The Custodian may resign as custodian at any time upon sixty (60) days prior written notice to the Employer.

8.2 The Custodian may be removed as custodian at any time upon sixty (60) days prior written notice from the Employer.

8.3 Upon the resignation or removal of the Custodian, the Employer shall promptly appoint a successor, provided that in the event of resignation of the Custodian, the Custodian may appoint a successor in its notice of resignation subject to the consent of the Employer. If the Employer does not consent to the successor designated by the Custodian, the Employer may designate a different successor. Any successor custodian appointed herein shall be a bank or other person eligible to serve as a custodian in accordance with Code Section 401(f)(2). Upon receipt by the Custodian of a written acceptance of such appointment by the successor, the Custodian shall promptly transfer and pay over to such successor the assets of the custodial account. The Custodian is authorized, however, to reserve from the assets to be transferred such sum of money or other property, as it may deem advisable, for the payment of all of its fees, compensation, costs and expenses under this Agreement as Custodian. The Custodian shall not be liable for the acts or omissions of the successor whether or not it appoints the successor.

ARTICLE IX. FEES

9.1 The Employer understands and agrees that the Custodian may be compensated for its services under this Agreement by payments made by providers of Mutual Funds, or their affiliates, used under the Plan. This shall include sharing, on a periodic basis, in the revenue derived by such Mutual Fund providers.
The Employer acknowledges that the Record Keeper has provided information relating to such fees and may obtain further information upon request by the Employer to the Record Keeper.

9.2 The Employer directs the Custodian, on instructions from and on behalf of the Record Keeper, to collect the administrative fees set forth in the Record Keeping Agreement between the Record Keeper and Employer, as sponsor of the Plan, as such agreement may be amended from time to time. Such fees shall be paid from Plan assets and are subject to change upon advance written notice from the Record Keeper to the Employer as set forth in the Record Keeping Agreement.

ARTICLE X. AMENDMENT AND TERMINATION

10.1 The parties shall have the right at any time to amend or terminate this Agreement by an instrument in writing and no change in the scope of the services hereunder shall be permitted or undertaken unless agreed to by the parties in such a written amendment.

10.2 No amendment shall authorize any part of a Plan participant or Beneficiary’s account to be used for, or diverted to, purposes other than for the exclusive benefit of the participant or his or her beneficiaries except to the extent such amendment is permitted under the Code.

10.3 Termination of a participant’s Plan account shall be effected by a distribution of all assets in the account as directed by the Record Keeper.

10.4 The Custodian’s rights, protections, and remedies under this Agreement shall survive the termination of this Agreement.

ARTICLE XI. MISCELLANEOUS PROVISIONS

11.1 (a) The Employer represents and warrants that (i) it has full authority and power, and has obtained all necessary authorizations and consents, to use the Custodian as its custodian in accordance with the terms of this Agreement; (ii) assuming execution and delivery of this Agreement by the Custodian, this Agreement is the Employer's legal, valid and binding obligation, enforceable in accordance with its terms and it has full power and authority to enter into and has taken all necessary corporate action to authorize the execution of this Agreement; (iii) it has not relied on any oral or written representation made by the Custodian or any person on its behalf, and acknowledges that this Agreement sets out to the fullest extent the duties of the Custodian; and (iv) it is a resident of the United States and shall notify the Custodian of any changes in residency.

(b) The Custodian represents and warrants that (i) assuming execution and delivery of this Agreement by the Employer, this Agreement is the Custodian’s legal, valid and binding obligation, enforceable in accordance with its terms; (ii) Custodian is a bank eligible to serve as custodian in accordance with Code section 401(f)(2); and (iii) it has full power and authority to
enter into and has taken all necessary corporate action to authorize the execution of this Agreement.

The Custodian and Employer may rely upon the representations made in this Section 11.1. The Employer shall indemnify the Custodian and the Custodian shall indemnify the Employer, against all losses, liability, claims, or demands arising directly or indirectly from any such representations.

11.2 At the time of mailing of notice of each annual or special stockholders' meeting of any Mutual Fund, the Record Keeper shall send a copy of the notice and all proxy solicitation materials to each participant or Beneficiary who has shares of such Mutual Funds credited to his or her individual account excluding Mutual Funds held in any TIAA-CREF Brokerage Account together with a voting direction form for return to the Custodian or its designee. These materials shall clearly explain to the participants and Beneficiaries that the Custodian will not vote shares for which it receives no voting directions. Each participant and Beneficiary shall have the right to send instructions to the Record Keeper directing the Custodian as to the manner in which the Custodian is to vote the shares credited to his or her accounts (both vested and unvested) excluding Mutual Funds held in any TIAA-CREF Brokerage Account. The Custodian shall vote the shares as directed by the Record Keeper. The Custodian shall not vote shares for which it has received no directions. With respect to all rights other than the right to vote, the Custodian shall follow the directions of the Record Keeper. The Custodian shall have no duty to solicit direction from participants and Beneficiaries.

11.3 The Plan accounts shall be held for the exclusive benefit of all persons who shall be entitled to receive payments under the Plan. It shall be prohibited at any time for any part of the accounts (other than such amounts as are required or permitted to be used to pay Plan expenses) to be used for, or diverted to, purposes other than the exclusive benefit of Plan participants and their beneficiaries except as otherwise permitted under the Code.

11.4 The participant’s or Beneficiary’s benefits under the Plan held pursuant to this Custodial Agreement shall be provided solely from his or her Plan account, and neither the Employer nor the Custodian shall have any other liability therefore.

11.5 No right or interest of a Plan participant or Beneficiary in a Plan account under this Agreement shall be (a) assignable or transferable in any manner, (b) subject to any lien, or (c) liable for, or subject to any obligation or liability of any person except as otherwise permitted under the Code. The preceding sentence shall not apply to an assignment, transfer, or attachment pursuant to a Qualified Domestic Relations Order or to a lien or levy on behalf of the Internal Revenue Service or as otherwise permitted with respect to garnishments orders issued pursuant to the Federal Debt Collection Procedures Act of 1990.

11.6 Notices required to be given by the parties hereunder shall be sufficiently given if made in writing to such address as each party shall from time to time specify in writing to the other party. Such notices shall be effective when received.

11.7 This Agreement is intended to comply with Section 401(a) of the Code and its terms shall be interpreted accordingly. Otherwise, the laws of the State of New York shall control the interpretation and performance of the terms of this Agreement. However, neither the Custodian, any of its subsidiaries or
affiliates nor any mutual fund provider assumes any responsibility as to the efficacy or legal sufficiency of this Agreement under federal, state or local law. The United States District Court will have the sole and exclusive jurisdiction over any lawsuit or other judicial proceeding relating to or arising from this Agreement. The parties further hereby knowingly, voluntarily and intentionally waive, to the fullest extent permitted by Applicable Law, any right to a trial by jury with respect to any such lawsuit or judicial proceeding arising or relating to this Agreement or the transactions contemplated hereby. To the extent that in any jurisdiction the Employer may now or hereafter be entitled to claim, for itself or its assets, immunity from suit, execution, attachment (before or after judgment) or other legal process, the Employer shall not claim, and it hereby irrevocably waives, such immunity.

11.8 If any provision of this Agreement shall be held or made invalid by a court decision, statute, rule or otherwise, the remainder of this Agreement shall not be affected thereby.

11.9 This Agreement may be executed simultaneously in two or more counterparts, each of which taken together shall constitute one and the same instrument.
IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the Effective Date specified in Article I.

SAN DIEGO COUNTY WATER AUTHORITY

By: ____________________________  Print Name: ____________________________
Title: ____________________________  Date: ____________________________

JPMORGAN CHASE BANK, N. A.

By: ____________________________  Print Name: ____________________________
Title: ____________________________  Date: ____________________________

The undersigned shall be bound by the terms of the foregoing Agreement with respect to the duties of the Record Keeper. The undersigned shall notify the Custodian of any material change in its duties as Record Keeper under its agreement with the Employer.

TEACHERS INSURANCE AND ANNUITY ASSOCIATION OF AMERICA

By: ____________________________  Print Name: ____________________________
Title: ____________________________  Date: ____________________________
## APPENDIX A

### Mutual Funds and Other Funds

#### TIAA-CREF Mutual Funds

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<td>TIAA-CREF High-Yield Fund</td>
<td>Institutional</td>
<td>TIHYX</td>
</tr>
<tr>
<td>TIAA-CREF Social Choice Equity Fund</td>
<td>Institutional</td>
<td>TISCX</td>
</tr>
</tbody>
</table>

#### Non-Proprietary Mutual Funds

- Becker Value Equity Institutional: BVEIX
- DFA Inflation-Protection Securities I: DIPSX
- DFA International Value I: DFIVX
- DFA Real Estate Securities I: DFREX
- DFA US Targeted Value Portfolio Institutional: DFFVX
- Hartford Capital Appreciation HLS IA: HIACX
- Hartford International OPP HLS IA: HIAOX
- JPMorgan Mid Cap Value Instl: FLMVX
- MFS Massachusetts Investors Gr Stk I: MGTIX
- PIMCO Total Return Fund Inst Class: PTTRX
- Vanguard 500 Index Fund Signal: VIFSX
- Vanguard Mid Cap Growth Fund Investor: VMGRX
- Vanguard Mid-Cap Index Fund Signal: VMISX
- Vanguard Small Gap Growth Index Admiral: VSGAX
- Vanguard Small-Cap Index Fund Signal: VSIXS
- Vanguard Target Retirement Income Fund Investor: VTINX
- Vanguard Target Retirement 2010 Fund Investor: VTENX
- Vanguard Target Retirement 2015 Fund Investor: VTXVX
- Vanguard Target Retirement 2020 Fund Investor: VTWNX
- Vanguard Target Retirement 2025 Fund Investor: VTTVX
- Vanguard Target Retirement 2030 Fund Investor: VTTHRX
- Vanguard Target Retirement 2035 Fund Investor: VTHHX
- Vanguard Target Retirement 2040 Fund Investor: VFORX
- Vanguard Target Retirement 2045 Fund Investor: VTIVX
- Vanguard Target Retirement 2050 Fund Investor: VFIIX
- Vanguard Total Bond Market Index Fund Signal: VBTSX
- Vanguard Total International Stock Index Fund Signal: VTSGX

#### Stable Value Fund

Putnam Stable Value
TIAA-CREF Brokerage Account

Notwithstanding any other provision of the Agreement to which this Appendix is attached to the contrary, the following provisions shall apply to the TIAA-CREF Brokerage Account. If so directed by the Employer and subject to the Record Keeper's acceptance of a properly executed TIAA-CREF Retirement Plan Self-Directed Brokerage Application of a Plan participant or Beneficiary, the Custodian shall segregate all or a portion of the assets of the Plan accounts into individual TIAA-CREF Brokerage Accounts established for the benefit of Plan participants and Beneficiaries. Each participant or Beneficiary shall have the power to direct the investment and reinvestment of assets in the TIAA-CREF Brokerage Account established for his or her benefit, subject to such administrative rules and procedures as the Record Keeper and the Custodian may establish. Participants and Beneficiaries shall provide instructions regarding the investment of the TIAA-CREF Brokerage Account directly to the broker appointed for purposes of executing transactions under the account. That broker shall hold custody of property held in the TIAA-CREF Brokerage Account and the Custodian shall have no responsibility for the TIAA-CREF Brokerage Account whatsoever, including, but not limited to, the acts or omissions of any such broker or the broker's failure to follow any other investment restrictions imposed by the Employer under the terms of the Plan.
457(b) DEFERRED COMPENSATION PLAN OF SAN DIEGO COUNTY WATER AUTHORITY, A GOVERNMENTAL EMPLOYER
INTRODUCTION
The purpose of the Plan is to provide deferred compensation for Eligible Employees covered under the Plan. The Plan document and the Adoption Agreement are designated as constituting parts of a plan intended to satisfy the requirements of an eligible deferred compensation plan within the meaning of Section 457(b) of the Code, the regulations issued thereunder, and other applicable law.

ARTICLE I – DEFINITIONS

1.1 **Account Balance** means the book entry account maintained with respect to each Participant which reflects the value of the deferred Compensation credited to the Participant, including the Participant’s Annual Deferrals, any Compensation deferred under the Plan by non-elective Employer contribution (either matching contributions or non-elective contributions), the earnings or loss of the investment options held in the Investment Options (net of investment option expenses) allocable to the Participant, any transfers for the Participant’s benefit, and any distribution made to the Participant or the Participant’s Beneficiary. Account Balance includes any account established under Article III for rollover contributions and plan-to-plan transfers made for a Participant, any account established under Article X for Roth Elective Deferrals, the account established for a Beneficiary after a Participant’s death, and any account or accounts established for an alternate payee, as defined in Section 414(p)(8) of the Code. Subject to the terms of the Investment Option, if a Participant has more than one Beneficiary at the time of the Participant’s death, then a separate Account Balance shall be maintained for each Beneficiary.

1.2 **Annual Deferral** means the annual amount of Compensation that a Participant elects to defer pursuant to a properly executed Deferred Compensation Agreement. Effective on and after January 1, 2011, and if elected in the Adoption Agreement, Annual Deferral includes a Roth Elective Deferral that is separately accounted for under the Plan.

1.3 **Adoption Agreement** means the separate agreement that is executed by the Employer which sets forth the elective and certain non-elective provisions of the Plan. The Adoption Agreement and this Plan document collectively constitute the Plan.

1.4 **Beneficiary** means the individual, trustee, estate, or legal entity entitled to receive benefits under this Plan which become payable in the event of the Participant’s death.

1.5 **Code** means the Internal Revenue Code of 1986, as now in effect or as hereafter amended. All citations to sections of the Code are to such sections, as they may from time to time be amended or renumbered, to the Treasury regulations issued thereunder or to any applicable guidance issued by the IRS.

1.6 **Compensation** means, unless otherwise set forth in the Adoption Agreement, all cash remuneration for services rendered to the Employer, including salary, wages, fees, commissions, bonuses, overtime pay (collectively referred to as “regular pay”) and that is includible in the Participant’s gross income for the calendar year plus amounts that would be cash remuneration for services to the Employer and includible in the Participant’s
gross income for the calendar year but for an election under Section 457(b), 403(b),
401(k), 125, 132(f)(4), 401(k), 403(b) or 457(b) of the Code (including an election to defer
Compensation under Article III) or such other meaning as provided by Section 415(c)(3)
of the Code. Such term also includes regular pay received after Severance from
Employment if it is received within the later of two and one-half (2 ½) months following
Severance from Employment or the end of the limitation year that includes the date of
Severance from Employment. To the extent elected in the Adoption Agreement, such
term shall also unused accrued bona fide sick, vacation, and/or other leave payments
provided the Participant would have been entitled to use such leave had employment
continued and such amounts are received by the Plan within the later of two and one-half
(2 ½) months after Severance from Employment or the end of the limitation year that
includes the date of Severance from Employment. Effective January 1, 2009, the term
Compensation includes Differential Wage Payments.

1.7 **Deferred Compensation Agreement** means the agreement between a Participant and
the Employer to defer receipt by the Participant of Compensation not yet paid or
otherwise made available. Such agreement shall state the Annual Deferral amount to be
withheld from a Participant’s Compensation and shall become effective no earlier than
the first day of the month following execution of such agreement. Once executed and
received by the Plan Administrator, or its designee, the Deferred Compensation
Agreement shall be legally binding and irrevocable with regard to amounts paid or
otherwise made available while the Agreement is in effect.

1.8 **Differential Wage Payment** means any payment which is made by the Employer to an
Employee with respect to any period during which the Employee is performing service in
the uniformed services (as defined in chapter 43 of title 38 of the Code) while on active
duty for a period of more than thirty (30) days, and such payment represents all or a
portion of the wages the Employee would have received from the Employer if the
Employee were performing service for the Employer.

1.9 **Disabled or Disability** means the definition of disability in Section 72(m)(7) of the Code
as determined by the Employer.

1.10 **Effective Date** means the date set forth in the Adoption Agreement if this is a new Plan.

1.11 **Eligible Governmental Deferred Compensation Plan or Eligible Plan** means a plan
that constitutes an eligible governmental deferred compensation plan within the meaning
of Section 457(b) of the Code that is established and maintained by an employer that is a
governmental employer and eligible to maintain a 457(b) deferred compensation plan.

1.12 **Eligible Employee** means any person who performs services for the Employer and who,
pursuant to the terms of the Adoption Agreement, is eligible to participate in this Plan.
Unless elected in Adoption Agreement, Eligible Employee shall not include any individual
who is deemed to be an independent contractor, as determined by the Plan Administrator
in its sole and absolute discretion. Eligible Employee shall not include any individual who
is performing services for the Employer pursuant to an agreement that provides that such
individual shall not be eligible to participate in this Plan or other benefit plans of the

Employer. If any individual is not classified as an Eligible Employee by the Employer and is subsequently reclassified as an Eligible Employee by any overriding governmental or regulatory authority, such individual shall nevertheless be deemed to have become an Eligible Employee prospectively only, effective as of the date of such reclassification (and not retroactive to the date on which he or she was found to have first become eligible for any other purposes), and then only if he or she otherwise satisfies the requirements of this Plan.

1.13 **Employee** means any person, whether appointed or elected, who is employed by the Employer as a common law employee, excluding any Employee who is included in a unit of employees covered by a collective bargaining agreement that does not specifically provide for participation in the Plan. The term Employee shall include any individual classified by the Employer as an independent contractor of the Employer, in accordance with its general administrative policies.

1.14 **Employer** means the entity that is a state, a political subdivision of a state, and any agency or instrumentality of a state which has adopted this Plan and is named in the Adoption Agreement.

1.15 **Includible Compensation** means with respect to a taxable year, the Participant’s compensation as defined in Section 415(c)(3) of the Code and the Treasury regulations issued thereunder for services performed for the Employer. The amount of Includible Compensation is determined without regard to any community property laws. Such term shall include any amount that would be cash remuneration for services to the Employer and includible in the Participant’s gross income for the calendar year but for an election under Section 457(b), 403(b), 401(k), 125, 132(f)(4), 401(k), 403(b) or 457(b) of the Code (including an election to defer Compensation under Article III). Effective January 1, 2009, Includible Compensation will include Differential Wage Payments made by the Employer to a Participant.

1.16 **Investment Options** means the annuity contracts, custodial accounts, and other investment options offered by TIAA-CREF and selected by the Plan Administrator as investment options to be offered to Participants and Beneficiaries under the Plan. Investment Options shall also include any other investment alternatives made available by any other Investment Sponsor and designated pursuant to the terms of this Plan document and the Adoption Agreement as being available for the purpose of allocating contributions, rollovers and/or transfers under this Plan.

1.17 **Investment Sponsors** means TIAA-CREF, any other insurance company, regulated investment company, or other entity providing Investment Options under the Plan.

1.18 **Normal Retirement Age** means age 65 unless otherwise provided in the Adoption Agreement.

1.19 **Participant** means an Eligible Employee who becomes a Participant in the Plan in accordance with Article II hereof. An individual shall cease to become a Participant at
such time as he or she no longer has any interest in contracts or accounts under the Plan. An “Active Participant” means a Participant who is an Employee of the Employer.

1.20 Plan means the 457(b) Deferred Compensation Plan set forth herein and in the Adoption Agreement, as amended from time to time.

1.21 Plan Administrator means the individual(s) or committee appointed by the Employer to administer the Plan. If the Employer fails to make such appointment, the Employer shall be the Plan Administrator.

1.22 Plan Year means the twelve (12) consecutive month period designated by the Employer in the Adoption Agreement.

1.23 Restated Effective Date means the date set forth in the Adoption Agreement if this is a restated plan.

1.24 Severance from Employment means the date the Participant dies, retires, or otherwise severs employment with the Employer as determined by the Plan Administrator or its designee (and taking into account guidance issued under the Code). To the extent elected in the Adoption Agreement, such term shall also include a deemed Severance from Employment during any period the Participant is performing services in the uniformed services for a period of more than thirty (30) days.

1.25 TIAA-CREF means Teachers Insurance and Annuity Association and College Retirement Equities Fund.

1.26 Valuation Date means any day that the New York Stock Exchange is open for trading.

ARTICLE II – PARTICIPATION IN THE PLAN

2.1 Eligibility.

(a) Eligible Employees. If this is a new plan, any Employee who is classified as an Eligible Employee under the terms of the Adoption Agreement as of the Effective Date shall be eligible to participate in the Plan on the Effective Date. If this is a restated plan, each present Participant shall continue to be a Participant in the Plan. Any other Employee who is classified as an Eligible Employee under the terms of the Adoption Agreement as of the Restated Effective Date shall be eligible to participate in the Plan on the Restated Effective Date.

(b) Non-Eligible Employees. If this is a new plan, any Employee who is not eligible to participate in the Plan as of the Effective Date pursuant to paragraph (a) above, shall be eligible to participate in the Plan upon classification as an Eligible Employee. If this is a restated plan, any Employee who is not eligible to participate in the Plan as of the Restated Effective Date pursuant to paragraph (a) above, shall be eligible to participate in the Plan upon classification as an Eligible Employee.
2.2 **Enrollment in the Plan.** To participate in the Plan, each Eligible Employee shall complete and remit the applicable enrollment forms, including a Deferred Compensation Agreement, to the Plan Administrator or its designee. Enrollment shall be effective on or after the first day of the month following the date the properly completed enrollment forms are remitted to and accepted by the Plan Administrator or its designee. A newly hired Eligible Employee may defer Compensation payable in the calendar month in which he or she becomes an Employee if a Deferred Compensation Agreement is entered into on or before the first day on which the Eligible Employee performs services for the Employer.

2.3 **Information Provided by the Participant.** Each Eligible Employee enrolling in the Plan should provide to the Investment Sponsor or the Plan Administrator, as required, at the time of initial enrollment, and later if there are any changes, any information necessary or advisable for the Investment Sponsor or the Administrator, as appropriate, to administer the Plan, including, without limitation, whether the Eligible Employee is a participant in any other Eligible Plan.

2.4 **Contributions Made Promptly.** Annual Deferrals under the Plan shall be transferred to the applicable Investment Option within a period that is not longer than is reasonable for the proper administration of the Plan. In no event, shall any Annual Deferrals be transferred to the applicable Investment Option later than fifteen (15) days following the end of the month in which the amount would otherwise have been paid to the Participant.

2.5 **Leave of Absence.** Unless a Deferred Compensation Agreement is otherwise revised, if a Participant is absent from work by paid leave of absence, Annual Deferrals under the Plan shall continue to the extent Compensation continues.

2.6 **Disability.** A Disabled Participant may elect to make Annual Deferrals during any portion of the period of his or her Disability to the extent that he or she has actual Compensation (not imputed compensation and not disability benefits) from which to make deferrals to the Plan and has not had a Severance from Employment.

**ARTICLE III – DEFERRAL OF COMPENSATION**

3.1 **Annual Deferrals.** If elected pursuant of the terms of the Adoption Agreement, an Eligible Employee may elect to make Annual Deferrals to the Plan pursuant to a Deferred Compensation Agreement with the Employer. Annual Deferrals may be made up to the applicable annual limits under the Code or, or if less, the amount set forth in the Adoption Agreement. Subject to the rules of the applicable Investment Sponsor, the Plan Administrator may establish a minimum Annual Deferral amount and may change such amount from time to time. The Deferred Compensation Agreement may also include a designation of Investment Options and a designation of a Beneficiary. Any such election shall remain in effect until a new election is filed.

3.2 **Modifications to Amount Deferred.** A Participant may elect to change his or her Annual Deferral rate with respect to future Compensation by submitting a new and properly executed Deferred Compensation Agreement to the Plan Administrator or its designee. Pursuant to the rules of the Investment Sponsor, if any, unless the new Deferred
Compensation Agreement specifies a later effective date, a change in the amount of Annual Deferrals shall take effect as of the first day of the next following month or as soon as administratively practicable thereafter.

3.3 **Deferral of Special Pay.** If elected in the Adoption Agreement, a Participant may elect to defer accumulated bona fide sick, vacation, and/or other leave pay. These amounts may be deferred for any calendar month only if an agreement providing for the Annual Deferral is entered into before the beginning of the month in which the amounts would otherwise be paid or made available.

3.4 **Termination of Deferral.** A Participant may terminate his or her participation election by so notifying the Plan Administrator or its designee in using the administrative practices specified by the Plan Administrator or its designee. Such administrative practices may include electronic notice if made available to Participants. The termination shall take effect as soon as administratively practicable, but not earlier than the first pay period commencing with or during the first month following receipt by the Plan Administrator or its designee of satisfactory notice of such revocation.

3.5 **Employer Non-Elective Contributions.** If elected in the Adoption Agreement, the Employer shall make non-elective contributions (other than Employer matching contributions, if any, made pursuant to Section 3.6, below) to the Plan on behalf of Active Participants. No Participant shall have the right to elect to receive any amount contributed pursuant to this Section 3.5 as cash in lieu of a contribution. All such non-elective contributions shall be made at the rate or in the amount set forth in the Adoption Agreement. Any non-elective contribution will reduce, dollar for dollar, the annual amount the Participant can defer to the Plan.

3.6 **Employer Matching Contributions.** If elected in the Adoption Agreement, the Employer shall make matching contributions (other than Employer non-elective contributions, if any, made pursuant to Section 3.5, above) to the Plan on behalf of Active Participants who make Annual Deferrals to the Plan pursuant to a Deferred Compensation Agreement. No Participant shall have the right to elect to receive any amount contributed pursuant to this Section 3.6 as cash in lieu of a contribution. All such matching contributions shall be made at the rate or in the amount set forth in the Adoption Agreement and shall be based on the amount of Annual Deferrals made by an Active Participant to the Plan during the year. Any matching contribution will reduce, dollar for dollar, the annual amount the Participant can defer to the Plan.

3.7 **Maximum Deferral.**

(a) **Primary Limitation.** The maximum amount that may be contributed to the Plan pursuant to Sections 3.1, 3.5, and 3.6 hereof on behalf of any Participant, other than by means of a rollover or plan-to-plan transfer, shall not exceed the lesser of: (1) the annual applicable dollar amount, as set forth in Section 457(e)(15) of the Code, or (2) 100% of the Participant’s Includible Compensation for the taxable year.
(b) **Special Section Catch-Up Limitation.** If elected in the Adoption Agreement, for one (1) or more of the last three (3) taxable years ending before the calendar year of a Participant’s attainment of Normal Retirement Age (“NRA”), the Participant may utilize the catch-up provision under Section 457(b)(3) of the Code. When special Section 457 catch-up is utilized, the maximum amount that may be contributed to the Plan pursuant to Sections 3.1, 3.5, and 3.7 hereof on behalf of a Participant, other than by means of a rollover or plan-to-plan transfer, shall be the lesser of X or Y. X shall be, for any taxable year beginning on or after January 1, 2002, twice (2 times) the applicable dollar amount in effect under Section 457(b)(2)(A) of the Code for such year. Y shall be the sum of (i) the primary limitation amount determined under Section 3.7(a), above, for the year, and (ii) underutilized amounts, which is that portion of the primary limitation amount determined under Section 3.7(a), above, that is not utilized by the Participant in prior taxable years (beginning after 1978) in which the Participant was eligible to participate in the Plan. The special Section 457 catch-up limitation is available to a Participant during one (1) three (3)-year period only. If the Participant uses the special Section 457 catch-up limitation and then postpones retirement or returns to work after retirement, the Participant cannot utilize special Section 457 catch-up again, even if he or she has underutilized amounts in the Plan or only utilized special Section 457 catch-up in one (1) of the three (3) years prior to the year the Participant attained his or her NRA.

(c) **Catch-Up Limitation For Individuals Age 50 or Older.** To the extent permitted by law and elected in the Adoption Agreement, the maximum Annual Deferral that may be contributed pursuant to Section 3.1 for any individual who has attained the age of 50, or older, before the close of a taxable year, shall be increased by the applicable amount set forth in Section 414(v) of the Code. Notwithstanding the immediately preceding sentence, contributions shall not be made in accordance with this Section 3.7(c) during any year in which special Section 457 catch-up, described in Section 3.7(b), provides a higher limitation.

(d) **Coordination with Other Code Section 457(b) Plans.** If a Participant participates in more than one (1) Code Section 457(b) plan, all Code Section 457(b) plans are aggregated and the maximum deferral under all such plans shall not exceed the applicable limit described in Section 3.7(a), above, or if the special Section 457 or age 50 catch-up is utilized, the applicable limitation described in Section 3.7(b) or (c), above,).

(e) **Distribution of Excess Deferrals.** To the extent that any amount deferred under the Plan for any taxable year exceeds the limitations of this Section 3.7, any excess deferrals will be distributed to the Participant with allocable net income, as soon as administratively practicable after the Employer determines that there is an excess deferral and the amount of the excess deferral. Such excess shall first be deemed to be attributable to contributions made pursuant to Section 3.5 hereof, and then to the extent required, attributable to contributions made pursuant to Section 3.6 hereof, and then, to the extent required, attributable to contributions made pursuant to a Deferred Compensation Agreement under Section 3.1 hereof.
3.9 **Vesting.** A Participant shall be fully vested at all times in his or her accrued benefits under this Plan. Such accrued benefits shall be non-forfeitable at all times.

3.10 **Plan-to-Plan Transfers to the Plan.** To the extent provided in the Adoption Agreement and pursuant to the rules of each Investment Sponsor, a Participant may elect to make contributions that are transferred directly from the Participant's prior employer's Eligible Governmental Deferred Compensation Plan under Section 457(b) of the Code. Notwithstanding the foregoing, transfers shall be permitted only to the extent (i) the transferor plan provides for such direct transfers, (ii) the receiving plan provides for the receipt of plan-to-plan transfers, and (iii) the Participant will have an amount deferred immediately after the transfer at least equal to the amount deferred with respect to that Participant immediately before the transfer, and (iv) the Participant gives written direction to the Employer or its designee in a satisfactory form to make such transfer. The Plan Administrator may require such documentation from the other plan as it deems necessary to effectuate the transfer in accordance with Section 457(e)(10) of the Code and Section 1.457-10(b) of the Treasury regulations and to confirm that the other plan is an eligible governmental plan as defined in Section 1.457-2(f) of the Treasury regulations.

The amount so transferred shall be credited to the Participant's Account Balance and shall be held, accounted for, administered and otherwise treated in the same manner as an Annual Deferral by the Participant under the Plan, except that the transferred amount shall not be considered an Annual Deferral under the Plan in determining the maximum deferral limit under Section 3.7. Such funds and the accumulation generated from them shall be fully vested and nonforfeitable at all times.

3.11 **Acceptance of Rollover Contributions.** If so provided in the Adoption Agreement and if an Active Participant is entitled to receive, and elects to receive, an eligible rollover distribution from any eligible retirement plan within the meaning of Section 402(c)(8)(B) of the Code, each Investment Sponsor shall, subject to the rules of such Investment Sponsor, accept such amount under this Plan, provided that the rollover to this Plan is made either directly from another such plan or by the Active Participant within sixty (60) days of the receipt of the distribution. Any such amounts rolled over from any such plan shall be made in the form of cash only and accounted for separately upon acceptance as a rollover under this Plan. Such funds and the accumulation generated from them shall be fully vested and nonforfeitable at all times and shall not be considered when calculating the maximum deferral limit under Section 3.7.

3.12 **Qualified Military Service.**

(a) Notwithstanding any provision of this Plan to the contrary, contributions, benefits, and service credit with respect to qualified military service will be provided in accordance with Section 414(u) of the Code.

(b) A Participant whose employment is interrupted by qualified military service under Section 414(u) of the Code or who is on a leave of absence for qualified military service under Section 414(u) of the Code may elect to make additional Annual
Deferrals upon resumption of employment with the Employer equal to the maximum Annual Deferrals that the Participant could have elected during that period if the Participant’s employment with the Employer had continued (at the same level of Compensation) without the interruption or leave, reduced by the Annual Deferrals, if any, actually made for the Participant during the period of the interruption or leave. This right applies for five (5) years following the resumption of employment (or, if sooner, for a period equal to three (3) times the period of the interruption or leave).

ARTICLE IV – INVESTMENT OF CONTRIBUTIONS

4.1 Direction of Investment. A Participant may request that amounts contributed to the Plan on his or her behalf be allocated among the available Investment Options available under the Plan. The Investment Options shall include the Investment Options made available by TIAA-CREF and any other approved Investment Sponsors. The initial allocation request may be made at the time of enrollment. Once made, an investment allocation request shall remain in effect for all subsequent contributions until changed by the Participant.

4.2 Investment Changes. A Participant may change any investment allocation made by such Participant hereunder, or transfer existing accumulations to another Investment Option available under the Plan, by submitting a written request to the Employer or its designee on such form as may be required by the Employer or its designee. Any such changes shall become effective as soon as administratively feasible after the Employer or its designee receives a satisfactory written request.

ARTICLE V – DISTRIBUTIONS

5.1 Eligibility for Payment.

(a) Subject to the terms of the Investment Options, distribution of benefits from the Plan shall be made no earlier than: (i) when the Participant has a Severance from Employment (other than due to death), (ii) Plan termination, (iii) the Participant has amounts separately held in a rollover account and, if elected in the Adoption Agreement, (iv) the calendar year in which the Participant attains age 70-1/2, (v) in the event of an approved financial hardship due to an Unforeseeable Emergency, or (vi) the Participant is eligible for an in-service distribution of his or her small Account Balance.

(b) Notwithstanding the foregoing, if elected in the Adoption Agreement, with respect to amounts payable to a Participant who is classified as an independent contractor, as determined by the Plan Administrator in its sole and absolute discretion, no amount will be paid to the Participant before a date at least twelve (12) months after the day on which the contract expires under which services are performed for the Employer (or, in the case of more than one contract, all such contracts expire); and no amount payable to the Participant on that date will be paid to the Participant if, after expiration of the contract (or contracts) and before
that date, the Participant performs services for the Employer as an independent contractor or an Employee.

(c) “Severance from Employment” means the termination of a Participant’s employment with the Employer for any reason including the Participant’s death or retirement.

(1) A Participant will be deemed to have incurred a Severance from Employment without regard to whether such Participant continues in the same job for a different employer following a liquidation, merger, consolidation or other similar transaction.

(2) Pursuant to an election in the Adoption Agreement, “Severance from Employment” for a Participant classified as an independent contractor shall mean the cessation of services upon expiration of the contract (or in the case of more than one contract, all contracts) under which services are performed for the Employer provided the expiration constitutes a good-faith and complete termination of the contractual relationship. An expiration will not constitute a good-faith and complete termination of the contractual relationship if the Employer anticipates a renewal of the contractual relationship or the independent contractor becoming an Employee. For this purpose, an Employer is considered to anticipate the renewal of the contractual relationship with an independent contractor if it intends to contract again for the services provided under the expired contract, and neither the Employer nor the independent contractor has eliminated the independent contractor as a possible provider of services under any such new contract. Further, an Employer is considered to intend to contract again for the services provided under an expired contract if the Employer’s doing so is conditioned only upon incurring a need for the services, the availability of funds, or both.

5.2 Small Balance In-service Distributions. Subject to the terms of the Investment Options and if elected in the Adoption Agreement, a Participant may elect to receive an in-service distribution of the Participant’s benefit under the Plan if the following requirements are met:

(a) excluding rollover contributions held in a separate account, the total amount of the Participant’s benefit under the Plan does not exceed $5,000 (or the dollar limit under Section 411(a)(11) of the Code),

(b) the Participant has not previously received a distribution under this provision of the Plan, and

(c) no amounts have been deferred under the Plan with respect to the Participant during the two (2)-year period ending on the date of the in-service distribution.
5.3 **In-service Distributions from Rollover Account.** If a Participant has a separate account attributable to rollover contributions to the Plan, the Participant may at any time elect to receive a distribution of all or any portion of the amount held in the rollover account.

5.4 **Small Balance Distributions at Severance from Employment.** Subject to the terms of the Investment Option and if elected in the Adoption Agreement, the Employer may direct the Investment Sponsor to distribute the total amount payable to a Participant who has a Severance from Employment in the form of a lump sum payment within sixty (60) days of the Participant’s Severance from Employment, but only if the total amount does not exceed $1,000. Further, unless otherwise elected by the Participant, if a Participant’s Account Balance exceeds $1,000 but not $5,000 (or the dollar limit under Section 411(a)(11) of the Code), the Employer may direct the Investment Sponsor to distribute the total amount payable to a Participant in a direct rollover to an individual retirement plan designated by the Employer or its designee. The determination of whether a Participant’s Account Balance exceeds the small balance threshold shall be determined by including rollover contributions (and earnings attributable thereto) within the meaning of Sections 402(e), 403(a)(4), 403(b)(8), 408(d)(3)(A)(ii), and 457(e)(16) of the Code.

5.5 **Distribution Due to Unforeseeable Emergency.**

(a) If elected in the Adoption Agreement, a Participant, but not a Beneficiary after the Participant’s death, may request a distribution due to an “Unforeseeable Emergency” as defined by Section 1.457-6(c)(2) of the Treasury regulations, by submitting a written request to the Plan Administrator or its designee, accompanied by evidence to demonstrate that the circumstances being experienced qualify as an Unforeseeable Emergency. The Plan Administrator or its designee shall have the authority to require such evidence, as it deems necessary to determine if a distribution shall be warranted. If an application for a distribution due to an Unforeseeable Emergency is approved, the distribution shall be limited to an amount sufficient to meet the Unforeseeable Emergency.

(b) Unless defined otherwise by the Code or regulations, “Unforeseeable Emergency” generally means a severe financial hardship to the Participant resulting from an illness or accident of the Participant, the Participant’s spouse, the Participant’s dependent (as defined in Code Section 152, and, for taxable years beginning on or after January 1, 2005, without regard to Section 152(b)(1), (b)(2), and (d)(1)(B)) or the Participant’s primary beneficiary, loss of the Participant’s property due to casualty, or other similar extraordinary and unforeseeable circumstances arising as a result of events beyond the control of the Participant.

The circumstances that will constitute an Unforeseeable Emergency will depend upon the facts of each case, but, in any case, payment may not be made to the extent that such emergency is or may be relieved:

(1) Through reimbursement or compensation by insurance or otherwise;
(2) By liquidation of the Participant’s assets, to the extent that liquidation of such assets would not itself cause severe financial hardship; or

(3) By cessation of deferrals under the Plan.

The purchase a home and the payment of college tuition are not considered to be an Unforeseeable Emergency. Imminent foreclosure of or eviction from the Participant's primary residence, the need to pay for medical expenses, including prescription drug medication, or the need to pay the funeral expenses of the Participant's spouse, the Participant's dependent or the Participant's primary Beneficiary may constitute an Unforeseeable Emergency.

5.6 Special Considerations Relating to Military Service.

(a) Unless otherwise elected in the Adoption Agreement, a Participant who dies (or becomes Disabled) while performing qualified military service on and after January 1, 2007, will be treated as if he/she had resumed employment with the Employer on the date preceding death (or Disability) and terminated employment on the actual date of death (or Disability).

(b) If elected in the Adoption Agreement, and notwithstanding anything herein to the contrary, a Participant shall be deemed as have had a Severance from Employment during any period the individual is performing service, for thirty (30) or more days, in the uniformed services described in Section 3401(h)(2)(A) of the Code, thereby enabling the Participant to take a distribution, but if the Participant elects such a distribution, the Participant may not make any Annual Deferrals during the six-month period beginning on the date of distribution.

(c) Unless otherwise elected in the Adoption Agreement, with respect to deaths occurring on and after January 1, 2007 and in accordance with Section 401(a)(37) of the Code, any additional benefits (other than benefit accruals relating to the period of qualified military service,) made available to the Beneficiary of a Participant who dies while in the active employment of the Employer shall be made available to the Beneficiary of an Active Participant who is on leave and dies while performing qualified military service (as defined in Section 414(u) of the Code). If the Employer elects to credit Participants who die while performing qualified military service with benefit accruals in the Adoption Agreement, any Employer contribution will comply with Section 401(a)(37) of the Code.

5.7 Commencement of Distributions.

(a) A Participant may commence distribution of benefits at any time following Severance from Employment by submitting a request to the Investment Sponsor.

(b) Notwithstanding the provisions of Section 5.7(a) above, in no event shall distribution of benefits commence with respect to any Participant later than the April 1st of the calendar year following the calendar year in which the Participant
attains age 70½, or if later, the April 1st of the calendar year following the calendar year in which the Participant incurs a Severance from Employment.

ARTICLE VI – FORM OF PAYMENT

6.1 Form of Payment. To the extent permitted by the Investment Options, distributions to Participants will be made in a single lump sum unless other distribution options are made available by any Investment Sponsor and selected for use under the Plan. These alternative distribution options may include:

(a) Single Life Annuity. An annuity payable in equal installments for the life of the Participant that terminates upon the Participant’s death.

(b) Joint Life Annuity. An annuity payable in equal installments for the joint lives of the Participant and his or her Beneficiary.

(c) Fixed Period Payments. Payments for a fixed period subject to the terms or limitations of the applicable Investment Sponsor or Investment Options.

(d) Any other annuity or withdrawal options as provided under the Investment Options available under this Plan

All forms of payments shall be subject to the limitations of the applicable Investment Sponsor and its Investment Options.

6.2 Limits on Income Options Under an Annuity Contract. Distributions from and annuity contract, if not made in a single lump sum, shall be made over a period that does not exceed:

(a) the life of the Participant;

(b) the lives of the Participant and his or her designated Beneficiary;

(c) a period certain not extending beyond the life expectancy of the Participant; or

(d) a period certain not extending beyond the life expectancies of the Participant and his or her designated Beneficiary.

6.3 Minimum Amounts to be Distributed.

(a) If a Participant’s retirement payments are to be distributed in a form other than a single lump sum, the amount to be distributed each year, and the times those amounts are paid, shall satisfy the requirements specified in Section 401(a)(9) of the Code and the regulations issued thereunder.

(b) Notwithstanding the foregoing Section 6.3(a), a Participant or Beneficiary who would have been required to receive required minimum distributions for 2009 but
for the enactment of Section 401(a)(9)(h) of the Code ("2009 RMDs"), and who would have satisfied that requirement by receiving distributions that are (1) equal to the 2009 RMDs or (2) one or more payments in a series of substantially equal distributions (that include the 2009 RMDs) made at least annually and expected to last for the life (or life expectancy) of the Participant, the joint lives (or joint life expectancy) of the Participant and the Participant’s designated Beneficiary, or for a period of at least ten (10) years ("Extended 2009 RMDs"), will receive those distributions for 2009 unless the Participant or Beneficiary chooses not to receive such distributions. Participants and Beneficiaries described in the preceding sentence will be given the opportunity to elect not to receive the distributions described in this Section 6.3(b).

6.4 Minimum Distribution Requirements During Participant’s Lifetime.

(a) Requirements of Code and Related Regulations Incorporated. All distributions required under this Section 6.4 will be determined and made in accordance with Section 401(a)(9) of the Code and the regulations issued thereunder.

(b) Time and Manner of Distribution.

(1) Required Beginning Date. The Participant’s entire interest will be distributed, or begin to be distributed, to the Participant no later than the April 1st of the calendar year following the calendar year in which the Participant attains age 70½, or if later, the April 1st of the calendar year following the calendar year in which the Participant incurs a Severance from Employment.

(2) Amount of Required Minimum Distribution for Each Distribution Calendar Year. During the Participant’s lifetime, the minimum amount that will be distributed for each distribution calendar year will be determined under the applicable provisions of Section 401(a)(9) of the Code and the Treasury regulations issued thereunder.

(3) Lifetime Required Minimum Distributions Continue Through Year of Participant’s Death. Required minimum distributions will be determined under this Section 6.4 beginning with the first (1st) distribution calendar year and up to and including the distribution calendar year that includes the Participant’s date of death. Any amount due but untaken in the year of death, must be received by the Beneficiary, even if the Beneficiary elects to delay payments under the five (5) year rule under Section 7.2(b).

6.5 Election. Subject to the rules of the Investment Sponsor and the forms of distribution available under the Plan, a Participant or Beneficiary may elect the form of distribution of his or her benefits and may revoke that election at any time at least thirty (30) days before his or her benefits begin, or such other time as permitted by the Plan Administrator or its designee, by notifying the Plan Administrator or its designee in writing of his or her new election. Unless otherwise set forth in the Adoption Agreement, all distributions of
benefits paid pursuant to the terms of this Plan shall be paid directly by the applicable Investment Sponsor to the Participant or Beneficiary.

6.6 **Failure to Make Election.** If a Participant or Beneficiary fails to elect a form of payment in a timely manner, to the extent permitted by the Investment Option, benefits shall be paid in a single lump sum.

**ARTICLE VII – DEATH BENEFITS**

7.1 **Form of Payment.** Distributions to Beneficiaries will be made in a single lump sum to the designated Beneficiary as soon as administratively feasible following the death of the Participant unless the Beneficiary selects an alternative distribution option that are made available by any other Investment Sponsor and selected for use under the Plan. These alternative distribution options may include:

(a) Single Life Annuity. An annuity payable in equal installments for the life of the Beneficiary that terminates upon the Beneficiary’s death.

(b) Joint Life Annuity. An annuity payable in equal installments for the joint lives of the Beneficiary and his or her beneficiary.

(c) Fixed Period Payments. Payments for a fixed period subject to the terms or limitations of the applicable Investment Sponsor or Investment Options.

(d) Any other annuity or withdrawal options provided under the Investment Options.

All forms of payments shall be subject to the limitations of the applicable Investment Sponsor and its Investment Options.

7.2 **Death Distribution Requirements.** Notwithstanding any other provisions in this Section, any distribution option selected by a Beneficiary must comply with the following distribution provisions:

(a) **Death After Distributions Begin.** If the Participant dies after distribution of his or her interest has commenced, the remaining portion of such interest shall continue to be distributed at least as rapidly as the method of distribution being used prior to the Participant’s death.

(b) **Death Before Distributions Begin.** If the Participant dies before distribution of his or her interest has commenced, distribution of the Participant’s entire interest shall be completed by the December 31st of the calendar year containing the fifth (5th) anniversary of the Participant’s death, except to the extent that the recipient of such benefits elects to receive distributions in accordance with (1) or (2) below:

(1) If any portion of the Participant’s interest is payable to a designated Beneficiary, distributions may be made in substantially equal annual payments over the life of the designated Beneficiary, or over a period certain not extending beyond the life expectancy of the designated
Beneficiary, and commencing no later than the December 31st of the calendar year immediately following the calendar year in which the Participant died;

(2) If the designated Beneficiary is the Participant’s surviving spouse, the date distributions are required to begin in accordance with (1) above shall be the December 31st immediately following the calendar year in which the Participant died or, if later, the December 31st of the calendar year in which the Participant would have attained age 70½.

If the Participant has not made an election pursuant to this Section 7.2 by the time of his or her death, the Participant’s designated Beneficiary must elect the method of distribution no later than the earlier of (a) the December 31st of the calendar year in which distributions would be required to begin under this Section 7.2, or (b) the December 31st of the calendar year which contains the fifth (5th) anniversary of the date of death of the Participant. If the Participant has no designated Beneficiary, or if the designated Beneficiary does not elect a method of distribution, distribution of the Participant’s entire interest must be completed by the December 31st of the calendar year containing the fifth (5th) anniversary of the Participant’s death.

(c) For purposes of Section 7.2(b), if the surviving spouse dies after the Participant, but before payments to such spouse begins, the provisions of Section 7.2(b) with the exception of paragraph (2) shall be applied as if the surviving spouse were the Participant.

(d) For purposes of this Section 7.2, any amount paid to a child of the Participant will be treated as if it had been paid to the surviving spouse if the amount becomes payable to the surviving spouse when the child reaches the age of majority.

(e) For the purposes of this Section 7.2, distribution of a Participant’s interest is considered to begin on the Participant’s required beginning date (or, if applicable, the date distribution is required to begin to the surviving spouse). If distribution in the form of an annuity irrevocably commences to the Participant before the required beginning date, the date distribution is considered to begin is the date distribution actually commences.

7.3 Death of Beneficiary Before Benefits Commence.

In the event that a Beneficiary dies after becoming entitled to receive benefits under this Plan but before distributions to the Beneficiary have commenced, the benefits due such Beneficiary shall be paid to the estate of the Beneficiary in a single lump sum payment as soon as administratively feasible following the Beneficiary’s death. No other distribution elections shall be permitted.
ARTICLE VIII – TRANSFERS AND ROLLOVERS

8.1 Plan-to-Plan Transfers from the Plan.

(a) If elected in the Adoption Agreement and subject to the terms of the Investment Option, any Participant or Beneficiary, can elect to have all or any portion of his or her Account Balance transferred to another Eligible Governmental Deferred Compensation Plan (the “receiving plan”) and the transfer satisfies the applicable requirements of Section 1.457-10(b) of the Treasury regulations.

(b) Upon the transfer of assets under this Section 8.1, the Plan’s liability to pay benefits to the Participant or Beneficiary under this Plan shall be discharged to the extent of the amount so transferred for the Participant or Beneficiary. The Plan Administrator may require such documentation from the receiving plan as it deems appropriate or necessary to comply with this Section 8.1 (for example, to confirm that the receiving plan is an eligible governmental plan under paragraph (a) of this Section 8.1, and to assure that the transfer is permitted under the receiving plan) or to effectuate the transfer.

8.2 Permissive Service Credit Transfers.

(a) If elected in the Adoption Agreement, any Participant who participates in a tax-qualified defined benefit governmental plan (as defined in Code Section 414(d)) that provides for the acceptance of plan-to-plan transfers with respect to the Participant may elect to have any portion of the Participant’s Account Balance transferred from this Plan to the defined benefit governmental plan. A transfer under this Section 8.2 may be made before the Participant has had a Severance from Employment.

(b) A transfer may be made under this Section 8.2 only if the transfer is either for (i) the purchase of permissive service credit (as defined in Section 415(n)(3) of the Code) under the receiving defined benefit governmental plan; or (ii) the repayment of contributions and earnings related to a previous forfeiture of service credit under the defined benefit governmental plan.

8.3 Direct Rollovers. Notwithstanding any provision of the Plan to the contrary that would otherwise limit a distributee’s election under this provision, a “distributee” may elect, at the time and in the manner prescribed by the Employer, to have all or any portion of an eligible rollover distribution paid directly to an eligible retirement plan specified by the distributee in a direct rollover.

For purpose of implementing the requirements of this provision, certain terms contained in this Section 8.3 shall be defined as follows:
(a) **Eligible Rollover Distribution**

An eligible rollover distribution is any distribution of all or any portion of the Account Balance to the credit of the distributee, except that an eligible rollover distribution does not include: any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the distributee or the joint lives (or joint life expectancies) of the distributee and the distributee’s designated Beneficiary, or for a specified period of ten (10) years or more; any distribution to the extent such distribution is required under Section 401(a)(9) of the Code; and any other exception permitted by law or the Internal Revenue Service. Any amount that is distributed on account of Unforeseeable Emergency shall not be an eligible rollover distribution (and the distributee may not elect to have any portion of such a distribution paid directly to an eligible retirement plan). For 2009 only, the following shall also be treated as an eligible rollover distribution: 2009 RMDs and Extended 2009 RMDs as defined in Section 6.4(b) of the Plan.

(b) **Eligible Rollover Distribution to a Roth IRA**

Effective January 1, 2008, a Participant or any designated Beneficiary of the Participant may elect to roll over amounts in accordance with Section 408A(e) of the Code directly to a Roth IRA, provided that for any taxable year prior to January 1, 2010, the provisions of Section 408A(c)(3)(B) of the Code are satisfied.

(c) **Eligible Retirement Plan**

An eligible retirement plan is any plan within the meaning of Section 402(c)(8)(B) of the Code that accepts the distributee’s eligible rollover distribution. An eligible retirement plan shall also mean an Eligible Plan under Section 457(b) of the Code which is maintained by a State, political subdivision of a State, or any agency or instrumentality of a State or political subdivision of a State, and which agrees to separately account for amounts transferred into such plan from this Plan. This definition of eligible retirement plan shall also apply in the case of a rollover request for a distribution to a surviving spouse, or to a spouse or former spouse who is the alternate payee under a qualified domestic relation order, as defined in Section 414(p) of the Code.

(d) **Distributee**

(1) A distributee includes a Participant, a Participant’s surviving spouse, a Participant’s former spouse who is the alternate payee under a qualified domestic relations order, as defined in Section 414(p) of the Code, and distributees with regard to the interest of the spouse or former spouse. Effective beginning January 1, 2010, consistent with the provisions of Code Section 402(c)(11), in the case of a distribution to a designated Beneficiary for purposes of Code Section 401(a)(9) who at the time of the Participant’s death was neither the spouse of the Participant nor the spouse or former spouse of the Participant who is an alternate payee under a domestic relations order, a direct rollover is payable only to an individual retirement
account, Roth IRA or individual retirement annuity (IRA) that has been established on behalf of the Beneficiary as an inherited IRA (within the meaning of Section 408(d)(3)(C) of the Code).

(2) Although a non-spouse Beneficiary may directly rollover a distribution as provided in this subsection (d), any distribution made before January 1, 2010, is not subject to the direct rollover requirements of Code Section 401(a)(31) (including Code Section 401(a)(31)(B), the notice requirements of Code Section 402(f), or the mandatory withholding requirements of Code Section 3405(c)). If a non-spouse Beneficiary receives a distribution from the Plan, the distribution is not eligible for a “60-day” rollover.

ARTICLE IX – LOANS

9.1 **Availability.** If elected in the Adoption Agreement and subject to the terms of the Investment Options, a Participant who is an Active Participant may apply for and receive a loan from his or her Account Balance as provided in this Article IX. All loans must be subject to the terms of the Investment Options available under the Plan from which they are taken and subject to such rules and procedures as the Plan Administrator or its designee may adopt. Any such loan must be available to all Participants on a reasonably equivalent basis and may not be for an amount less than $1,000. All applications for a loan shall be made to the Investment Sponsor sponsoring the Investment Option from which the loan is taken. Absent any contrary provision in the loan agreement with the Investment Sponsor or under the Investment Option, the terms of this Article IX will apply.

9.2 **Maximum Loan Amount.** No loan to a Participant hereunder may exceed the lesser of:

(a) $50,000, reduced by the greater of (i) the outstanding balance on any loan from the Plan to the Participant on the date the loan is made or (ii) the highest outstanding balance on loans from the Plan to the Participant during the one-year period ending on the day before the date the loan is approved by the Investment Sponsor (not taking into account any payments made during such one-year period), or

(b) one-half of the value of the Participant’s vested Account Balance (as of the Valuation Date immediately preceding the date on which such loan is approved by the Investment Sponsor).

For purposes of this Section 9.2, any loan from any other plan maintained by the Employer shall be treated as if it were a loan made from the Plan, and the Participant’s vested interest under any such other plan shall be considered a vested interest under this Plan; provided, however, that the provisions of this paragraph shall not be applied so as to allow the amount of a loan under this Section 9.2 to exceed the amount that would otherwise be permitted in the absence of this paragraph.
9.3. **Terms of Loan.** The terms of the loan shall:

(a) require level amortization with payments not less frequently than quarterly throughout the repayment period.

(b) require that the loan be repaid within five (5) years unless the Participant certifies in writing to the Plan Administrator that the loan is to be used to acquire any dwelling unit which, within a reasonable time, is to be used (determined at the time the loan is made) as a principal residence of the Participant, in which case the loan may be repaid over a period not greater than ten (10) years.

(c) provide for interest at a rate to be determined under the terms of the Investment Option or the loan procedures of the Investment Sponsor.

9.4 **Extended Loan Term for Leaves of Absence due to Military Service.** The Plan may suspend the obligation to repay a loan for any period during which a Participant is performing military service in accordance with Section 414(u)(4) of the Code, even if the service is not qualified military service as defined under the Uniformed Services Employment and Reemployment Rights Act of 1994. Loan repayments must resume upon the completion of the military service, and the loan must be repaid in full (including interest that accrues during the period of military service) by amortization in substantially level payments over a period that ends not later than five (5) years after the origination date of the loan (unless the loan is for the purchase of a principal residence) plus the period of the military service.

9.5 **Loan Default.** In the event that a Participant fails to make a loan payment under this Article IX by the end of the calendar quarter following the calendar quarter in which the loan payment was due, a default on the loan shall occur. Loan defaults shall be administered in accordance with specific rules documented under the Investment Options and the Code.

**ARTICLE X – ROTH ELECTIVE DEFERRALS**

10.1 **General Application.** This Article X will apply to contributions beginning with the effective date specified in the Adoption Agreement but in no event, before the first day of the first taxable year beginning on or after January 1, 2011.

(a) As of the effective date under Section 10.1, the Plan will accept Roth Elective Deferrals made on behalf of Participants. A Participant’s Roth Elective Deferrals will be allocated to a separate account maintained for such deferrals as described in Section 10.2.

(b) Unless specifically stated otherwise, Roth Elective Deferrals will be treated as Annual Deferrals for all purposes under the Plan.
10.2 Separate Accounting.

(a) Contributions and withdrawals of Roth Elective Deferrals will be credited and debited to the Roth Elective Deferral account maintained for each Participant.

(b) The Plan will maintain a record of the amount of Roth Elective Deferrals in each Participant's account.

(c) Gains, losses, and other credits or charges must be separately allocated on a reasonable and consistent basis to each Participant's Roth Elective Deferral account and the Participant's other accounts under the Plan.

(d) No contributions other than Roth Elective Deferrals and properly attributable earnings will be credited to each Participant's Roth Elective Deferral Account.

10.3 Direct Rollovers.

(a) Notwithstanding Section 8.3, a direct rollover of a distribution from a Roth Elective Deferral account under the Plan will only be made to another Roth Elective Deferral account under an Eligible Governmental Deferred Compensation Plan and only to the extent the rollover is permitted under the rules of Section 402(c) of the Code or as otherwise permitted by law.

(b) Notwithstanding Section 3.11, unless otherwise provided by the Employer in the Adoption Agreement, the Plan will accept a rollover contribution to a Roth Elective Deferral account only if it is a direct rollover from another Roth Elective Deferral account under an Eligible Governmental Deferred Compensation Plan and only to the extent the rollover is permitted under the rules of Section 402(c) of the Code or as otherwise permitted by law.

(c) Notwithstanding Sections 8.3 and 3.11 and if elected in the Adoption Agreement and subject to the terms of the Investment Options, a Participant may elect an in-plan eligible rollover distribution of Annual Deferrals to the Participant's designated Roth Elective Deferral account if the eligible rollover distribution meets the following requirements:

1. the eligible rollover distribution is from a non-designated Roth account in the Plan;

2. the distribution is because of an event that triggers the availability of an eligible rollover distribution from the Plan; and

3. otherwise meets the rollover requirements of Section 402(c).

(d) Any eligible rollover distributions from a Participant's Roth Elective Deferral account are taken into account in determining whether the total amount of the
Participant’s Account Balances under the Plan exceeds the threshold amount for purposes of distributions from the Plan pursuant to Section 5.4.

(e) If subject to any minimum threshold for distributions that are direct rollovers that are imposed by the Plan Administrator or under the Investment Options, any amount distributed from the Participant’s Roth Elective Deferral account is treated as a separate distribution from any amount distributed from the Participant's other accounts in the Plan, even if the amounts are distributed at the same time.

10.4 Definition of Roth Elective Deferrals. A Roth Elective Deferral is an elective deferral that is:

(a) Designated irrevocably by the Participant in the Deferred Compensation Agreement as a Roth Elective Deferral that is being made in lieu of all or a portion of the pre-tax Annual Deferrals the Participant is otherwise eligible to make under the Plan; and

(b) Treated by the Employer as includible in the Participant’s income at the time the Participant would have received that amount in cash if the Participant had not made an agreement to defer this Compensation.

ARTICLE XI – BENEFICIARY INFORMATION

11.1 Designation. A Participant shall have the right to designate a Beneficiary, and amend or revoke such designation at any time prior to commencement of benefits, in writing, in a form approved by the Employer or the Investment Sponsor. Such Beneficiary designations, amendments, or revocations will be maintained by the Investment Sponsor and shall be effective upon satisfactory receipt by the Investment Sponsor.

11.2 Failure to Designate a Beneficiary. Benefits shall be paid to the Participant’s estate if, prior to the date a Participant commences to receive payment of benefits under the Plan, the Participant has not designated a Beneficiary or no designated Beneficiary survives the Participant and benefits are payable following the Participant’s death.

ARTICLE XII – PLAN ADMINISTRATION

12.1 Plan Administration. The Employer shall be responsible for appointing a Plan Administrator to administer the Plan. The Plan Administrator may authorize a committee comprised (to the extent possible) of not less than three (3) persons, to act collectively with regard to administration of the Plan. The Plan Administrator shall have sole discretionary responsibility for the interpretation of the Plan, enrolling Participants in the Plan, sending contributions on behalf of each Participant to the applicable Investment Sponsor, and for performing other duties required for the operation of the Plan. Any action taken on any matter within the discretion of the Plan Administrator shall be made in its sole and absolute discretion based on this Plan document and the Adoption Agreement, and shall be final, conclusive, and binding on all parties. In order to discharge its duties hereunder, the Plan Administrator shall have the power and authority to
delegate ministerial duties and to employ such outside professionals as may be required for prudent administration of the Plan. The Plan Administrator shall also have authority to enter into agreements on behalf of the Employer necessary to implement this Plan.

12.2 **Accounts and Expenses.** The Employer or the Investment Sponsor shall establish and maintain book entry accounts on behalf of each Participant. Such Participant’s accounts shall be valued in accordance with the rules of the Investment Option, in which the accounts are invested. Each Participant shall receive a written notice of his or her Account Balance following such valuation or valuations, provided that such notice shall not be required to be given more than one time per calendar quarter. Each Participant’s Account Balance shall reflect the aggregate of his or her aggregate Annual Deferrals, Employer non-elective contributions, Employer matching contributions, and plan-to-plan transfers and rollovers, if any, and shall also reflect investment experience credited to such Account Balance and expense charges applied to, and distributions made from, such Account Balance.

12.3 **Mistaken Contribution.** If any contribution (or any portion of a contribution) is made to the Plan by a good faith mistake of fact, then within one (1) year after the payment of the contribution, and upon receipt in good order of a proper request approved by the Plan Administrator, the amount of the mistaken contribution (adjusted for any income or loss in value, if any, allocable thereto) shall be returned directly to the Participant or, to the extent required or permitted by the Plan Administrator, to the Employer.

12.4 **Domestic Relations Orders.** Notwithstanding Sections 14.3 and 14.9, if a judgment, decree or order (including approval of a property settlement agreement) that relates to the provision of child support, alimony payments, or the marital property rights of a spouse or former spouse, child, or other dependent of a Participant is made pursuant to the domestic relations law of any State (“domestic relations order” or “DRO”), then the amount of the Participant's Account balance shall be paid in the manner and to the person or persons so directed in the domestic relations order provided such domestic relations order is found to be qualified under the provisions of Section 414(p) of the Code (“QDRO”), payment shall be made without regard to whether the Participant is eligible for a distribution of benefits under the Plan. The Investment Sponsor shall establish reasonable procedures for determining the status of any such decree or order and for effectuating distribution pursuant to the domestic relations order. The Plan Administrator shall establish such procedures, in the absence of any procedures established by the Investment Sponsor. Effective April 6, 2007, a DRO that otherwise satisfies the requirements of a QDRO will not fail to be a QDRO solely because (a) the order is issued after or revises another DRO or QDRO, or (b) at the time the DRO is issued, including issuance after the starting date for the Participant’s selected or defaulted form of distribution or the Participant’s death. Any such DRO shall be subject to the same requirements and protections as any other QDRO.

12.5 **IRS Levy.** Notwithstanding Sections 14.3 and 14.9, the Plan Administrator may pay from a Participant's or Beneficiary's book entry account the amount that the Plan Administrator finds is lawfully demanded under a levy issued by the Internal Revenue Service with respect to that Participant or Beneficiary or is sought to be collected by the United States
Government under a judgment resulting from an unpaid tax assessment against the Participant or Beneficiary.

12.6 **Location of Participant or Beneficiary Unknown.** Absent any procedures from the Investment Sponsors, the Plan Administrator shall make all reasonable attempts to determine the identity and address of a Participant or a Participant’s Beneficiary entitled to benefits under the Plan. For this purpose a reasonable attempt means (a) the mailing by certified mail of a notice to the last known address shown on the Employer’s records, (b) notification sent to the Social Security Administration under their program to identify payees under retirement plans, or (c) employing the services of a locator service. If after one or more of these methods is employed and the Participant or Beneficiary has not responded within six (6) months, and no claim has been made for such benefits, the benefits due such Participant or Beneficiary shall continue to be held in the Investment Option until such time as the Investment Sponsor deems it appropriate to apply State abandoned property law to distribute the benefits from the Plan or to forfeit the benefit, in accordance with the terms of the Investment Option.

12.7 **Payments to Minors and Incompetents.** Absent any procedures from the Investment Sponsors, if a Participant or Beneficiary entitled to receive any benefits hereunder is a minor or is adjudged to be legally incapable of giving valid receipt and discharge for such benefits, or is deemed so by the Plan Administrator or the Investment Sponsor, the Investment Sponsor shall make the distribution of benefits to the Participant's or Beneficiary's guardian, conservator, custodian, attorney-in-fact, or to any other legal representative adjudged to be appropriate upon receiving satisfactory evidence of such status or a court order to that effect.

**ARTICLE XIII – AMENDMENT OR TERMINATION OF PLAN**

13.1 **Amendment of Plan.** While it is expected that this Plan will continue indefinitely, the Employer reserves the right at any time to amend or otherwise modify the Plan without any liability for such action. No amendment shall increase the duties or responsibilities of any Investment Sponsor without its prior consent thereto in writing.

13.2 **Termination of Plan.** The Employer shall have the right at any time to terminate the Plan. No termination shall affect the funds already deferred under the Plan. In order for the Plan to be considered terminated, amounts deferred under the Plan must be distributed to all Plan Participants and Beneficiaries as soon as administratively practicable after termination of the Plan, in accordance with the terms of the Investment Option.

**ARTICLE XIV – MISCELLANEOUS**

14.1 **Plan Non-Contractual.** Nothing contained in this Plan will be construed as a commitment or agreement on the part of any person to continue his or her employment with the Employer, and nothing contained in this Plan will be construed as a commitment on the part of the Employer to continue the employment or the rate of compensation of any person for any period, and all Employees of the Employer will remain subject to discharge to the same extent as if the Plan had never been put into effect.
14.2 **Claims of Other Persons.** The provisions of the Plan will in no event be construed as giving any Participant or any other person, firm, corporation or other legal entity, any legal or equitable right against the Employer, its officers, employees, directors or trustees, except the rights as are specifically provided for in this Plan or created in accordance with the terms and provisions of this Plan.

14.3 **Non-Assignability.** Except as otherwise provided in 12.4 and 12.5, the interest of each Participant or Beneficiary under the Plan is not subject to the claims of the Participant's or Beneficiary's creditors, and neither the Participant nor any Beneficiary shall have any right to sell, assign, transfer or otherwise convey the right to receive payments hereunder or any interest under the Plan, which payments and interest are expressly declared to be non-assignable and non-transferable.

14.4 **Contracts.** The terms of each Investment Option offered to Participants as an investment option hereunder, the terms of a custodial agreement, or trust in which an investment option may be held, any contract issued on behalf of a Participant, certificate issued to a Participant, and any other written documents or instruments related to any such matters are a part of the Plan as if fully set forth in the Plan document and the provisions of which are hereby incorporated by reference into the Plan. In the case where there is any inconsistency or ambiguity between the terms of the Plan and those of any contract, certificate, custodial agreement, trust, or other such document or instrument if any, funding the Plan, the terms of the contract, certificate, custodial agreement, trust or other such document or instrument will control to the extent not inconsistent with the provisions of Sections 72(p), 401(a)(9), and 457(b) of the Code and any applicable regulations issued thereunder.

14.5. **Pronouns.** Whenever used herein, the masculine pronoun is deemed to include the feminine. The singular form, whenever used herein, shall mean or include the plural form where applicable, and vice versa.

14.6. **Representations.** The Employer does not represent or guarantee that any particular Federal or State income, payroll, personal property or other tax consequence will result from participation in this Plan. A Participant should consult with professional tax advisors to determine the tax consequences of his or her participation. Furthermore, the Employer does not represent or guarantee investment returns with respect to any Investment Option and shall not be required to restore any loss which may result from such investment or lack of investment.

14.7 **Severability.** If a court of competent jurisdiction holds any provision of this Plan to be invalid or unenforceable, the remaining provisions of the Plan shall continue to be fully effective.

14.8. **Applicable Law.** This Plan shall be construed in accordance with applicable Federal law and, to the extent otherwise applicable, the laws of the State in which the Employer is located.
14.9. **Trust Fund.** To the extent the trust requirements of Section 457(g)(3) of the Code are not satisfied through one or more annuity contracts or custodial agreements satisfying the requirements of Section 401(f) of the Code, all amounts of deferrals and contributions to the Plan, all property and rights purchased with such amounts, and all income attributable to such amounts, property, or rights shall be held and invested in the Trust Fund in accordance with this Plan and any trust agreement. The Trust Fund, and any subtrust established under the Plan, shall be established pursuant to a written agreement that constitutes a valid trust under the laws of the state in which the Employer is located. The trustee shall ensure that all investments, amounts, property, and rights held under the Trust Fund are held for the exclusive benefit of the Participants and their Beneficiaries. The Trust Fund shall be held in trust pursuant to a trust agreement for the exclusive benefit of Participants and their Beneficiaries and defraying reasonable expenses of the Plan and of the Trust Fund. It shall be impossible prior to the satisfaction of all liabilities with respect to Participants and their Beneficiaries, for any part of the assets and income of the Trust Fund to be used for, or diverted to, purposes other than for the exclusive benefit of Participants and their Beneficiaries.

IN WITNESS WHEREOF, this Plan Document has been executed this _______day of ________________, 20______.

Employer: __________________________________

By:  _______________ ___________________

Printed Name: __________________________________

Title:  _________ _________________________
ADOPTION AGREEMENT
FOR THE
457(b) DEFERRED
COMPENSATION PLAN OF
SAN DIEGO COUNTY
WATER AUTHORITY,
A GOVERNMENTAL
EMPLOYER
1. **General Information**

   (A) Name of Governmental Employer: San Diego County Water Authority

   (B) Address of Governmental Employer: 4677 Overland Avenue

   San Diego, CA 92123

   (C) Name of Plan: San Diego County Water Authority Deferred Compensation Plan

   (D) Federal Tax ID Number of Governmental Employer: 95-6002767

   (E) Plan Administrator's Name and Address:

   San Diego County Water Authority

   4677 Overland Avenue

   San Diego, CA 92123

2. **Effective Date / Restated Effective Date** (Article I - Definitions)
   (Select one)

   (A) The Plan is a new plan. The Effective Date is __________________________.

   (B) ☒ The Plan is a restated plan. The Restated Effective Date is April 9, 2012

   The Plan’s initial Effective Date was __________________________.

3. **Plan Year** (Article I - Definitions)
   (Select all that apply)

   Plan Year means:

   (A) ☒ The calendar year.

   (B) ☐ The Plan Year is a twelve (12) month period beginning on ___________ and ending on the following _____________.

   (C) ☐ The initial Plan Year is a short Plan Year beginning on ___________ ending on ___________. Thereafter, the Plan Year will be the twelve (12) month period selected in Box 3(A) or Box 3(B) above.
4. **Definition of Compensation** (Article I - Definitions)

*(Please make a selection in (A), (B), and (C))*

(A) ☒ Compensation is defined as W-2 wages.

☐ Compensation will be defined as W-2 wages exclusive of the following:

_______________________________________________________________________

_______________________________________________________________________

☐ Compensation will be defined as follows:

_______________________________________________________________________

_______________________________________________________________________

(B) If so selected, this amount also includes pay for accrued bona fide sick, vacation or other leave pay (but not severance pay). (Note: Any such pay must be paid within the later of 2 ½ months following Severance from Employment or the end of the calendar year which includes the date of Severance from Employment.)

☒ Yes, include. If yes, select which types of accrued leave pay will apply to the Plan.

(1) ☒ Accrued bona fide sick pay

(2) ☒ Accrued vacation pay

(3) ☐ Other accrued leave pay (describe): _________________________________

_______________________________________________________________________

☐ No, do not include.

5. **Eligible Employee** (Article I - Definitions)

*(Select all that apply)*

(A) ☐ All Employees of the Employer.

(B) ☒ All Employees of the Employer, other than the following excluded Employees:

(1) ☒ Leased Employees

(2) ☐ Salaried Employees

(3) ☐ Hourly Employees

(4) ☒ Seasonal Employees

(5) ☒ Temporary Employees
(6) ☑ Independent Contractors

(7) ☐ Employees whose employment is governed by the terms of a collective bargaining agreement between Employee representatives (within the meaning of Code Section 7701(a)(46)) and the Employer, under which retirement benefits were the subject of good faith bargaining.

(8) ☐ Other: ____________________________________________________________

6. **Investment Options** (Article I - Definitions)
   *(Select all that apply)*

   Investment Options shall include any investment made available by either TIAA-CREF or any other Investment Sponsor and selected for use under this Plan by the Employer, or its designee.

   (A) ☑ TIAA Group Supplemental Retirement Annuity Contract ("TIAA GSRA") and a CREF Group Supplemental Retirement Annuity Contract ("CREF GSRA").

   (B) ☑ TIAA Retirement Choice Plus Annuity Contract ("TIAA RCP") and CREF Retirement Choice Plus Annuity Contract ("CREF RCP").

   (C) ☐ Alternate Investment Sponsors are available under the Plan. (List alternate Investment Sponsors)

   ____________________________________________________________

   ____________________________________________________________

   ____________________________________________________________

   (D) ☑ Alternate Investment Sponsors are not available under the Plan.

7. **Normal Retirement Age** (Article I - Definitions)
   *(Please make a selection in (A) and if applicable, (B))*

   (A) **General Rule.** Other than provided in (B), Normal Retirement Age ("NRA") can be defined as any age that is on or after the earlier of age 65 or the age at which a Participant can retire and receive an unreduced benefit under the Employer's defined benefit plan (or if there is no defined benefit plan or if Participants cannot participate in that plan, a money purchase pension plan in which Participants also participate), and that is not later than age 70 ½. Alternatively, an Eligible Plan may choose or permit participants to choose any NRA that is within those ages.

   ☐ Normal Retirement Age will be age 65.

   ☑ Normal Retirement Age will be age ________.

   ☑ Normal Retirement Age will be the age selected by each Participant.
Normal Retirement Age is defined as follows:

(B) **Special Rule for Participants who are Police or Firefighters.** Those Participants may substitute age 40 for age 65 for the rules in (A).

- Normal Retirement Age will be age 40.
- Normal Retirement Age will be age _______.
- Normal Retirement Age will be the age selected by each Participant.
- Normal Retirement Age is defined as follows:

8. **Annual Deferrals** (Section 3.1)

   (Select one)

   (A) ✗ Annual Deferrals may be made to the Plan up to the maximum amount permitted by law.

   (B) □ Annual Deferrals may be made to the Plan up to a maximum amount equal to ____________________, provided that in no event may such deferrals exceed the maximum amount permitted by law.

   (C) □ Annual Deferrals may only be made to this Plan up to the maximum permitted by law after maximizing Elective Deferrals to the Employer's 403(b) plan.

   (D) □ Annual Deferrals may **not** be made to the Plan.

9. **Roth Elective Deferrals** (Article X)

   (Select one)

   (A) ✗ Roth Elective Deferrals may be made to the Plan up to the maximum amount permitted by law.

   (B) □ Roth Elective Deferrals may be made to the Plan up to a maximum amount equal to ____________________, provided that in no event may such deferrals exceed the maximum amount permitted by law.

   (C) □ Roth Elective Deferrals may only be made to this Plan up to the maximum permitted by law after maximizing Elective Deferrals to the Employer's 403(b) plan.

   (D) □ Roth Elective Deferrals may **not** be made to the Plan.
10. **Deferral of Special Pay** (Section 3.4)  
(Select one)  
If selected below, a Participant may elect to defer accumulated sick pay, accumulated vacation pay and other leave pay provided that in no event shall such deferrals to the Plan exceed the maximum amount permitted by law.  
[ ] Yes, apply.  
[ ] No, do not apply.

11. **Age 50 Catch-up Contributions** (Section 3.8(c))  
(Select one)  
If selected below, age 50 catch-up contributions may be made to the Plan up to the maximum amount permitted by law.  
[ ] Yes, apply.  
[ ] No, do not apply.

12. **Special Section 457 Catch-up Limitation** (Section 3.8(b))  
(Select one)  
If selected below, the special Section 457 catch-up contributions may be made to the Plan up to the maximum amount permitted by law.  
[ ] Yes, apply.  
[ ] No, do not apply.

13. **Employer Non-Elective Contributions** (Section 3.6)  
Note: Any Employer contribution will reduce, dollar for dollar, the amount the Participant can defer to the Plan and in no event shall the combined total of Participant and Employer contributions exceed the maximum amount permitted by law.  
(Select one)  
[ ] The Employer will make non-elective contributions to the Plan on behalf of Active Participants in an amount equal to _______% of the Participant’s Compensation.  
[ ] The Employer will make non-elective contributions to the Plan on behalf of Active Participants in an amount equal to:

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
The Employer will not make any non-elective contributions to the Plan.

14. Employer Matching Contributions (Section 3.7)
Note: Any Employer contribution will reduce, dollar for dollar, the amount the Participant can defer to the Plan and in no event shall the combined total of Participant and Employer contributions exceed the maximum amount permitted by law.

(Select one)

(A) The Employer will make matching contributions to the Plan on behalf of Active Participants who make an Annual Deferral pursuant to a Deferred Compensation Agreement in an amount equal to _________% of the Participant’s Compensation that is contributed to the Plan for the Plan Year.

(B) The Employer will make matching contributions to the Plan on behalf of Active Participants who make an Annual Deferral pursuant to a Deferred Compensation Agreement in an amount equal to _________% of the first _________% of the Participant’s Compensation that is contributed to the Plan for the Plan Year.

(C) The Employer will make matching contributions to the Plan as follows:
As authorized by the Board.

(D) The Employer will not make any matching contributions to the Plan.

15. Plan-to-Plan Transfers to the Plan (Section 3.10)

(Select one)

Please note that, in general, direct plan-to-plan transfers to the Plan can only be made between Eligible Governmental Deferred Compensation Plans and if the Participant is an Eligible Employee of the Employer. No transfers to the Plan can be made by a Beneficiary.

(A) Direct transfers may be made to the Plan from any other Eligible Governmental Deferred Compensation Plan to the extent permitted by law.

(B) Direct transfers may be made to the Plan from another Eligible Governmental Deferred Compensation Plan, subject to the following limitations:
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

(C) Direct transfers may not be made to this Plan from any other Eligible Governmental Deferred Compensation Plan.
16. **Plan-to-Plan Transfers from the Plan** (Section 8.1)  
*(Select one)*

Please note that, in general, direct plan-to-plan transfers from the Plan can only be made between governmental 457(b) plans following the Participant’s Severance from Employment with the employer that maintained the transferor plan unless the transfer is with respect to a Participant’s Beneficiary.

(A) ☒ Direct transfers from the Plan may be made to any other Eligible Governmental Deferred Compensation Plan to the extent permitted by law.

(B) ☐ Direct transfers from the Plan may be made to another Eligible Governmental Deferred Compensation Plan, subject to the following limitations:

_______________________________________________________________________

_______________________________________________________________________

_______________________________________________________________________

(C) ☐ Direct transfers from the Plan may **not** be made to any other Eligible Governmental Deferred Compensation Plan.

17. **Transfers to Purchase Service Credits** (Section 8.2)  
*(Select one)*

If selected below, a Participant may request a transfer from this Plan to a defined benefit governmental plan to purchase service credit.

☒ Yes, apply.

☐ No, do not apply.

18. **Rollover Contributions** (Section 3.11)  
*(Select one)*

Note: An Eligible Governmental Deferred Compensation Plan cannot accept rollovers of after-tax funds from another plan. If Roth Elective Deferrals are elected, An Eligible Governmental Deferred Compensation Plan can accept rollovers of Roth Elective Deferrals from another Eligible Governmental Deferred Compensation Plan, or as otherwise permitted under the Code.

(A) ☒ Rollovers to the Plan are permitted to the extent permitted by law.

(B) ☐ Rollovers to the Plan, excluding rollovers of Roth Elective Deferrals, are permitted to the extent permitted by law.

(C) ☐ Rollovers to the Plan are **not** permitted.
19. **Small Balance Distributions** (Section 5.4)  
*(Please select an option from (A) and (B))*

(A) If selected below, small balance distributions of Account Balances of $1,000 or less will be permitted.
- ✔ Yes, apply.
- ☐ No, do not apply.

(B) If selected below, small balance distributions of Account Balances of $5,000 or less will be distributed pursuant to Section 5.4, if permitted by an Investment Option.
- ☐ Yes, apply.
- ✔ No, do not apply.

If small balance distributions are permitted, the Account Balance threshold will be determined by including that portion of the Participant’s Account Balance that is attributable to rollover contributions (and earnings allocable thereto).

20. **Unforeseeable Emergency** (Section 5.5)  
*(Select one)*

If selected below, a Participant may receive a distribution due to Unforeseeable Emergency prior to Severance from Employment.
- ✔ Yes, apply. If “Yes” is selected, please select who will be making the determination approving an Unforeseeable Emergency:
  - ✔ TIAA-CREF
  - ☐ Other Investment Sponsor
  - ☐ Employer or Plan Administrator
- ☐ No, do not apply.

21. **Small Balance In-service Distribution** (Section 5.2)  
*(Select one)*

If selected below, a Participant may receive an in-service distribution of all or a part of his or her benefit if the total amount of the Participant’s benefit is less than $5,000 (or the dollar limit under Section 411(a)(11) of the Code) and the requirements of Section 5.2 of the Plan are satisfied.
- ☐ Yes, apply.
- ✔ No, do not apply.
22. **Special Severance from Employment Definition for Independent Contractors**  
(Section 5.1)  
(Select one)  

The special definition of “Severance from Employment” contained in Section 5.1 of the Plan will be applied to all Participants classified as independent contractors if selected below.

(A) ☐ Yes, apply.  
(B) ☑ No, do not apply.  

23. **Special Payment Date Restrictions for Independent Contractors**  
(Section 5.1)  
(Select one)  

If selected below, the special payment date restrictions for independent contractors contained in Section 5.1 will be applied.

(A) ☐ Yes, apply.  
(B) ☑ No, do not apply.  

24. **Loans**  
(Section 9.1)  
(Select one)  

If selected below, a Participant will be permitted to receive a loan from the Plan.

☑ Yes, apply.  
☐ No, do not apply.  

25. **Qualified Domestic Relations Orders**  
(Section 12.4)  
(Select one)  

If selected below, distributions pursuant to Qualified Domestic Relations Orders will be permitted under the Plan.

☑ Yes, apply.  
☐ No, do not apply.  

26. **Special Considerations Relating to Military Service**  
(Section 5.6)  
(Select one)  

(A) Participants who have died or became Disabled while performing qualified military service shall be treated as if they returned to employment the day preceding the date of death or Disability and had a Severance from Employment on the date of death or Disability.  

(Select one)
☑ Yes, apply to both deceased and Disabled Participants.

☐ Yes, apply to deceased Participants.

☐ No, do not apply.

(B) Deemed Severance from Employment. If elected below, Participants who have been called to active duty for 30 or more days will be deemed as having a Severance from Employment for purposes of receiving a distribution under the Plan. Any distribution under this Section 5.6 requires a suspension of Annual Deferrals under the Plan for six (6) months.

(Select one)

☑ Yes, apply.

☐ No, do not apply.

(C) Credit for Benefit Accruals for Deceased Participants. If elected below, Participants who die while performing qualified military service will be credited with service to the Employer for the period of qualified military service. Any Employer contributions made to the Plan for these Participants will comply with Section 401(a)(37) of the Code.

(Select one)

☐ Yes, apply.

☑ No, do not apply.

By executing this Adoption Agreement, the Employer adopts the 457(b) Deferred Compensation Plan described herein and in the Plan document. The selections and specifications contained in this Adoption Agreement together with the terms, provisions and conditions provided in the Plan document constitute the Plan.

It is understood and acknowledged that TIAA-CREF is not a party to the Plan and shall not be responsible for any tax or legal aspects of the Plan. The Employer assumes responsibility for these matters.

The Employer further acknowledges that it has counseled, to the extent necessary, with its attorney or other tax advisor. The obligations of the Investment Sponsors shall be governed solely by the provisions of its contracts and policies. TIAA-CREF shall not be required to inquire into any action taken by the Employer or the Plan Administrator and shall be fully protected in taking, permitting or omitting any action on the basis of the actions of the Employer or the Plan Administrator. TIAA-CREF shall incur no liability or responsibility for carrying out actions as directed by the Employer or the Plan Administrator.
The provisions you select in completing this Adoption Agreement will apply to your Plan as if they were set forth in the Plan document. In completing this Adoption Agreement, you are urged to consult with your attorney or other tax advisor. TIAA-CREF does not and cannot provide legal or tax advice. Failure to properly fill out the Adoption Agreement may result in the failure of your Plan to satisfy the requirements of an eligible deferred compensation plan under Section 457(b) of the Internal Revenue Code of 1986, as amended.

IN WITNESS WHEREOF, this Adoption Agreement has been executed this _____day of_________________, 20_____.

Employer: __________________________________

By: _______________________________________

Printed Name: ______________________________

Title: _____________________________________
Specimen
Qualified 401(a) Plan and
Trust For Public Employers*
## Table of Contents

<table>
<thead>
<tr>
<th>Article</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Article I – Definitions</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Article II - Eligibility for Participation</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Article III - Plan Contributions</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Article IV – Rollover Contributions and Transfer Contributions</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Article V - Limitations On Contributions</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Article VI – Investment of Contributions and Funding Vehicles</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Article VII – Vesting</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Article VIII – Benefits</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Article IX - Distribution Requirements, Rollovers, Transfers, and Loans</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Article X - Administration</td>
<td>39</td>
<td></td>
</tr>
<tr>
<td>Article XI - Termination and Amendment</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Article XII - Miscellaneous</td>
<td>43</td>
<td></td>
</tr>
</tbody>
</table>
Article I - Definitions

Unless defined otherwise by the Code, Treasury Regulations, or other applicable guidance, the following terms shall have the meaning described herein.

1.1. **Account Balance** means the separate account maintained for each Participant which reflects the aggregate amount credited to the Participant's account under all accounts, the earnings or loss of each Annuity Contract or a Custodial Account (net of expenses) allocable to the Participant, any transfers for the Participant’s benefit, and any distribution made to the Participant or the Participant’s Beneficiary. The Account Balance includes any account type elected in the Adoption Agreement that is established for a Participant, the account established for a Beneficiary after a Participant’s death, and any account or accounts established for an alternate payee (as defined in Code Section 414(p)(8)).

1.2. **Adoption Agreement** means the separate agreement that is executed by the Employer which sets forth the elective provisions of this Plan specified by the Employer.

1.3. **Annuity Contract** means a nontransferable contract that is issued by a company qualified to issue annuities and licensed as an insurance company in a State and which includes payment in the form of an annuity.

1.4. **Beneficiary(ies)** means the individual, Employer, trustee, or estate designated by the Participant to receive benefits. A married Participant's right to designate a Beneficiary (or a form of benefits) or change his or her designation is subject to the Spouse's rights as described in Section 8.6 and elected in the Adoption Agreement.

1.5. **Code** means the Internal Revenue Code of 1986, as amended. Reference to a specific Section of the Code includes not only the Section but any comparable Section or Sections of any future legislation that amends, supplements, or supersedes that Section.

1.6. **Computation Period** means the periods specified in the Adoption Agreement for measuring service for eligibility for participation and vesting.

1.7. **Compensation** will have one of the meanings below pursuant to the election in the Adoption Agreement.

Form W-2 wages. Wages as defined in Code § 3401(a) for purposes of income tax withholding at the source but determined without regard to any rules that limit the remuneration included in wages based on the nature or location of employment or the services performed, and all other payments of compensation paid by the Employer to the Participant for which the Employer is required to issue statements under Code §§ 6041, 6051 and 6052.

Form W-2 Wages less any exclusions selected in the Adoption Agreement.
Code Section 3401(a) wages. Wages for purposes of income tax withholding at the source but determined without regard to any rules that limit the remuneration included in wages based on the nature or location of employment or the services performed (such as the exception for agriculture labor in Code § 3401(a)(2)).

Code Section 415 compensation. A Participant's earned income, wages, salaries, and fees for professional services and other amounts received (without regard to whether or not an amount is paid in cash) for personal services actually rendered in the course of employment with the Employer maintaining the Plan to the extent that the amounts are includible in gross income (or to the extent these amounts would have been includible in gross income but for an election under Code Section 125(a), 132(f)(4), 402(e)(3), 402(h)(1)(B), 402(k) or 457(b)). These amounts include, but are not limited to: commissions paid to salespersons; compensation for services on the basis of a percentage of profits; commissions on insurance premiums; tips; bonuses; fringe benefits; and reimbursements or other expense allowances under a nonaccountable plan (as described in Treasury Regulation Section 1.62-2(c)), and except as set forth below, excluding the following:

(a) Employer contributions to a plan of deferred compensation (including a simplified employee pension described in Code Section 408(k) or a simple retirement account described in Code Section 408(p)) which are not includible in the Employee's gross income for the taxable year in which contributed, or any distributions from a plan of deferred compensation (whether or not qualified);

(b) Amounts realized from the exercise of a nonstatutory stock option, or when restricted stock (or property) held by the Employee either becomes freely transferable or is no longer subject to a substantial risk of forfeiture;

(c) Amounts realized from the sale, exchange or other disposition of stock acquired under a statutory stock option;

(d) Other amounts which received special tax benefits, or contributions made by the Employer (whether or not under a salary-reduction agreement) towards the purchase of an annuity described in Section 403(b) of the Internal Revenue Code (whether or not the amounts are actually excludible from the gross income of the Employee); or

(e) Other items of remuneration that are similar to any of the items listed above.

If elected in the Adoption Agreement Compensation shall include amounts paid by the later of 2½ months after the Participant’s Severance from Employment with the Employer or the end of the limitation year that includes the Participant’s Severance from Employment if:

(a) The payment is regular compensation for services during or outside the Participant’s working hours, commissions, bonuses or other similar payments,
and, absent a severance of employment, the payment would have been made to
the Participant while the Participant continued in the employ of the Employer;

(b) The payment is for unused accrued bona fide sick, vacation, or other leave that
the Participant would have been able to use if employment had continued; or

(c) The payment is received by the Participant pursuant to a nonqualified unfunded
deferred compensation plan and would have been paid at the same time if
employment had continued, but only to the extent includible in gross income.

(d) If elected in the Adoption Agreement Compensation includes amounts paid after
an Employee’s Severance from Employment with the Employer if:

(e) The Participant does not provide services for the Employer by reason of qualified
military service as described in Code Section 414(u)(1) to the extent those
payments do not exceed the amount the Participant would have received had he or
she continued to perform services for the Employer rather than entering qualified
military service; or

(f) The Participant is permanently and totally disabled as defined in Code Section
22(e)(3) and either the Participant is not a highly compensated employee (as
defined in Code Section 414(q)) immediately before becoming disabled or the
Employer elects to continue contributions on behalf of all Participants who are
permanently and totally disabled for a fixed or determined period.

Notwithstanding the election made in the Adoption Agreement, Compensation shall
include only that compensation which is actually paid to the Participant during the
determination period. Except as provided elsewhere in this Plan, the determination
period shall be the period selected by the Employer in the Adoption Agreement. If the
Employer makes no election, the determination period shall be the Plan Year.

Notwithstanding the above, if elected by the Employer in the Adoption Agreement,
Compensation shall include any amount which is contributed by the Employer pursuant
to a salary reduction agreement and which is not includible in the gross income of the
Employee under Sections 125, 132(f)(4), 402(e)(3), 402(h)(1)(B) or 403(b) of the Code.

Also, notwithstanding the election made in the Adoption Agreement, Compensation for a
Participant in a defined contribution plan who is permanently and totally disabled (as
defined in Code Section 22(e)(3)) is the compensation such Participant would have
received for the limitation year if the Participant had been paid at the rate of
compensation paid immediately before becoming permanently and totally disabled, if
such compensation is greater than the compensation determined without such imputed
Compensation if:

(a) The Participant is not a highly compensated employee (as defined under Code
Section 414(q)); and
(b) The contributions made on behalf of such Participant are nonforfeitable when
made.

The annual Compensation of each Participant taken into account for purposes of
determining all benefits provided under the Plan for any Plan Year shall not exceed
$150,000, as adjusted by the Commissioner of the Internal Revenue Service for increases
in the cost of living in accordance with Section 401(a)(17)(B) of the Code. The cost-of-
living adjustment in effect for a calendar year applies to any period, not exceeding 12
months, over which Compensation is determined (determination period) beginning in
such calendar year. If a determination period consists of fewer than 12 months, the
annual compensation limit will be multiplied by a fraction, the numerator of which is the
number of months in the determination period, and the denominator of which is 12.

Notwithstanding the above, Employees of the Employer who became Participants in the
Plan before the first day of the Plan Year beginning after December 31, 1995, will be
subject to the annual compensation limit in effect under the Plan before that date as
determined by IRS regulations.

1.8. **Custodial Account** means the group or individual custodial account or accounts
established for each Participant by the Employer or by each Participant individually, to
hold assets of the Plan.

1.9. **Date of Employment or Re-employment** means the first day in which an employee is
paid for the performance of services for the most recent period of service with the
Employer. For a faculty member, the Date of Employment or Re-employment is the
effective date of the appointment.

1.10. **Differential Pay** means any payment which is made by the Employer to a Participant
with regards to any period during which the individual is performing services in the
uniformed services while on active duty for a period of more than 30 days and such
amount represents all or a portion of the wages such Participant would have received
from the Employer if the Participant was performing services for the Employer.
Differential Pay is included in Compensation for purposes of determining benefits under
the Plan unless specifically elected otherwise under the Adoption Agreement.

1.11. **Eligible Employee** means any employee who is employed by the Employer, including an
officer of the Employer, who is in an eligible category of Employee as designated in the
Adoption Agreement. The term Eligible Employee shall not include an independent
contractor or self-employed individuals as defined by Code Section 401(c)(1), but may
include Leased Employees as provided in Section 1.18., if so elected in the Adoption
Agreement.

1.12. **Employer** means a State or its employment unit named in the Adoption Agreement which
adopts this Plan.

1.13. **Employer Contribution** means the contributions made by the Employer on behalf of a
Participant specified in the Adoption Agreement.
1.14. **Fund Sponsor** means the insurance, variable annuity, an investment company, or any other company offering funding instruments which are providing the Funding Vehicles under the Plan.

1.15. **Funding Vehicles** means any investment held by the trustee pursuant to Article VI and the Annuity Contracts or Custodial Accounts issued for funding amounts held under the Plan and specifically approved by the Employer for use under the Plan which are described in Article VI and designated in the Adoption Agreement as being available for the purpose of funding benefits under this Plan.

1.16. **Hour of Service** means each hour for which an employee is paid, or entitled to payment, for the performance of duties for the Employer. The method for calculating Hours of Service selected in the Adoption Agreement will be credited to the Eligible Employee for the computation period in which the duties are performed for the Employer.

If the Employer elects the actual Hours of Service method for counting Hours of Service, the following hours will be credited to the Eligible Employee for the Computation Period in which the duties are performed for the Employer:

(a) Each hour for which an Employee is paid, or entitled to payment, by the Employer on account of a period of time during which no duties are performed (irrespective of whether the employment relationship has terminated) due to vacation, holiday, illness, incapacity (including disability), layoff, jury duty, military duty or leave of absence. No more than 501 hours of service will be credited under this paragraph for any single continuous period (whether or not such period occurs in a single computation period);

(b) Hours of Service under this paragraph will be calculated and credited pursuant to the Department of Labor Regulation Section 2530.200b-2 of which is incorporated herein by this reference;

(c) Each hour for which back pay, irrespective of mitigation of damages, is either awarded or agreed to by the Employer. The same Hours of Service will not be credited both under the first paragraph or the second paragraph, as the case may be, and under this paragraph. These hours will be credited to the Eligible Employee for the computation period or periods to which the award or agreement pertains rather than the computation period in which the award, agreement or payment is made; or

(d) Any other description provided by the Employer in the Adoption Agreement.

If the Employer elects the elapsed time method for counting Hours of Service, an Employee will receive credit for the aggregate of all time period(s) commencing with the Employee's first day of employment or reemployment and ending on the date of Severance from Employment except for periods of service which may be disregarded in Section 2.3. The first day of employment is the first day the Employee performs an Hour.
of Service. Fractional periods of a year will be expressed in terms of days. An Employee will also receive credit for any period of severance of less than 12 consecutive months. A period of severance is a continuous period of time during which the Employee is not employed by an Employer for at least 12 consecutive months.

1.17. **Individual Agreement** means the agreement between a Fund Sponsor and the Employer or a Participant that constitutes or governs an Annuity Contract or a Custodial Account.

1.18. **Leased Employee** means any person (other than an employee of the Employer (the “recipient employer”), who pursuant to an agreement between the recipient employer and any other person (“leasing organization”), has performed services for the recipient employer (or for the recipient employer and related persons determined in accordance with Code Section 414(n)(6)) on a substantially full-time basis for a period of at least one year, and such services are performed under primary direction or control by the recipient employer. Contributions or benefits provided a Leased Employee by the leasing organization that are attributable to services performed for the recipient employer shall be treated as provided by the recipient employer.

A Leased Employee shall not be considered an employee of the recipient employer if:

(a) Such employee is covered by a money purchase pension plan (maintained by the leasing organization) providing:

(i) a non-integrated employer contribution rate of at least 10 percent of compensation (as defined in Code Section 415(c)(3)), but including amounts contributed pursuant to a salary reduction agreement which are excludible from the employee's gross income under Code Sections 125, 402(e)(3), 402(h)(1)(B), 403(b) ;

(ii) for immediate participation; and

(iii) full and immediate vesting.

(b) Leased Employees do not constitute more than 20 percent of the recipient employer's non-highly compensated workforce.

1.19. **Normal Retirement Age** means the age selected in the Adoption Agreement. Selection of a Normal Retirement Age in no way imposes a mandatory retirement age.

1.20. **Participant** means any Eligible Employee of the Employer for whom contributions are currently being made or have previously been made under the Plan and who has not received a distribution of his or her benefit under the Plan. Except for those employees excluded in the Adoption Agreement, all Eligible Employees who satisfy the participation requirements in the Adoption Agreement will be eligible to participate in the Plan in accordance with Article II.

1.21. **Plan** means the retirement plan of the Employer as described in this document, the
Adoption Agreement, and any amendments thereto.

1.22. **Plan Administrator** means the individual, committee, or entity identified in the Adoption Agreement. If no Plan Administrator is designated in the Adoption Agreement, then the Employer is the Plan Administrator, unless provided otherwise by applicable state statute or regulation.

1.23. **Plan Entry Date** means the first administratively practicable day after the date that an Eligible Employee has met the participation requirements set forth in the Adoption Agreement unless another date is otherwise specified in the Adoption Agreement.

1.24. **Plan Year** is the 12-consecutive-month period designated in the Adoption Agreement.

1.25. **Severance from Employment** means that the Participant ceases to be employed by the Employer maintaining the Plan.

1.26. **Spouse** has the meaning provided under Section 7 of Title 1 of the United States Code pursuant to the Defense of Marriage Act of 1996.

1.27. **State** means a state, a political subdivision of a state, or any agency or instrumentality of a state. “State” includes the District of Columbia (pursuant to Code Section 7701(a)(10)).

1.28. **Taxable Wage Base (TWB)** (also known as the Social Security Earnings Base) means the contribution and benefit base under Section 230 of the Social Security Act.

1.29. **Valuation Date** means the assets of the Plan will be valued daily and annually at fair market value as of the last day of the Plan Year. The method of allocating gains, expenses, losses, appreciation, or depreciation, shall be the method(s) described in the Funding Vehicles.

1.30. **Year of Service** means a Year of Service as determined under the Adoption Agreement.
Article II - Eligibility for Participation

2.1. **Participation.** An Eligible Employee who has met the eligibility requirements in the Adoption Agreement will begin participation in this Plan on his or her Plan Entry Date. Each Participant is entitled to the benefits and is bound by all of the terms, provisions, and conditions of this Plan, including any and all amendments which from time to time may be adopted, including the terms, provisions and conditions of any Funding Vehicle(s) to which Plan contributions have been applied.

If an individual is classified as an independent contractor during any period of providing services to the Employer, such individual will be deemed to be in an ineligible class of employees for purposes of the Plan during such period, even if the individual is determined to be a common law employee during such period pursuant to a government audit or litigation.

2.2. **Notification.** The Employer will notify each Eligible Employee in writing of eligibility to participate in the Plan.

2.3. **Break in Service.** An Eligible Employee shall incur a Break in Service for each Computation Period during which the Eligible Employee fails to complete more than half the number of Hours of Service needed for a Year of Service.

2.4. **Reemployment.** A Participant shall resume participation in the Plan immediately upon reemployment. In the case of a Participant who does not have any non-forfeitable right to the Account Balance attributable to Employer Contributions, Years of Service before the date of reemployment will not be taken into account in computing vesting service under Article VII if the period of absence from employment equals or exceeds five years. The period of absence shall be computed in the same manner as Years of Service.

2.5. **Return to Eligible Class.** In the event a Participant is no longer a member of an eligible class of employees and becomes ineligible to participate, such employee will participate immediately upon returning to an eligible class of employee.

2.6. **Enrollment in Plan.** To participate in this Plan, an Eligible Employee shall complete and return to the Employer the appropriate enrollment form(s). Unless the Eligible Employee’s participation in the Plan is mandatory, failure to complete and return such forms shall be deemed a waiver of such Eligible Employee's right to participate.

2.7. **Information Provided by the Employee.** Each Eligible Employee enrolling in the Plan should provide to the Administrator at the time of initial enrollment, and later if there are any changes, any information necessary or advisable for the administration of the Plan, including any information required under the Individual Agreements.
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Article III - Plan Contributions

3.1. **Employer Contributions.** The Employer will make contributions to the Plan as set forth in the Adoption Agreement.

3.2. **Employee Contributions.** If elected in the Adoption Agreement, this Plan will accept after-tax employee contributions.

3.3. **Military Service Credit.** A Participant whose employment is interrupted or who is on a leave of absence due to qualified military service under Code Section 414(u) will be provided contributions, benefits, and service credit with respect to qualified military service in accordance with Code Section 414(u) and the elections made in the Adoption Agreement.

3.4. **Acceptance of Rollover Contributions.** If elected in the Adoption Agreement, the Plan will accept rollover contributions as provided in Section 4.1 and in accordance with the provisions of the Funding Vehicles.

3.5. **Acceptance of Transfer Contributions.** If elected in the Adoption Agreement, the Plan will accept transfer contributions as provided in Section 4.2 and in accordance with the provisions of the Funding Vehicles.

3.6. **Contributions Made Promptly.** Contributions shall be transferred to the applicable Funding Vehicles within the applicable time prescribed by the Code. Contributions are considered to be credited to Participants no later than the next business day following the day in which the contributions are made to the Funding Vehicles.

3.7. **Allocation of Contributions.** Contributions shall be forwarded to the Fund Sponsors of the Funding Vehicles selected by a Participant, in accordance with the procedures established by the Employer and the Fund Sponsors. Contributions may be allocated by the Participant to one or more Funding Vehicles in whole number percentages. At least as frequently as once a month, a Participant may change his or her allocation of future Plan Contributions to such Funding Vehicles.

3.8. **Remittance Statements.** The Employer will determine the total amount of contributions to be made for each Participant from time to time on the basis of its books and records and in accordance with the provisions of this Section. When each contribution payment is made by the Employer, the Employer will prepare a statement identifying the Participant and the portion of the payment which is made for him or her, and will deliver the payment to the appropriate Fund Sponsors with the contribution payment. Determination by the Employer, which is evidenced by a statement delivered to the Fund Sponsors, is final and binding on all Participants, their Beneficiaries or contingent annuitants, or any other person or persons claiming an interest in or derived from the contributions payment.
3.9. **Participant Statements.** At least once a year the Fund Sponsors to whom the Participant has allocated contributions will send the Participant a report summarizing the status that portion of his or her Account Balance with that Fund Sponsor.

3.10. **Limitations.** Notwithstanding anything to the contrary contained in this Plan, the obligation of the Employer to make contributions is subject to the provisions relating to the amendment and termination of the Plan. However, no amendment or termination will affect any obligation of the Employer to make contributions with respect to Compensation earned by Participants prior to the date of amendment or termination.
Article IV – Rollover Contributions and Transfer Contributions

4.1. **Rollover Contributions.** If elected in the Adoption Agreement, the Plan will accept rollover contributions as provided in this Section. Such contributions will be subject to the terms and restrictions of the Funding Vehicles.

(a) **Eligible Rollover Contributions.** An employee who is a Participant who is entitled to request an Eligible Rollover Distribution from another Eligible Retirement Plan may request to have all or a portion of the Eligible Rollover Distribution paid to the Plan. Such rollover contributions shall be made in the form of cash only. The Plan Administrator may require such documentation from the distributing plan as it deems necessary to effectuate the rollover in accordance with Code Section 402 and to confirm that such plan is an Eligible Retirement Plan.

(b) **Eligible Rollover Distribution.** For purposes of Section (a), an Eligible Rollover Distribution means any distribution of all or any portion of a Participant’s benefit under another Eligible Retirement Plan, except that an Eligible Rollover Distribution does not include (1) any installment payment for a period of 10 years or more, (2) any distribution made upon hardship, or (3) for any other distribution, the portion, if any, of the distribution that is a required minimum distribution under Code Section 401(a)(9).

(c) **Eligible Retirement Plan.** An Eligible Retirement Plan means another qualified trust described in Code Section 401(a), an annuity plan described in Code Section 403(a) or 403(b), an individual retirement account described in Code Section 408(a), an individual retirement annuity described in Code Section 408(b), or an eligible governmental plan described in Code Section 457(b). Rollovers of after-tax amounts may only be made from another plan qualified under Code Section 401(a), an IRA, or a 403(b) plan.

(d) **Separate Accounts.** Separate accounts shall be established and maintained for the Participant for any Eligible Rollover Distribution paid to the Plan.

4.2. **Transfers.** If elected in the Adoption Agreement, direct transfers for a Participant from another plan qualified under Code Section 401(a) shall be permitted as provided in this Section and pursuant to the terms and restrictions of the Funding Vehicles.
Article V - Limitations On Contributions

5.1. Single Plan Limits.

(a) If, for the current limitation year, the Participant does not participate in and has never participated in, another qualified plan maintained by the Employer or a welfare benefit fund, as defined in Code Section 419(e) maintained by the Employer, or an individual medical account, as defined in Code Section 415(l)(2), maintained by the Employer, or a simplified employee pension, as defined in Code Section 408(k), maintained by the Employer, which provides an annual addition as defined in Section 5.4(a), the amount of annual additions which may be credited to the Participant's account for any limitation year will not exceed the lesser of the maximum permissible amount as described in Section 5.4(h) or any other limitation contained in this Plan. If the Employer Contribution that would otherwise be contributed or allocated to the Participant's account would cause the annual additions for the limitation year to exceed the maximum permissible amount, the amount contributed or allocated will be reduced so that the annual additions for the limitation year will equal the maximum permissible amount.

(b) Prior to determining the Participant's actual Compensation for the limitation year, the Employer may determine the maximum permissible amount for a Participant on the basis of a reasonable estimation of the Participant's Compensation for the limitation year, uniformly determined for all Participants similarly situated.

(c) As soon as is administratively feasible after the end of the limitation year, the maximum permissible amount for the limitation year will be determined on the basis of the Participant's actual Compensation for the limitation year.

(d) If pursuant to Section 5.1(c) or as a result of the allocation of forfeitures there is an excess amount, the excess amount will be deemed to consist of the annual additions last allocated, except that annual additions attributable to a welfare benefit fund or individual medical account, if any, will be deemed to have been allocated first regardless of the actual allocation date. The excess shall be disposed of in accordance with the procedures promulgated by the Internal Revenue Service for correcting such excess amounts.

5.2. Multiple Plan Limits

(a) This Section applies if, in addition to this Plan, the Participant is covered for the same limitation year under another qualified defined contribution plan maintained by the Employer, a welfare benefit fund, as defined in Code Section 419(e) maintained by the Employer, an individual medical account, as defined in Code Section 415(l)(2), maintained by the Employer, or a simplified employee pension, as defined in Code Section 408(k), maintained by the Employer, which provides an annual addition as defined in Section 5.4(a). The annual additions which may
be credited to a Participant's account under this Plan for any such limitation year will not exceed the maximum permissible amount as described in Section 5.4(h), reduced by the annual additions credited to a Participant's account under the other plans and welfare benefit funds for the same limitation year. If the annual additions with respect to the Participant under other defined contribution plans, welfare benefit funds, individual medical accounts, and simplified employee pensions maintained by the Employer are less than the maximum permissible amount and the Employer contribution that would otherwise be contributed or allocated to the Participant's account under this Plan would cause the annual additions for the limitation year to exceed this limitation, the amount contributed or allocated will be reduced so that the annual additions under all such plans and funds for the limitation year will equal the maximum permissible amount. If the annual additions with respect to the Participant under such other defined contribution plans, welfare benefit funds, individual medical accounts, and simplified employee pensions in the aggregate are equal to or greater than the maximum permissible amount, no amount will be contributed or allocated to the Participant's account under this Plan for the limitation year.

(b) Prior to determining the Participant's actual Compensation for the limitation year, the Employer may determine the maximum permissible amount for a Participant in the manner described in Section 5.1(b).

(c) As soon as is administratively feasible after the end of the limitation year, the maximum permissible amount for the limitation year will be determined on the basis of the Participant's actual Compensation for the limitation year.

(d) If, pursuant to Section 5.2(c) or as a result of the allocation of forfeitures, a Participant's annual additions under this Plan and such other plans would result in an excess amount for a limitation year, the excess amount will be deemed to consist of the annual additions last allocated, except that annual additions attributable to a welfare benefit fund or individual medical account will be deemed to have been allocated first regardless of the actual allocation date.

(e) If an excess amount was allocated to a Participant on an allocation date of this Plan which coincides with an allocation date of another plan, the excess amount attributed to this Plan will be the product of

(i) the total excess amount allocated as of such date, times

(ii) the ratio of (a) the annual additions allocated to the Participant for the limitation year as of such date under this Plan to (b) the total annual additions allocated to the Participant for the limitation year as of such date under this and all the other qualified defined contribution plans.

(f) Any excess amount attributed to this Plan will be disposed in the manner described in Section 5.1(d).
5.3. **Definitions.** The following definitions apply to this Article:

(a) **Annual Additions** means the sum of the following amounts credited to a Participant's Account for the Limitation Year under this Plan, any other qualified defined contribution plan:

(i) Employer contributions;

(ii) Employee contributions;

(iii) Forfeitures;

(iv) Mandatory Employee contributions to a defined benefit plan that are not picked up by the employer pursuant to Code Section 414(h)(2) are treated as annual additions to a defined contribution plan;

(v) Amounts allocated to an individual medical account, as defined in Code Section 415(l)(2), which is part of a pension or annuity plan are treated as annual additions to a defined contribution plan;

(vi) Also amounts derived from contributions paid or accrued which are attributable to post-retirement medical benefits, allocated to the separate account of a key employee, as defined in Code Section 419A(d)(3), under a welfare benefit fund, as defined in Code Section 419(e), are treated as annual additions to a defined contribution plan; and

(vii) Allocations under a simplified employee pension described in Code Section 408(k).

For this purpose, any excess amount applied under Sections 5.1(d) or 5.2(f) in the limitation year to reduce Employer Contributions will be considered annual additions for such limitation year.

(b) **Compensation** means a Participant's earned income, wages, salaries, and fees for professional services and other amounts received (without regard to whether or not an amount is paid in cash) for personal services actually rendered in the course of employment with the Employer maintaining the Plan to the extent that the amounts are includible in gross income (or to the extent these amounts would have been includible in gross income but for an election under Code Section 125(a), 132(f)(4), 402(e)(3), 402(h)(1)(B), 402(k), or 457(b)). These amounts include, but are not limited to; commissions paid to salespersons; compensation for services on the basis of a percentage of profits; commissions on insurance premiums; tips; bonuses; fringe benefits; and reimbursements or other expense allowances under a nonaccountable plan (as described in Treasury Regulation Section 1.62-2(c)), and except as set forth below, excluding the following:
(i) Employer contributions to a plan of deferred compensation (including a simplified employee pension described in Code Section 408(k) or a simple retirement account described in Code Section 408(p)) which are not includible in the employee's gross income for the taxable year in which contributed, or any distributions from a plan of deferred compensation (whether or not qualified);

(ii) Amounts realized from the exercise of a nonstatutory stock option, or when restricted stock (or property) held by the employee either becomes freely transferable or is no longer subject to a substantial risk of forfeiture;

(iii) Amounts realized from the sale, exchange or other disposition of stock acquired under a statutory stock option;

(iv) Other amounts which received special tax benefits, or contributions made by the Employer (whether or not under a salary reduction agreement) towards the purchase of an annuity described in Section 403(b) of the Internal Revenue Code (whether or not the amounts are actually excludible from the gross income of the Employee); or

(v) Other items of remuneration that are similar to any of the items listed above.

Notwithstanding the preceding sentence, Compensation for a Participant in a defined contribution plan who is permanently and totally disabled (as defined in Code Section 22(e)(3)) is the compensation such Participant would have received for the limitation year if the Participant had been paid at the rate of compensation paid immediately before becoming permanently and totally disabled, if such compensation is greater than the compensation determined without such imputed Compensation if:

The Participant is not a highly compensated employee (as defined under Code Section 414(q)); and

The contributions made on behalf of such Participant are nonforfeitable when made.

For limitation years beginning on or after July 1, 2007, and if elected in the Adoption Agreement, Compensation shall also include compensation paid by the later of 2 ½ months after the Participant’s Severance from Employment with the Employer or the end of the limitation year that includes the Participant’s Severance from Employment if:

The payment is regular compensation for services during or outside the Participant’s working hours, commissions, bonuses or other similar payments, and, absent a severance of employment, the payment would have been made to the Participant while the Participant continued in the employ of the Employer;
The payment is for unused accrued bona fide sick, vacation, or other leave that the Participant would have been able to use if employment had continued; or

The payment is received by the Participant pursuant to a nonqualified unfunded deferred compensation plan and would have been paid at the same time if employment had continued, but only to the extent includible in gross income.

Also, if elected in the Adoption Agreement, for limitation years beginning on or after July 1, 2007, Compensation shall also include compensation paid after an Employee’s Severance from Employment with the Employer if:

The Participant does not provide services for the Employer by reason of qualified military service as used in Code Section 414(u)(1) to the extent those payments do not exceed the amount the Participant would have received had he or she continued to perform services for the Employer rather than entering qualified military service; or

The Participant is permanently and totally disabled as defined in Code Section 22(e)(3) and either the Participant is not a highly compensated employee (as defined in Code Section 414(q)) immediately before becoming disabled or the Employer elects to continue contributions on behalf of all Participants who are permanently and totally disabled for a fixed or determined period.

(c) **Employer** means the Employer that adopts this Plan and any employer required to be aggregated with the Employer pursuant to applicable IRS guidance.

(d) **Excess Amount** means the excess of the Participant's annual additions for the limitation year over the maximum permissible amount.

(e) **Limitation Year** means the calendar year or the 12-consecutive-month period elected by the Employer in the Adoption Agreement. All qualified plans maintained by the Employer must use the same limitation year. If the Plan is amended to adopt a different limitation year, the new limitation year must begin on a date within the limitation year in which the amendment is made.

(g) **Maximum Annual Additions** means the maximum annual addition that may be contributed or allocated to a Participant's account under the Plan for any limitation year and which shall not exceed the lesser of:

(i) $40,000 (as adjusted under Code Section 415(d)); or

(ii) 100 % of the Participant's Compensation for the limitation year.

The compensation limitation referred to in (ii) shall not apply to any contribution for medical benefits (within the meaning of Code Sections 401(h) or 419A(f)(2)) which is otherwise treated as an annual addition.
If a short limitation year is created because of an amendment changing the limitation year to a different 12-consecutive-month period, the maximum permissible amount will not exceed the defined contribution dollar limitation multiplied by the following fraction:

\[
\frac{\text{Number of months in the short limitation year}}{12}
\]
Article VI – Investment of Contributions and Funding Vehicles

6.1. **Manner of Investment.** All amounts contributed to the Plan, all property and rights purchased with such amounts under the Funding Vehicles, and all income attributable to such amounts, property, or rights shall be held and invested in one or more investments held in trust or in one or more Annuity Contracts or Custodial Accounts.

6.2. **Investment of Contributions.** In accordance with the terms of the Individual Agreements, each Participant or Beneficiary shall direct the investment of his or her account among one or more Funding Vehicles made available by Teachers Insurance and Annuity Association (TIAA) and the College Retirement Equities Fund (CREF) and any other Funding Vehicles for the Plan that the Employer makes available to Participants as specified in the Adoption Agreement. A Participant may at any time revise his or her investment direction. A change in the investment direction shall take effect as of the date provided by the Plan Administrator to Funding Vehicle on a uniform basis for all Participants.

6.3. **Exclusive Benefit Rule.** The corpus or income of the Plan may not be diverted to or used for other than the exclusive benefit of the Participants or their Beneficiaries.

Except as provided herein, no annuity contract will be purchased under the Plan unless: (1) no value under contracts providing benefits under the Plan or (2) credits determined by the Fund Sponsor (on account of dividends, earnings, or other experience rating credits, or surrender or cancellation credits) with respect to such contracts may be paid or returned to the Employer or diverted to or used for other than the exclusive benefit of the Participants or their Beneficiaries. Under the group annuity contract, premiums or other consideration received by the Fund Sponsor must be allocated to Participants' Accounts under the Plan.

6.4. **Funding Vehicles.** All Funding Vehicles must be annuity contracts, as defined in Code Section 401(g), issued by companies qualified to do business under the insurance laws of a state, custodial accounts that satisfy the requirements of Code Section 401(f) which are made available by TIAA-CREF, or any other investment held in a trust pursuant to Section 6.7.

6.5. **Trust Requirement.** Qualified plans under Code Section 401(a) are required to satisfy the trust provisions of Code Section 401(a). A trust is created under and subject to a trust agreement in which all of the Plan assets, and the income thereon, are held and from which the Plan benefits are distributed. For this purpose, amounts held under an annuity contract or custodial account pursuant to Code Section 401(f) will qualify as a trust. Annuity Contracts and Custodial Accounts made available by TIAA-CREF are intended to satisfy the trust requirement pursuant to Code Section 401(f). All Funding Vehicles that are not made available by TIAA-CREF shall be held in a trust pursuant to Section 6.7.
6.6. **Trust.** All Funding Vehicles that are not made available by TIAA-CREF shall be held in a trust that meets the requirements of applicable law. The trust shall be adopted by completing and executing a trust agreement, which will form a part of the Plan. Plan contributions may not be restricted by the Employer exclusively to Funding Vehicles held in the trust. Any dividends or credits earned on Funding Vehicles held in the trust will be allocated to the Participants' Accumulation Accounts derived from the contribution for whose benefit the amounts are held.

6.7. **Trust Agreement** means a trust agreement which is a written agreement (or declaration) made by and between the Employer and the trustee under which the trust, as amended from time to time, is maintained.

6.8. **Trustee:** The person(s), committee, or organization appointed under and currently serving as the trustee under the trust agreement. In the case of an annuity contract or custodial account treated as a qualified trust under Code Section 401(f), the person holding the assets of such annuity contract or custodial account shall be treated as the Trustee.
Article VII - Vesting

7.1. **Employer Contributions.** Amounts attributable to Employer Contributions shall become nonforfeitable and fully vested in the Participant’s account in accordance with the vesting schedule elected in the Adoption Agreement.

(a) **Vesting Schedule.** One of the following vesting schedules, as elected in the Adoption Agreement, shall apply to Employer Contributions.

(i) **Immediate:** All contributions are immediately vested when made;

(ii) **Cliff:** All contributions are 100% vested after three Years of Service;

(iii) **Graded:** All contributions are 100% vested in six years; or Contributions vest:

   • 20% after two Years of Service;
   • 40% after three Years of Service;
   • 60% after four Years of Service;
   • 80% after five Years of Service; and
   • 100% after six Years of Service.

(iv) **Alternative schedule consistent with the provisions of the Code.**

(b) Notwithstanding any non-immediate vesting schedule elected in the Adoption Agreement, a Participant shall be fully vested upon:

(i) Termination or partial termination of the Plan for affected Participants; and

(ii) Complete discontinuance of contributions under the Plan.

(c) Pursuant to the elections in the Adoption Agreement, a Participant may also be fully vested upon:

(i) Attaining Normal Retirement Age, if he or she is still an Employee at that time;

(ii) Disability (as defined in Code Section 72(m)(3)); and/or

(iii) Death.
The Computation Period for vesting shall be as designated in the Adoption Agreement. Years of Service for the calculation of the Participant's nonforfeitable percentage shall include all Years of Service except those specifically disregarded by Section 2.3.

7.2. **Employee, Rollover, and Transfer Contributions.** All applicable Employee contributions including Code Section 414(h) pick-up contribution, after-tax contributions, rollovers (after-tax amounts and pre-tax amounts), transfers and earnings thereon will be 100% nonforfeitable at all times.

7.3. **Severance from Employment.** For purposes of this Article, if the value of a Participant's vested Account Balance is zero upon Severance from Employment, the Participant shall be deemed to have received a distribution of such vested Account Balance.

If the Participant severs employment and elects to take a distribution, the non-vested portion will be treated as a forfeiture. If the Participant elects to have distributed less than the entire vested portion of his or her Account Balance derived from Employer Contributions, the part of the non-vested portion that will be treated as a forfeiture is the total non-vested portion multiplied by a fraction, the numerator of which is the amount of the distribution attributable to Employer Contributions and the denominator of which is the total value of the vested Employer-derived Account Balance.

If a Participant receives or is deemed to receive a distribution pursuant to this Section and the individual resumes employment covered under this Plan, the rehired Participant’s Employer-derived Account Balance will be restored to the amount on the date of distribution if the Participant repays to the Plan the full amount of the distribution attributable to Employer Contributions before the earlier of five years after the first date on which the individual is subsequently re-employed by the Employer, or the date the Participant incurs five consecutive one-year Breaks in Service following the date of the distribution. If a Participant is deemed to receive a distribution pursuant to this Section, and the Participant resumes employment covered under this Plan before the date the Participant incurs five consecutive one-year Breaks in Service, upon the re-employment of such Participant, the Employer-derived Account Balance will be restored to the amount on the date of such deemed distribution.

7.4. **Forfeitures.** Forfeitures arising hereunder shall be used to reduce Employer Contributions in the limitation year and succeeding limitation years if necessary or pay Plan expenses as elected in the Adoption Agreement. No forfeitures will occur solely as a result of a Participant's withdrawal of employee contributions.
Article VIII - Benefits

8.1. Normal Form of Benefit.

(a) Unless the joint and survivor rules are elected in the Adoption Agreement, the normal form of benefit is a Single Life Annuity. Except as limited by the Employer in the Adoption Agreement, a Participant who does not elect a Single Life Annuity may receive benefits under income options set forth in the Funding Vehicles between the Fund Sponsor(s) and Participants and/or the Employer. Notwithstanding the foregoing, any option selected must comply with the applicable requirements of Article IX, Distribution Requirements.

(b) To the extent the following rules are elected in the Adoption Agreement, this Subsection shall be administered in accordance with Code Sections 401(a)(11) and 417 and the regulations issued thereunder:

(i) The vested Account Balance of a married Participant will be paid in the form of a Qualified Joint and Survivor Annuity or a Qualified Optional Survivor Annuity, unless an optional form of benefit is selected pursuant to a Qualified Election within the applicable election period described in Code Section 417(a) and the Treasury Regulations issued thereunder.

(ii) If a married Participant dies prior to the annuity starting date, the vested Account Balance will be paid to the Participant’s surviving Spouse in the form of a Qualified Preretirement Survivor Annuity, unless the surviving Spouse has waived his or her rights to such a benefit by consenting in a Qualified Election.

(iii) The normal form of benefit for an unmarried Participant is a Single Life Annuity. Except as limited by the Employer in the Adoption Agreement, a Participant who does not elect a Single Life Annuity may receive benefits under income options set forth in the Funding Vehicles between the Fund Sponsor(s) and Participant and/or the Employer.

(c) Any option selected must comply with the applicable requirements of the Distribution Requirements Article.

(d) Definitions used in this Section:

(i) Qualified Election means the election made by a Participant’s Spouse to consent to waive the normal form of benefit required under the full joint and survivor rules elected in the Adoption Agreement. Such consent shall not be effective unless:
The Participant's Spouse consents in writing to the election;

- The election designates a Beneficiary(ies) or form of benefits, which may not be changed without spousal consent (or the Spouse’s consent expressly permits designations by the Participant without any further spousal consent);

- The Spouse's consent acknowledges the effect of such election and is witnessed by a Plan representative or notary public; or

- The Participant establishes to the satisfaction of a Plan representative that the consent required cannot be obtained because there is no Spouse, because the Spouse cannot be located or because of other circumstances as the Secretary of the Treasury may by regulations prescribe.

Additionally, a Participant's waiver of the Qualified Joint and Survivor Annuity shall not be effective unless the election designates a form of benefit payment that may not be changed without spousal consent (or the Spouse expressly permits designations by the Participant without any further spousal consent). If it is established to the satisfaction of a Plan representative that there is no Spouse or that the Spouse cannot be located, a waiver will be deemed a Qualified Election.

Any consent by a Spouse obtained under this provision (or establishment that the consent of a Spouse may not be obtained) shall be effective only with respect to such Spouse. A revocation of a prior waiver may be made by a Participant without the consent of the Spouse at any time before the commencement of benefits. The number of revocations shall not be limited. No consent obtained under this provision shall be valid unless the Participant has received notice as provided in Code Section 417(a)(3).

(ii) **Qualified Joint and Survivor Annuity** means an annuity for the life a Participant with a survivor annuity for the life of the Participant’s Spouse which is not less than 50% of the amount of the annuity which is payable during the joint lives of the Participant and his or her Spouse, and is the actuarial equivalent of a single annuity for the life of the Participant.

(iii) **Qualified Optional Survivor Annuity** means an annuity for the life of the Participant with a survivor annuity for the life of the Participant’s Spouse that is 75% of the amount which is payable during the joint lives of the Participant and his or her Spouse, and is the actuarial equivalent of a single annuity for the life of the Participant.

(iv) **Qualified Preretirement Survivor Annuity** means a survivor annuity for
the life of a Participant’s Spouse the actuarial equivalent of which is not less than 50% of the Participant’s vested Account Balance.

8.2. **Optional Forms of Benefit.** The optional forms of benefit are the forms offered by the Funding Vehicles available under this Plan. Optional forms available under a Funding Vehicle are equally available to all Participants choosing that Funding Vehicle. The selection of an optional form is subject only to the terms of this Plan and Adoption Agreement and is otherwise not subject to the Employer's discretion. Subject to the elections made in the Adoption Agreement, optional forms of benefit available under this Plan are:

(a) **Single life annuities** as provided under the Funding Vehicle contracts. A single life annuity means an annuity payable in equal installments for the life of the Participant that terminates upon the Participant's death.

(b) **Joint and survivor annuities** as provided under the Funding Vehicle contracts. A joint and survivor annuity means an annuity payable in equal installments for the life of the Participant and providing for at least 50% of the equal installments to be paid for the life of the Participant’s surviving Spouse in the event of the Participant’s death.

(c) **Lump sum benefit** to the extent elected in the Adoption Agreement and to the extent the Funding Vehicle contract permits.

(d) **Fixed period annuities**, to the extent elected in the Adoption Agreement and if provided for under the Funding Vehicle contracts, such period shall not be less than two nor more than 30 years and subject to the limits of Section 9.5.

(e) Any other such annuity and withdrawal option as may be provided under the Funding Vehicle contracts.

8.3. **Life Insurance.** The Plan does not invest in or distribute life insurance.

8.4. **Commencement of Benefits.** Benefits shall commence in accordance with the elections made in the Adoption Agreement and pursuant to Article IX. Payment of benefits under the Plan will commence only when the request is submitted in good order in accordance with Article IX and the rules of the applicable Funding Vehicle(s) holding the Participant’s Accumulation Account.

8.5. **Annuity Contracts.** Any annuity contract distributed under the Plan must be nontransferable. The terms of any annuity contract purchased and distributed by the Plan to a Participant or Beneficiary shall comply with the requirements of this Plan.

8.6. **Death Benefits.** In the event a Participant dies prior to commencement of retirement benefit payments, the full current value of the vested amount in the Account Balance will be paid to the Beneficiary designated by the Participant under the procedures set forth by the Fund Sponsors.
If there is no designated Beneficiary the Account Balance will be paid to the Participant’s Estate, unless the joint and survivor rules are elected in the Adoption Agreement in which case the Participant’s Spouse, if any, is the Beneficiary for at least 50% of the Participant’s vested Account Balance.

Benefits payable under this Section are subject to the minimum distribution rules of Code Section 401(a)(9), as described in Article IX.

8.7. **Benefits for Participants Who Have Died or Become Disabled While Performing Qualified Military Service.** In the case of a Participant who dies while performing qualified military service (as defined in Code Section 414(u)(5)), the Participant’s Beneficiary shall, to the extent required by Code Section 401(a)(37), be entitled to any additional benefits (other than benefit accruals relating to the period of qualified military service unless so elected in the Adoption Agreement) that would be provided under the Plan had the Participant resumed and then severed employment on account of death.

Pursuant to an election in the Adoption Agreement, Participants who die or become disabled (as defined in Code Section 72(m)(3)) as a result of performing qualified military service prior to re-employment by the Employer shall be credited for benefit accrual purposes as if the Participant had resumed employment (pursuant to Chapter 43 of Title 38 of the United States Code) on the day preceding death or disability and severed employment on the actual date of death or disability.

(a) For Participants in a contributory plan who die while performing qualified military service, the following rules will apply if elected in the Adoption Agreement:

(i) The Employer Contribution will be based on the Participant’s actual Employee contributions contributed to the Plan (or elective deferrals if an Employer match applies to this Plan) for the prior 12 months (or the actual length of employment if less than 12 months) herein referred to as “deemed contributions”.

(ii) If the Employer Contribution is based on Years of Service, the Participant’s qualified military service will be credited as actual service with the Employer.

(b) For Participants in a contributory plan who become disabled while performing qualified military service, the following rules will apply as elected in the Adoption Agreement:

(i) The Employer Contribution may be based on either:
   - deemed contributions (described in (a)(i) above); or
   - the actual contributions the Participant has contributed upon resuming employment (with the Employer) which does not exceed the amount the Participant could have contributed during the
period of qualified military service had the Participant not been called to duty. Any contribution made under this provision must be made pursuant to and within the permitted period for making these “make-up” contributions under Code Section 414(u)(8); and

(ii) If the Employer Contribution is based on Years of Service, the Participant’s qualified military service may be credited as actual service with the Employer.
Article IX - Distribution Requirements, Rollovers, Transfers, and Loans

9.1. Commencement of Benefits:

(a) Contributions and/or Transfer Contributions. Subject to the distribution elections in the Adoption Agreement, distributions of contributions and/or amounts held in a separate account attributable to transferred contributions may not be made earlier than Severance from Employment.

(b) Amounts Held In Rollover Accounts. If permitted by the Adoption Agreement and a Participant has separate accounts under the Plan attributable to rollover contributions, the Participant may at any time elect to receive a distribution of all or any portion of the amount held in the Participant’s rollover account(s).

(c) FICA Replacement (“3121”) Plan Contributions. If this election applies in the Adoption Agreement, distributions may not be made from the Participant’s Account Balance that is attributable to the amounts contributed to satisfy the FICA replacement contributions (7.5% of the Participant’s Compensation up to the applicable year’s TWB) prior to Severance from Employment or death.

(d) Notwithstanding any other provision of the Plan and unless the Participant elects otherwise, the payment of benefits under the Plan to the Participant will begin no later than the 60th day after the latest of the close of the Plan Year in which:

(i) The date on which the Participant attains the earlier of age 65 or the Normal Retirement Age specified under the Plan;

(ii) Occurs the 10th anniversary of the year in which the Participant commenced participation in the Plan; or

(iii) The Participant has a Severance from Employment.

A Participant may elect to defer distributions under the Plan to a date that is no later than the Participant’s Required Beginning Date, which is defined in this Article.

9.2. Required Minimum Distributions. The Plan shall comply with the minimum distribution requirements of Code Section 401(a)(9) and the Treasury Regulations issued thereunder.

9.3. General Rules. The requirements of the following Sections are intended to comply with Code Section 401(a)(9) and the Treasury Regulations issued thereunder. The requirements of Code Section 401(a)(9) shall apply to any distribution of a Participant’s vested Accumulation Account(s) and will take precedence over any inconsistent
provisions of this Plan. Notwithstanding the other provisions of this Section, distributions may be made under a designation made before January 1, 1984, in accordance with section 242(b)(2) of the Tax Equity and Fiscal Responsibility Act (TEFRA) and the provisions of the plan that relate to section 242(b)(2) of TEFRA.

9.4. **Time and Manner of Distribution.**

(a) **Required Beginning Date.** The Participant’s entire interest shall be distributed, or begin to be distributed, to the Participant no later than the Participant's Required Beginning Date.

(b) **Death of Participant Before Distributions Begin.** If the Participant dies before distributions begin, the Participant's entire interest shall be distributed, or begin to be distributed, no later than as follows:

(i) If the Participant's surviving Spouse is the Participant's sole designated beneficiary, then distributions to the surviving Spouse shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died, or by December 31 of the calendar year in which the Participant would have attained age 70 ½ , if later.

(ii) If the Participant's surviving Spouse is not the Participant's sole designated beneficiary, then distributions to the designated beneficiary shall begin by December 31 of the calendar year immediately following the calendar year in which the Participant died.

(iii) If there is no designated beneficiary as of September 30 of the year following the year of the Participant's death, the Participant's entire interest shall be distributed by December 31 of the calendar year containing the fifth anniversary of the Participant's death.

(iv) If the Participant's surviving Spouse is the Participant's sole designated beneficiary and the surviving Spouse dies after the Participant but before distributions to the surviving Spouse begin, this Section, other than (b)(i), will apply as if the surviving Spouse were the Participant.

For purposes of Sections 9.4.(b) and 9.6., unless Section 9.4.(b)(iv) applies, distributions are considered to begin on the Participant's Required Beginning Date. If Section 9.4.(b)(iv) applies, distributions are considered to begin on the date distributions are required to begin to the surviving Spouse under Section 9.4.(b)(i). If distributions under an annuity purchased from an insurance company irrevocably commence to the Participant before the Participant's Required Beginning Date or to the Participant's surviving Spouse before the date distributions are required to begin to the surviving Spouse under Section 9.4.(b)(i), the date distributions are considered to begin is the date distributions actually commence.

(c) **Forms of Distribution.** Unless the Participant's interest is distributed in the form
of an annuity purchased from an insurance company or in a single sum on or before the Required Beginning Date, as of the first distribution calendar year, distributions shall be made in accordance with Sections 9.5. and 9.6. If the Participant's interest is distributed in the form of an annuity purchased from an insurance company, distributions thereunder will be made in accordance with the requirements of Code Section 401(a)(9) and the Treasury Regulations.

9.5. Required Minimum Distributions During Participant's Lifetime.

(a) Amount of Required Minimum Distribution for Each Distribution Calendar Year. During the Participant's lifetime, the minimum amount that will be distributed for each distribution calendar year is the lesser of:

(i) the quotient obtained by dividing the Participant's Account Balance by the distribution period in the Uniform Lifetime Table set forth in Treasury Regulation Section 1.401(a)(9)-9, using the Participant's age as of the Participant's birthday in the distribution calendar year; or

(ii) if the Participant's sole designated beneficiary for the distribution calendar year is the Participant's Spouse, the quotient obtained by dividing the Participant's Account Balance by the number in the Joint and Last Survivor Table set forth in Treasury Regulation Section 1.401(a)(9)-9, using the Participant's and Spouse's attained ages as of the Participant's and Spouse's birthdays in the distribution calendar year.

(b) Lifetime Required Minimum Distribution Through Year of Participant’s Death. Required minimum distributions will be determined under this Subsection beginning with the first distribution calendar year and up to and including the distribution calendar year that includes the Participant's date of death.


(a) Death On or After Date Distributions Begin.

(i) Participant Survived by Designated Beneficiary. If the Participant dies on or after the date distributions begin and there is a designated beneficiary, the minimum amount that will be distributed for each distribution calendar year after the year of the Participant's death is the quotient obtained by dividing the Participant's Account Balance by the longer of the remaining life expectancy of the Participant or the remaining life expectancy of the Participant's designated beneficiary, determined as follows:

- The Participant's remaining life expectancy is calculated using the age of the Participant in the year of death, reduced by one for each subsequent year.
• If the Participant's surviving Spouse is the Participant's sole
designated beneficiary, the remaining life expectancy of the
surviving Spouse is calculated for each distribution calendar year
after the year of the Participant's death using the surviving Spouse's
age as of the Spouse's birthday in that year. For distribution calendar
years after the year of the surviving Spouse's death, the remaining
life expectancy of the surviving Spouse is calculated using the age of
the surviving Spouse as of the Spouse's birthday in the calendar year
of the Spouse's death, reduced by one for each subsequent calendar
year.

• If the Participant's surviving Spouse is not the Participant's sole
designated beneficiary, the designated beneficiary's remaining life
expectancy is calculated using the age of the Beneficiary in the year
following the year of the Participant's death, reduced by one for each
subsequent year.

(ii) **No Designated Beneficiary.** If the Participant dies on or after the date
distributions begin and there is no designated beneficiary as of September
30 of the year after the year of the Participant's death, the minimum
amount that shall be distributed for each distribution calendar year after
the year of the Participant's death is the quotient obtained by dividing the
Participant's Account Balance by the Participant's remaining life
expectancy calculated using the age of the Participant in the year of death,
reduced by one for each subsequent year.

(b) **Death Before Date Distributions Begin.**

(i) **Participant Survived by Designated Beneficiary.** If the Participant dies
before the date distributions begin and there is a designated beneficiary,
the minimum amount that shall be distributed for each distribution
calendar year after the year of the Participant's death is the quotient
obtained by dividing the Participant's Account Balance by the remaining
life expectancy of the Participant's designated beneficiary, determined as
provided in Section 9.6.(a).

(ii) **No Designated Beneficiary.** If the Participant dies before the date
distributions begin and there is no designated beneficiary as of
September 30 of the year following the year of the Participant's death,
distribution of the Participant's entire interest shall be completed by
December 31 of the calendar year containing the fifth anniversary of the
Participant's death.

(iii) **Death of Surviving Spouse Before Distributions to Surviving Spouse
are Required to Begin.** If the Participant dies before the date
distributions begin, the Participant's surviving Spouse is the Participant's
sole designated beneficiary, and the surviving Spouse dies before
distributions are required to begin to the surviving Spouse under Section 9.4.(b)(i), this Section 9.6.(b) shall apply as if the surviving Spouse were the Participant.

9.7. **Definitions.**

(a) **Designated Beneficiary.** The individual who is designated as the Beneficiary under the Plan and is the designated beneficiary under Code Section 401(a)(9) and Treasury Regulation Section 1.401(a)(9)-1, Q&A-4.

(b) **Distribution Calendar Year.** A calendar year for which a minimum distribution is required. For distributions beginning before the Participant's death, the first distribution calendar year is the calendar year immediately preceding the calendar year which contains the Participant's Required Beginning Date. For distributions beginning after the Participant's death, the first distribution calendar year is the calendar year in which distributions are required to begin under Section 9.4.(b). The required minimum distribution for the Participant's first distribution calendar year shall be made on or before the Participant's Required Beginning Date. The required minimum distribution for other distribution calendar years, including the required minimum distribution for the distribution calendar year in which the Participant's Required Beginning Date occurs, will be made on or before December 31 of that distribution calendar year.

(c) **Life Expectancy.** Life expectancy as computed by use of the Single Life Table in Treasury Regulation Section 1.401(a)(9)-9.

(d) **Participant's Account Balance.** The Participant's Account Balance as of the last valuation date in the calendar year immediately preceding the distribution calendar year (valuation calendar year) increased by the amount of any contributions made and allocated or forfeitures allocated to the Participant's Account Balance as of dates in the valuation calendar year after the valuation date and decreased by distributions made in the valuation calendar year after the valuation date. The Participant's Account Balance for the valuation calendar year includes any amounts rolled over or transferred to the Plan either in the valuation calendar year or in the distribution calendar year if distributed or transferred in the valuation calendar year.

(e) **Required Beginning Date.** The Required Beginning Date of a Participant is April 1 following the calendar year in which the Participant attains age 70 ½ or, if later, April 1 following the calendar year in which the Participant retires.

9.8. **Election to Allow Participants, Former Participants or Beneficiaries to Elect the Five-Year Rule.**

Participants or Beneficiaries may elect on an individual basis whether the five-year rule or the life expectancy rule in Subsections 9.4.(b) and 9.6.(b) applies to distributions after the death of a Participant who has a designated beneficiary. The election must be made
no later than the earlier of September 30 of the calendar year in which distribution would be required to begin under Section 9.4.(b), or by September 30 of the calendar year which contains the fifth anniversary of the Participant's (or, if applicable, surviving Spouse's) death. If neither the Participant nor the Beneficiary makes an election under this paragraph, distributions will be made in accordance with Sections 9.4.(b) and 9.6.(b).

9.9. **Direct Rollover of Eligible Rollover Distributions.** Notwithstanding any provision of the Plan to the contrary that would otherwise limit a Distributee’s election, a Distributee may elect, at the time and in the manner prescribed by the Plan Administrator, to have any portion of an Eligible Rollover Distribution that is paid directly to an Eligible Retirement Plan specified by the Distributee in a direct rollover and subject to the terms and restrictions of the Funding Vehicles. A Distributee may not make the election described in the preceding sentence to roll over only a portion of the Eligible Rollover Distribution.

For the purposes of this Section, the following definitions apply:

(a) **Eligible Rollover Distribution.** An Eligible Rollover Distribution is any distribution of all or any portion of the balance to the credit of the Distributee, except that an Eligible Rollover Distribution does not include:

(i) any distribution that is one of a series of substantially equal periodic payments (not less frequently than annually) made for the life (or life expectancy) of the Distributee or the joint lives (or joint life expectancies) of the Distributee and the Distributee’s designated beneficiary, or for a period of 10 years or more;

(ii) any distribution to the extent such distribution is required under Code Section 401(a)(9);

(iii) any hardship distribution;

(iv) the portion of any other distribution(s) that is not includible in gross income (determined without regard to the exclusion for net unrealized appreciation with respect to employer securities); and

(v) any distribution(s) that is reasonably expected to total less than $200 during a year.

A portion of a distribution shall not fail to be an Eligible Rollover Distribution merely because the portion consists of after-tax employee contributions, if applicable, which are not includible in gross income. However, such after-tax portion, if any, may be transferred only to an individual retirement account or annuity described in Code Sections 408(a) or 408(b), or to a qualified defined contribution plan described in Code Sections 401(a) or 403(a) that agrees to separately account for amounts so transferred, including separately accounting for the portion of such distribution which is includible in gross income and the portion of such distribution which is not so includible.
(b) **Eligible Retirement Plan.** An Eligible Retirement Plan which agrees to accept a Distributee’s Eligible Rollover Distribution is a qualified plan described in Code Section 401(a), an annuity plan described in Code Section 403(a), an annuity contract described in Code Section 403(b), an individual retirement account described in Code Section 408(a), an individual retirement annuity described in Code Section 408(b), or an eligible plan under Code Section 457(b) which is maintained by a governmental employer which agrees to separately account for amounts transferred into such plan from this Plan. Effective for Plan Years beginning on and after January 1, 2008, an eligible rollover distribution may be paid to a Roth IRA as described in Code Section 408A. In the case of a distribution to a non-spouse Beneficiary, an Eligible Retirement Plan is limited to an individual retirement account described in Code Section 408(a) or an individual retirement annuity described in Code Section 408(b) that has been established on behalf of the Beneficiary as an inherited IRA (within the meaning of Code Section 408(d)(3)(C)). The definition of Eligible Retirement Plan shall also apply in the case of a distribution to a surviving Spouse, or to a Spouse or former Spouse who is the alternate payee under a domestic relations order as defined in Code Section 414(p).

(c) **Distributee.** A Distributee includes an Employee or former Employee. In addition, the Employee’s or former Employee’s surviving Spouse and the Employee’s or former Employee’s Spouse or former Spouse who is the alternate payee under a domestic relations order, as defined in Code Section 414(p), are Distributees with regard to the interest of the Spouse or former Spouse. A Distributee also includes the Participant’s non-spouse designated beneficiary under Section 8.5. In the case of a non-spouse beneficiary, the Direct Rollover may be made only to an individual retirement account or annuity described in Code Sections 408(a) or 408(b) (“IRA”) that is established on behalf of the designated beneficiary and that will be treated as an inherited IRA pursuant to the provisions of Code Section 402(c)(11). Also, in this case, the determination of any required minimum distribution under Code Section 401(a)(9) that is ineligible for rollover shall be made in accordance with IRS Notice 2007-7, Q&A 17 and 18, 2007 I.R.B. 395.

(d) **Direct Rollover.** A Direct Rollover is a payment by the Plan to the Eligible Retirement Plan specified by the Distributee.

9.10. **Transfers to Another Qualified Plan.** If elected in the Adoption Agreement, direct transfers for a Participant to another plan qualified under Code Section 401(a) shall be permitted pursuant to the terms and restrictions of the Funding Vehicles.

9.11. **Transfers for the Purchase of Service Credit.** If elected in the Adoption Agreement, transfers for the purchase of service credit shall be permitted under the Plan as provided in this Section and pursuant to the terms and restrictions of the Funding Vehicles.
(a) If a Participant is also a Participant in a tax-qualified defined benefit governmental plan (as defined in Section 414(d) of the Code) that provides for the acceptance of plan-to-plan transfers with respect to the Participant, then the Participant may elect to have any portion of the Participant’s Account Balance transferred to the defined benefit governmental plan.

(b) Except as provided in this paragraph, a transfer may be made before the Participant has had a Severance from Employment. In the case of a plan with FICA Replacement “3121” contributions, a transfer may only be made after the Participant has had a Severance from Employment.

(c) A transfer may be made only if the transfer is either for the purchase of permissive service credit (as defined in Code Section 415(n)(3)(A)) under the receiving defined benefit governmental plan or a repayment to which Code Section 415 does not apply by reason of Code Section 415(k)(3).

9.12. **Automatic Rollovers of Small Account Balances.** If elected in the Adoption Agreement and pursuant to the terms and restrictions of the Funding Vehicle, Code Section 401(a)(31)(B) and the Treasury Regulations issued thereunder, in the event of an Account Balance greater than $1,000 but less than $5,000 (or such other limit as permitted by the Treasury Regulations), and the Participant does not elect to have such distribution paid directly to an Eligible Retirement Plan specified by the Participant in a Direct Rollover or to receive the distribution directly, then to the extent required and permitted by the Treasury Regulations, the Plan Administrator will distribute such amount in a Direct Rollover to an IRA designated by the Plan Administrator for the benefit of the Participant.

9.13. **Notice of Direct Rollover.** The Plan Administrator shall provide, within a reasonable time period before making an Eligible Rollover Distribution, an explanation to the Participant of his or her right to elect a Direct Rollover and the income tax withholding consequences of not electing a Direct Rollover.

9.14. **Loans.** If elected in the Adoption Agreement and subject to the terms of the Funding Sponsors, loans are available to Participants before the commencement of benefit payments to the extent permitted under Code Section 72(p).

(a) No loan to a Participant under the Plan may exceed the lesser of:

(i) $50,000, reduced by the greater of (i) the outstanding balance on any loan from the Plan to the Participant on the date the loan is made or (ii) the highest outstanding balance on loans from the Plan to the Participant during the one-year period ending on the day before the date the loan is approved by the Plan Administrator (not taking into account any payments made during such one-year period); or

(ii) One-half of the value of the Participant’s vested Account Balance (as of
the valuation date immediately preceding the date on which such loan is approved by the Plan Administrator).

(b) All loans shall be established and administered in accordance with the terms of the loan agreement, the Funding Vehicle from which the loan is taken, Code Section 72(p) and the Treasury Regulations issued thereunder.

(c) To the extent required by the joint and survivor rules elected in the Adoption Agreement, a married Participant’s Spouse must consent to the loan or execute a waiver.
Article X - Administration

10.1. **Plan Administration.** This Plan is intended to satisfy Code Section 401(a) as applicable to a governmental employer as defined in Code Section 414(d) and all provisions shall be interpreted consistently therewith. This Plan shall be administered in accordance with the applicable Code section(s) and regulations issued thereunder which are now in effect or as hereafter amended or recodified.

10.2. **Plan Administrator.** The Plan Administrator named in the Adoption Agreement shall be responsible for enrolling Participants, remitting contributions to the Plan for each Participant to the Funding Vehicle(s) selected by the Participant, and for performing other duties required for the operation of the Plan.

10.3. **Administrative Duties.** The Plan Administrator shall be responsible for administering the Plan according to its terms. These provisions and requirements include but are not limited to:

(a) Determining whether an employee is eligible to participate in the Plan.

(b) Determining whether contributions comply with the applicable limitations.

(c) Determining that any transfers, rollovers, or purchases of service credit comply with applicable requirements and limitations.

(d) Maintaining a list of all Fund Sponsors, Funding Vehicles, and investments under the Plan.

(e) Determining that the requirements of the Plan and Section 401(a) of the Code are properly applied.

(f) Determining the status of domestic relations orders in accordance with the procedures of the Funding Vehicles.

(g) Discretionary and final authority in determining any uncertain terms and to resolve any disputes arising under and all questions concerning administration of the Plan.

(h) Employing attorneys, agents, and accountants as it finds necessary or advisable to assist it in carrying out its duties.

Any determination made by the Plan Administrator shall be given deference, if it is subject to judicial review, and shall be overturned only if it is arbitrary or capricious. In exercising these powers and authority, the Plan Administrator will at all times exercise good faith, apply standards of uniform application, and refrain from arbitrary action.

10.4. **Authority of the Employer.** The Employer, by action of its authorized representative,
Board of Trustees, governing body, or committee may designate a person or persons other than the Employer to carry out any of its powers, authority, or responsibilities. Any delegation will be set forth in writing.

10.5. **Action of the Employer.** Any act authorized, permitted, or required to be taken by the Employer under the Plan, which has not been delegated in accordance with Section 10.3., may be taken by the Employer’s authorized representative, the Board of Trustees, governing body, or committee or as set forth in any governing provision of law. All notices, advice, directions, certifications, approvals, and instructions required or authorized to be given by the Employer under the Plan will be in writing and signed by: (i) the Employer’s authorized representative, (ii) the members of the Board of Trustees, governing body, or committee, as proscribed by law, (iii) by any member or members of the Board of Trustees, governing body, or committee as may be designated by an instrument in writing, signed by all members (or otherwise proscribed by law), as having authority to execute the documents on its behalf, or (iv) a person who becomes authorized to act for the Employer in accordance with the provisions of Section 10.3.

Any action taken by the Employer which is authorized, permitted, or required under the Plan and is in accordance with a Funding Vehicle's contractual obligations, is final and binding upon the Employer, all persons who have or who claim an interest under the Plan, and third parties dealing with the Employer.

10.6. **Indemnification.** In addition to whatever rights of indemnification the Employer’s authorized representative, members of the Board of Trustees, governing body, or committee, or any other person or persons to whom any power, authority, or responsibility of the Employer is delegated pursuant to Section 10.3., may be entitled under any provision of law, the Employer may, under any other agreement, satisfy any liability actually and reasonably incurred by any member or other person or persons, including expenses, attorney's fees, judgment, fines, and amounts paid in settlement or in connection with any threatened, pending, or completed action, suit, or proceeding which is related to the exercise or failure to exercise by the member or other person or persons of any of the powers, authority, responsibilities, or discretion of the Employer as provided under the Plan or trust, or reasonably believed by the authorized representative, member of the Board of Trustees, governing body, or committee, or other person(s) to be provided thereunder or any action taken by the Employer’s authorized representative, member of the Board of Trustees, governing body, or committee, or other person(s) in connection with it.

10.7. **No Reversion.** Except as provided in Section 12.8, under no other circumstances or conditions will any contributions of the Employer revert to, be paid to or inure to the benefit of, directly or indirectly the Employer.

10.8. **Valuations.** Records for each Participant or Beneficiary shall be maintained on the basis of the Plan Year. The assets of the Plan will be valued at fair market value as of the Valuation Date, and the method of allocating trust gains, expenses, losses, appreciation, or depreciation, shall be the method(s) described in the Annuity Contracts and Custodial Accounts or by other applicable documents issued under the Funding Vehicles held under the trust requirement.
10.9. **Relationship of Federal and State Law.** The Plan is intended to satisfy the applicable requirements of Code Section 401(a) that apply to government plans as defined in Code Section 414(d) including Treasury Regulations and other authoritative pronouncements. To the extent not governed by the provisions of the Code or other federal laws, the Plan shall be administered, interpreted and enforced in accordance with the law of the state in which the Employer is located.

10.10. **Expenses.** The Employer may, in its sole discretion, pay any or all reasonable expenses of the Plan’s administration, including but not limited to those involved in retaining necessary professional assistance. If the Employer chooses not to pay such expenses, those amounts may be paid in the following manner at the discretion of the Employer and as permitted by the terms of the Individual Agreement:

- (a) from the assets of the Funding Vehicles,
- (b) from the Accumulation Accounts of Participants who are assessed such expenses or expenses particular to a group of Participants,
- (c) from the Accounts of terminated Participants, even if such amounts are not assessed against active Participants, or
- (d) by Participants outside of the Plan.

Amounts paid from Participant Accumulation Accounts or by Participants outside of the Plan are permitted only to the extent allowed by law, permitted by the terms of the Individual Agreement, and are subject to the nondiscriminatory rules established and applied uniformly by the Employer. Participant expenses, such as those incurred by the Participant in retaining investment advice, may be paid from the Participant’s account to the extent permitted by the Individual Agreement.
Article XI - Termination and Amendment

11.1. **Termination.** While it is expected that this Plan will continue indefinitely, the Employer reserves the right at any time to terminate the Plan, or to discontinue any further contributions or payments under the Plan. In the event of a termination of the Plan or a complete discontinuance of Plan contributions, the Employer will notify all Participants of the termination. As of the date of complete or partial termination, all Accumulation Accounts of affected Participants will become nonforfeitable to the extent funded.

11.2. **Distribution Upon Termination.** Upon termination of the Plan and subject to any restrictions contained in the Individual Agreements, all Annuity Contracts will be distributed to the Participant, the shares in the Custodial Account may be redeemed or otherwise distributed pursuant to the terms of the Custodial Account agreement, and the investment options held in trust will be liquidated, redeemed, or otherwise distributed pursuant to the instructions of the trustee consistent with the terms of any Funding Vehicle.

11.3. **Amendment by Employer.** The Employer reserves the authority to amend this Plan at anytime.

11.4. **Limitation on Amendment.** Notwithstanding the provisions of Section 11.4., the following conditions and limitations apply:

(a) No amendment will be made which will operate to recapture for the Employer any contributions previously made under this Plan except reversions as permitted under Section 12.8. Also, those contributions made in contemplation of initial approval by the Internal Revenue Service may be returned to the Employer if the Internal Revenue Service fails to approve the Plan, provided they are returned within one year of the date of denial and the determination letter application was filed in a timely manner.

(b) No amendment will deprive, take away or alter any previously approved right of any Participant insofar as Plan contributions are concerned.
12.1. **Plan Non-Contractual.** Nothing contained in this Plan will be construed as a commitment or agreement on the part of any person to continue his or her employment with the Employer, and nothing contained in this Plan will be construed as a commitment on the part of the Employer to continue the employment or the rate of compensation of any person for any period, and all employees of the Employer will remain subject to discharge to the same extent as if the Plan had never been put into effect.

12.2. **Claims of Other Persons.** The provisions of the Plan will in no event be construed as giving any Participant or any other person, firm, or corporation, any legal or equitable right against the Employer, its officers, employees, or directors, except the rights as are specifically provided for in this Plan or created in accordance with the terms and provisions of this Plan.

12.3. **Non-Alienation of Retirement Rights or Benefits.** Except as provided below in (a) and (b), the interests of each Participant or Beneficiary under the Plan are not subject to the claims of the Participant's or Beneficiary’s creditors; and neither the Participant nor any Beneficiary shall have any right to sell, assign, transfer, or otherwise convey the right to receive any payments hereunder or any interest under the Plan, which payments and interest are expressly declared to be non-assignable and non-transferable.

(a) **Domestic Relation Orders.** Notwithstanding the first paragraph of this Section, above, if a judgment, decree or order (including approval of a property settlement agreement) that relates to the provision of child support, alimony payments, or the marital property rights of a Spouse or former Spouse, child, or other dependent of a Participant is made pursuant to the domestic relations law of any State (“domestic relations order”), then the amount of the Participant’s Account Balance shall be paid in the manner and to the person or persons so directed in the domestic relations order. Such payment shall be made without regard to whether the Participant is eligible for a distribution of benefits under the Plan. The Plan Administrator shall establish reasonable procedures for determining the status of any such decree or order and for effectuating distribution pursuant to the domestic relations order.

(b) **IRS Levy.** Notwithstanding the first paragraph of this Section, above Subsection (a), the Administrator may pay from a Participant's or Beneficiary's Account Balance the amount that the Administrator finds is lawfully demanded under a levy issued by the Internal Revenue Service with respect to that Participant or Beneficiary or is sought to be collected by the United States Government under a judgment resulting from an unpaid tax assessment against the Participant or Beneficiary.
12.4. **Plan Mergers.** In the event of a merger or consolidation with, or transfer of assets or liabilities to any other plan, each Participant will receive a benefit immediately after such merger, etc. (if the Plan then terminated) which is at least equal to the benefit the Participant was entitled to immediately before such merger, etc. (if the Plan had terminated).

12.5. **Individual Agreements.** The terms of the Funding Vehicles and the terms of the trust in which a Funding Vehicle may be held and any certificates issued to a Participant are a part of the Plan as if fully set forth in the Plan document and the provisions of which are incorporated by reference into the Plan. Documents establishing such Funding Vehicles shall be consistent with the terms of the Plan. In the event of any conflict between the terms of this Plan and the terms of any document that is made a part of the Plan, the Plan Administrator shall resolve the conflict. In the event of any conflict between the terms of this Plan and the terms of any portion of any document that is not a part of the Plan, the Plan provisions shall control. Notwithstanding the foregoing, in no event will the terms of the Plan expand or change the benefits, rights or features available under the Individual Agreements.

12.6 **Tax Withholding.** Contributions to the Plan are subject to applicable employment taxes. Any benefit payment made under the Plan is subject to applicable income tax withholding requirements (including Code Section 3401 and the Employment Tax Regulations issued thereunder). A payee shall provide such information as the Funding Vehicle may need to satisfy income tax withholding obligations, and any other information that may be required by guidance issued under the Code.

12.7 **Payments to Minors and Incompetents.** If a Participant or Beneficiary entitled to receive any benefits hereunder is a minor or is adjudged to be legally incapable of giving valid receipt and discharge for such benefits, or is deemed so by the Funding Vehicle, benefits will be paid to such person as the Funding Vehicle may designate or the benefit of such Participant or Beneficiary. Such payments shall be considered a payment to such Participant or Beneficiary and shall, to the extent made, be deemed a complete discharge of any liability for such payments under the Plan.

12.8 **Mistaken Contributions.** If any contribution (or any portion of a contribution) is made to the Plan by a good faith mistake of fact, then within one year after the payment of the contribution, and upon receipt in good order of a proper request approved by the Funding Vehicle, the amount of the mistaken contribution (adjusted for any income or loss in value, if any, allocable thereto) shall be returned directly to the Employer.

12.9 **Procedure When Distributee Cannot Be Located.** The Funding Vehicle shall make all reasonable attempts to determine the identity and address of a Participant or a Participant's Beneficiary entitled to benefits under the Plan. For this purpose, a reasonable attempt means:

(a) The mailing by certified mail of a notice to the last known address shown on the Employer’s or the Plan Administrator's records,
(b) Notification sent to the Social Security Administration or the Pension Benefit Guaranty Corporation (under their program to identify payees under retirement plans), and

(c) The payee has not responded within six months.

If the Funding Vehicle is unable to locate such a person entitled to benefits hereunder, or if there has been no claim made for such benefits, the Funding Vehicle shall continue to hold the benefits due such person except to the extent state law requires otherwise.

12.10 **Headings.** Headings of the Plan have been inserted for convenience of reference only and are to be ignored in any construction of the provisions hereof.

12.11 **Gender.** Pronouns used in the Plan in the masculine or feminine gender include both genders unless the context clearly indicates otherwise.

Employer Identification number____________________________________________

Plan Number_________________________________________________________
Specimen
Qualified 401(a) Plan and
Trust For Public Employers
Adoption Agreement
Specimen
Qualified 401(a) Plan and
Trust For Public Employers
Adoption Agreement

By filling out and signing this Adoption Agreement, the Employer formally adopts this Qualified 401(a) Plan and Trust for Public Employers. Failure to properly fill out the Adoption Agreement may result in the Employer's Plan failing to satisfy the requirements of the Internal Revenue Code.

The undersigned Employer adopts the Qualified 401(a) Plan and Trust for Public Employers. This Adoption Agreement is part of that Plan. The Plan as adopted will be known as the San Diego County Water Authority Defined Contribution Plan (the "Plan").

(This Plan may only be adopted by a state government or any political subdivision thereof, or an agency or instrumentality of the foregoing.)

This Adoption Agreement is to be completed for plans with an Employer Contribution that is either a Code Section 414(h)(2) pick-up contribution, matching contribution, Employer non-elective or discretionary contribution, and for plans with after-tax Employee Contributions which are in addition to an Employer Contribution. For other Employer Contribution types (FICA replacement, leave conversion, early/phased retirement incentive, deferred retirement option program, or any other Employer Contribution not previously described), the appropriate appendix must be used in conjunction with this Adoption Agreement for the Contribution, Eligibility, Participation Requirements, and Vesting sections (noted with an asterisk below).

If an appendix will be used with this Adoption Agreement, check all of the appendices that will be attached:

FICA Replacement Appendix
Leave Conversion Appendix
Early/Phased Retirement Incentive Appendix
Deferred Retirement Option Program Appendix
Other Employer Contribution Appendix

1. EMPLOYER: San Diego County Water Authority

PLAN ADMINISTRATOR: San Diego County Water Authority
2. **EFFECTIVE DATE:** (select one)

   This is a new plan, effective as of: ____________________________.

   X This is an amendment and restatement of a prior plan known as the:

   San Diego County Water Authority Defined Contribution Plan

   The amendment and restatement is effective as of: April 9, 2012

   **Note:** If this is an amendment and restatement of a prior plan, the selection of options in this Adoption Agreement which differ from those in the prior plan should not result in inconsistent provisions and the effective date must not be earlier than the first day of the plan year in which this Adoption Agreement is executed.

3. **PLAN YEAR:**

   A Plan Year shall be (select only one of the first two options):

   X Each twelve-month period beginning on January 1 and ending on December 31; or

   Each twelve-month period beginning on _________ and ending on ________.

   The initial Plan Year, and only that year, shall begin on ______ and end on ______. (Complete if initial year is a short year.)

4. **CONTRIBUTIONS***:

   A. **Employer Non-Elective Contributions** (select option 1 or 2):

   X 1. Employer non-elective contributions that are made without any requirement for an Employee contribution are NOT applicable to this plan; or

   2. Employer non-elective contributions will be made in accordance with the following schedule:
B. **Code Section 414(h)(2) Pick-Up Contributions** (select option 1 or 2):

1. Code Section 414(h)(2) pick-up contributions are NOT applicable to this Plan; or

   X 2. This Plan requires a mandatory pre-tax contribution made on a salary reduction basis (Code Section 414(h)(2) pick-up contributions are required as a condition of employment).

   The amount of the mandatory Employee contribution is (select one):

   X In the amount of an amount each pay period equal to 3% or greater up to 20% of Compensation; or

   In the amount of $_______________ (must be greater than zero).

C. **Matching Employer Contributions** (select either option 1 or both options 2 & 3):

   X 1. Matching Employer contributions are NOT applicable to this Plan; or

   2. Using the formula(s) below, the Employer will make matching contributions to the Plan based on (select all that apply):

      Employee contributions to another plan maintained by the Employer; or

      Code Section 414(h)(2) pick-up contributions; or

      After-tax Employee contributions.

   3. The following matching contribution formula applies to this Plan:

      ______________________________________________________________

      ______________________________________________________________

      ______________________________________________________________.

Page 4 of 25
D. **Discretionary Employer Contributions** (select one):

Discretionary contributions are NOT applicable to this Plan; or

The Employer will make discretionary contributions which will be
allocated in the proportion that each Participant’s Compensation bears to
all Participants’ Compensation; or

X The Employer will make the following discretionary contributions
(describe): Employer discretionary contributions as approved by the
Board.

E. **After-Tax Employee Contributions** (select option 1 or 2):

X 1. This Plan will NOT accept after-tax contributions; or

2. This Plan will accept after-tax contributions.

After-tax Employee contributions are permitted under the Plan only if Employer
contributions are also made to the Plan.

F. **Contribution Continuance** (select one or both if applicable):

Even if the Participant would otherwise have an absence from service
during a paid sabbatical or other comparable leave of absence, the
Employer will continue its contributions for a Participant on the basis of
Compensation then being paid by the Employer; and/or

The Employer will make contributions for totally and permanently
disabled Participants (as defined in Code §22(e)(3)) during the period of
disability on the basis of the Compensation each such Participant would
have received for the limitation year if the Participant had been paid at the
rate of Compensation paid immediately before becoming permanently and
totally disabled. Contributions made on behalf of such Participant will be
nonforfeitable when made.

Describe the contributions: ______________________________________

______________________________________________________________.
G. **Military Service:**

**Special option for Participants who die or become disabled while performing qualified military service.** If you elect, below, to provide credit for this time, Participants who die or become disabled while serving in the military will receive additional contributions under the Plan for the time they served in military service. If you do not elect, such Participants will not receive credit under this Section.

1. For benefit accrual purposes, Participants who die or become disabled while performing qualified military service (select one):

   Will receive credit in accordance with Section 414(u) (if you select this option and have a contributory plan, fill out Subsection 2 below); or

   Will not receive credit.

2. For a contributory plan that has elected to give credit in Subsection 1 above, select how required contributions will be determined for disabled participants:

   Employer contributions will be made based on deemed contributions (this method will automatically apply to deceased Participants if the election to receive credit is made in Subsection 1, above); or

   Employer Contributions will be based on the actual contributions that the Participant makes up to the Plan.

5. **ELIGIBILITY**: (Select A or B)

   A. **Eligible Employee is as follows for all contribution types under the Plan:**
   (use Section B if an Eligible Employee is defined differently for different contribution types under the Plan):

   Not applicable; or

   X   For all contributions, an Eligible Employee is:

   Special category employees, executive managers, senior managers, and confidential employees.

   Any Employee of the Employer.
B. **Eligible Employee is defined differently for different contribution types:** Use the following provision.

1. **Non-Elective Employer Contributions:**

   For purposes of non-elective Employer Contributions, an Eligible Employee is: ___________________________________________  
   _____________________________________________________; or

   Non-elective Employer Contributions are NOT applicable to this Plan.

2. **Code Section 414(h) Pick-Up Contributions:**

   For purposes of the Code Section 414(h)(2) pick-up contributions, an Eligible Employee is: _______________________________  
   _____________________________________________________; or

   Code Section 414(h)(2) pick-up contributions are NOT applicable to this Plan.

3. **Matching Employer Contributions:**

   For purposes of the matching Employer Contributions, an Eligible Employee is: ___________________________________________  
   _____________________________________________________; or

   Matching Employer Contributions are NOT applicable to this Plan.

4. **Discretionary Employer Contributions:**

   For purposes of discretionary Employer Contributions, an Eligible Employee is: Based on Qualifying Employee Group

   Discretionary Employer Contributions are NOT applicable to this Plan.
5. After-Tax Employee Contributions:

For purposes of after-tax Employee contributions, an Eligible Employee is: __________________________________________
___________________________________________________; or

After-tax Employee contributions are NOT applicable to this Plan.

6. CREDITING SERVICE:

Method for crediting service. An Employee’s service will be determined on the basis of the method selected below for all purposes under the Plan.

On the basis of actual Hours of Service for which an Employee is paid or entitled to payment (counting hours).

This method shall apply to the following groups of Employees:

All Employees; or

Only the following categories of Employees:___________
______________________________________________
______________________________________________.

X Not applicable to this Plan.

Year of Service. A Year of Service means each computation during which an Eligible Employee completes at least 1,000 Hours of Service unless provided otherwise in the next sentence. A Year of Service means each computation period during which an Eligible Employee completes at least ____________ (insert the required number of Hours) Hours of Service.

Hours of Service. If actual Hours of Service is elected above for crediting service, the following hours will be credited to the Eligible Employee for the Computation Period in which the duties are performed for the Employer:

Each hour for which an Employee is paid, or entitled to payment, by the Employer.

Hours of Service under this paragraph will be calculated and credited pursuant to the Department of Labor Regulation Section 2530.200b-2 of which is incorporated herein by this reference.
Hours of service are calculated based on equivalencies. For each of the following periods which apply, insert the number of hours which will be credited.

Daily hours credited: _______________________

Weekly hours credited: _____________________

Monthly Hours credited: ____________________

ii. Other (describe): ________________________

On the basis of Elapsed Time. For purposes of determining whether an Employee has a Year of Service, except for periods of service which may be disregarded in Section 2.3 of the Plan Document, an Employee will receive credit for the aggregate of all time period(s) commencing with the Employee's first day of employment or reemployment and ending on the date of Severance from Employment. The first day of employment is the first day the Employee performs an Hour of Service. Fractional periods of a year will be expressed in terms of days. An Employee will also receive credit for any period of severance of less than 12 consecutive months. A period of severance is a continuous period of time during which the Employee is not employed by an Employer for at least 12 consecutive months.

i. This method shall apply to the following groups of Employees:

   All Employees; or

   Only the following categories of Employees:

   ________________________________
   ________________________________
   ________________________________.

ii. Not applicable to this Plan.
7. PARTICIPATION REQUIREMENTS*:

Eligible Employees who meet the following participation requirements are eligible to participate in the Plan. Complete section A & B if you apply the same requirements for all types of contributions. Complete Section C if you have different rules for different types of contributions.

A. Age (select one):

   X No age requirement; or
   _____ years old (generally not older than 26).

B. Service (select one):

   X No service requirement; or
   One Year of Service is required; or
   _____ Years of Service are required (generally not greater than two years).

C. If you apply different age and/or service requirements for different types of contributions, describe the rules that apply to each type of contribution.

   Non Elective Employer Contributions: ______________________________
   ________________________________________________________________.

   Code Section 414(h) Pick-up Contributions: ________________________
   ________________________________________________________________.

   Matching Employer Contributions: _________________________________
   ________________________________________________________________.

   Discretionary Employer Contributions: _____________________________
   ________________________________________________________________.

   After-Tax Employee Contributions: _________________________________
   ________________________________________________________________.
D. **Continued Participation Requirements for receiving Employer Contributions:**

Unless elected below, Participants are not required to complete a Year of Service or be employed on the last day during the Plan Year in order to receive contributions. If Participants are required to satisfy certain on-going participation requirements to receive contributions, select all that apply. If you do not impose any requirements, skip this section.

Participants are required to be employed on the last day of the Plan Year in order to receive contributions.

Participants are required to complete a Year of Service during each Plan Year in order to receive contributions.

Participants who have had a Severance from Employment are NOT required to satisfy a Year of Service in the year of severance.

Participants who are on a paid sabbatical or other comparable leave of absence are NOT required to satisfy a Year of Service.

Participants who are totally and permanently disabled are NOT required to satisfy a Year of Service.

E. **Computation Period:** The Computation Period for purposes of eligibility to participate is:

- **X** The initial computation period is the 12-consecutive month period beginning on the date the Eligible Employee first performs an Hour of Service for the Employer (employment commencement date).

- **X** The succeeding computation periods are (select one):

  The 12-consecutive month periods commencing with the first anniversary of the Eligible Employee’s employment commencement date and succeeding anniversaries thereof; or

  **X** Plan Years, beginning with the first Plan Year which includes the first anniversary of the Eligible Employee’s employment commencement date (regardless of whether the Eligible Employee is entitled to be credited with the Hours of Service required for a Plan Year during such period), provided that an Eligible Employee who is credited with the required Hours of Service in both the initial Computation Period and the Plan Year which includes the first anniversary of the Eligible Employee’s employment commencement date is credited with two Years of Service for purposes of eligibility to participate.
For Eligible Employees who are required to perform two Years of Service, for purposes of the Computation Period for eligibility to participate:

The initial computation period is the 24-consecutive month period beginning on the date the Eligible Employee first performs an Hour of Service for the Employer (employment commencement date).

The succeeding computation periods are (select one):

The 12-consecutive month periods commencing with the first anniversary of the Eligible Employee's employment commencement date and succeeding anniversaries thereof; or

Plan Years, beginning with the first Plan Year which includes the second anniversary of the Eligible Employee's employment commencement date (regardless of whether the Eligible Employee is entitled to be credited with the Hours of Service required for a Plan Year during such period), provided that an Eligible Employee who is credited with the required Hours of Service in both the initial Computation Period and the Plan Year which includes the second anniversary of the Eligible Employee's employment commencement date is credited with two Years of Service for purposes of eligibility to participate.

F. Periods of service excluded from Years of Service for eligibility to participate: All of a Participant's Years of Service with the Employer are counted except (select all that apply):

Years of Service before age _____.

Years of Service before the Employer maintained this Plan or a predecessor plan.

8. PLAN ENTRY DATE:

Unless otherwise described below, the Plan Entry Date is the first administratively practicable date after the date an Eligible Employee has met the participation requirements.

The Plan Entry Date shall be (describe): Daily
9. **COMPENSATION:**

A. **Definition:** Compensation will mean all of a Participant's (select one definition):

1. **Form W-2 wages.**
   
   Inclusion of Employer Contributions from salary reduction agreements. Compensation (select one):
   
   Shall not include; or
   
   **X** Shall include
   
   Employer Contributions made pursuant to a salary reduction agreement which are not includable in the gross income of the Employee under Code Sections 125, 132(f)(4), 402(e)(3), 402(h)(1)(B), 402(k) or 457(b).

2. Form W-2 wages described above exclusive of the following items (select all that apply):
   
   - Bonuses
   - Overtime
   - Differential Wage Payments made by the Employer to a Participant who is serving in the military
   - Other (describe) __________________________________________________________________________.

   Note: Any exclusion(s) must be very specifically described.

3. Code Section 3401(a) wages.


5. **Other.** Compensation is (describe): ____________________________________________________________________________  
   
   ____________________________________________________________________________.

6. Compensation shall include the following (select all that apply):

   Compensation paid by the later of 2 ½ months after the Participant’s Severance from Employment with the Employer or the end of the limitation year that includes the Participant’s Severance from Employment.

   Compensation paid after an Employee’s Severance from Employment with the Employer if the Participant is permanently and totally disabled as defined in Code Section 22(e)(3) and either the Participant is not a highly compensated employee (as defined in Code Section 414(q) immediately before becoming disabled or the Employer elects to continue contributions on behalf of all Participants who are permanently and totally disabled for a fixed or determined period.

B. **Determination Period.** Compensation shall be determined over the following determination period (select one):

   X The Plan Year; or

   A consecutive 12-month period ending with or within the Plan Year.

   Enter the date this period begins: ____________________________.

   For Employees whose date of hire is less than 12 months before the end of the period designated, Compensation will be determined over the Plan Year.

10. **ROLLOVERS INTO THE PLAN:**

A. Direct rollovers into the Plan (other than after-tax amounts) (select one):

   The Plan will NOT accept an Eligible Rollover Distribution from other Plans; or

   X The Plan will accept an Eligible Rollover Distribution from other plans in accordance with the provisions of the Funding Vehicles.

   If rollovers into the Plan are accepted, check each that applies. (Note that if the Plan accepts a direct rollover from a qualified plan, only the first two choices below will apply.)

   A qualified plan described in Code Section 401(a).

   A qualified plan described in Code Section 403(a).

   An annuity contract described in Code Section 403(b).
An eligible governmental plan under Code Section 457(b) which is maintained by a state, political subdivision of a state, or any agency or instrumentality of a state or political subdivision of a state.

An individual retirement account or annuity under Code Sections 408(a) or 408(b).

B. Direct rollovers of after-tax contributions into the Plan (Roth Elective Deferrals or Roth IRA are not accepted) (select one):

The Plan will NOT accept a direct rollover of after-tax amounts; or

The Plan will accept a direct rollover of after-tax amounts; or

The Plan will accept a direct rollover of after-tax amounts but only from:

Another qualified plan described in Code Section 401(a);

An annuity contract described in Code Section 403(b); and/or

An individual retirement account or annuity under Code Section 408(a) or 408(b).

11. TRANSFERS INTO THE PLAN:
Direct transfers into the Plan (check one):

The Plan will NOT accept transfers from other plans; or

X The Plan will accept transfers from other plans in accordance with the provisions of the Funding Vehicles and the Code.

12. VESTING*:

A. A Participant’s nonforfeitable right to the Account Balances (if any) derived from Code Section 414(h)(2) pick-up contributions and after-tax employee contributions is 100% vested at all times.

B. Employer Non-Elective Contributions: Participant's nonforfeitable right to the Account Balance derived from the Employer non-elective Contributions shall vest according to the following schedule (select one):

100% vested at all times; or

100% vested upon completion of _____ Years of Service (and/or attainment of age _____, if later); or
Graded vesting schedule:

2 Years of Service = 20% vested
3 Years of Service = 40% vested
4 Years of Service = 60% vested
5 Years of Service = 80% vested
6 Years of Service = 100% vested; or

Other vesting schedule (describe):

C. **Employer Matching Contributions**: A Participant's nonforfeitable right to the Account Balance derived from the Employer matching contributions shall vest according to the following schedule (select one):

100% vested at all times; or

100% vested upon completion of _____ Years of Service (and/or attainment of age _____, if later); or

Graded vesting schedule:

2 Years of Service = 20% vested
3 Years of Service = 40% vested
4 Years of Service = 60% vested
5 Years of Service = 80% vested
6 Years of Service = 100% vested; or

Other vesting schedule (describe):

____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________
____________________________________________________________
D. **Discretionary Employer Contributions:** A Participant's nonforfeitable right to the Account Balance derived from the discretionary Employer Contributions shall vest according to the following schedule (select one):

- **X** 100% vested at all times; or

- 100% vested upon completion of ____Years of Service (and/or attainment of age _____, if later); or

Graded vesting schedule:

- 2 Years of Service = 20% vested
- 3 Years of Service = 40% vested
- 4 Years of Service = 60% vested
- 5 Years of Service = 80% vested
- 6 Years of Service = 100% vested; or

Other vesting schedule (describe):

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

F. **Check if applicable:**

- **X** A Beneficiary's (ies) right to the Participant's Account Balance derived from Employer Contributions shall be nonforfeitable upon the Participant's death.

- **X** A Participant’s right to his or her Account Balance will be nonforfeitable upon attainment of Normal Retirement Age.

- **X** A Participant’s right to his or her Account Balance will be nonforfeitable upon Disability.
G. **Years of Service for Vesting:**

X All of a Participant's Years of Service with the Employer are counted to determine the nonforfeitable percentage in the Participant’s Account Balance derived from Employer Contributions except (check all that apply):

- Years of Service before age _____.
- Years of Service before the Employer maintained this Plan or a predecessor plan.

For Participants who become disabled while performing qualified military service and are unable to return to employment, you may provide credit for vesting for the time served in the military. If you do not elect below, no credit will be given for this time. For vesting purposes, Participants who become disabled while performing qualified military service (select one):

  - Will receive credit in accordance with Section 414(u); or
  - Will not receive credit.

If you elected in this Adoption Agreement to provide Participants who die or become disabled with credit for qualified military service for benefit accrual purposes, Participants who die will automatically be credited for qualified military service for vesting purposes.

H. **Computation Period for Vesting:** For purposes of the Computation Period for vesting:

X The initial computation period is the 12-consecutive month period beginning on the date the Eligible Employee first performs an Hour of Service for the Employer (employment commencement date).

The succeeding computation periods are (select one):

  - The 12-consecutive month periods commencing with the first anniversary of the Eligible Employee's employment commencement date and succeeding anniversaries thereof; or
Plan Years, beginning with the first Plan Year which includes the first anniversary of the Eligible Employee's employment commencement date (regardless of whether the Eligible Employee is entitled to be credited with the Hours of Service required for a Plan Year during such period), provided that an Eligible Employee who is credited with the required number of Hours of Service in both the initial Computation Period and the Plan Year which includes the second anniversary of the Eligible Employee's employment commencement date is credited with two Years of Service for purposes of vesting.

I. Amended Plans (select one):

X The vesting schedule has not been amended or the amended schedule is more favorable in all years.

A prior vesting schedule was more favorable. The prior schedule was (describe): __________________________________________________
___________________________________________________________.

Note: Notwithstanding the vesting schedule specified above in this Adoption Agreement, the vested percentage of a Participant’s account shall not be less than the vested percentage attained as of the effective date of this amendment and restatement.

The prior more favorable vesting schedule shall continue to apply to Participants who commenced employment prior to the effective date of this Plan, as specified in Section 2 of this Adoption Agreement.

13. LOANS:

The Plan does NOT permit loans unless otherwise selected below.

1. The Plan will not permit Participants to obtain a loan; or

X 2. The Plan will permit Participants to obtain a loan.
a. Loans will be available from (check all that apply):

- Transfer contributions (from another 401(a) plan)
- Rollover contributions
- After-tax Employee contributions
- Other: _____________________.

b. If loans are permitted, Participants are limited to _____ (insert the number, if applicable) of outstanding loans at any one time. If not completed, the number of loans will not be limited under the Plan.

c. If a Participant defaults on a loan, he or she (choose one):

- Will; or
- Will NOT

be prohibited from taking another loan from the Plan. This is in addition to any other restrictions imposed by the Code.

14. DISTRIBUTIONS*:

A. Limitations: Unless specifically noted here, and except to the extent a particular form of benefit is required under the terms of the Plan, a Participant who has a Severance from Employment is entitled to receive benefits from the Plan in any form permitted both under Articles VIII and IX of the Plan document and by the Funding Vehicles to which his or her contributions have been applied. The following limitations will apply to any lump sum withdrawal that might otherwise be available (select one):

- No limitations;
- Any lump sum withdrawal from a Funding Vehicle will be limited to _____ % of the funds that the Participant has accumulated under the Plan in that Funding Vehicle, if elected by the Participant. The remainder of the funds in the Funding Vehicle are payable to the Participant only in a form that is designed to guarantee payment over at least the duration of the Participant's lifetime; or

Any lump sum withdrawal will be limited to the portion of the funds attributable to employee contributions made under this Plan or a previous plan. The portion of funds in the Funding Vehicle attributable to Employer Contributions are payable to the Participant only in a form that is designed to guarantee payment over at least the duration of the Participant's lifetime, as elected by the Participant under the terms of the Funding Vehicle.
B. **Benefit Commencement:**

1. If the Plan is used as a profit-sharing plan, benefits attributable to Employer Contributions and transfer contributions may only be received after Severance from Employment, death, or one of the following (select all that apply):

   Benefits may be received while the Participant is employed by the Employer if the contributions were made at least two years prior to the date on which the distribution will occur.

   Benefits may be received while the Participant is employed by the Employer if the individual has been a Participant for at least five years prior to the date on which the distribution will occur.

   Benefits may be received while the Participant is employed by the Employer upon attainment of Normal Retirement Age.

   X Benefits may be received while the Participant is employed by the Employer if the Participant is disabled within the meaning of Code Section 72(m)(3).

2. If the Plan is used as a money-purchase pension plan, benefits attributable to Employer contributions and transfer contributions may only be received after the Participant has a Severance from Employment, death, or one of the following (select all that apply):

   Benefits may be received while the Participant is employed by the Employer if the phased/early retirement incentive option applies. If using one of these plans, complete the appropriate appendix.

   Benefits may be received while the Participant is employed by the Employer upon attainment of Normal Retirement Age.

   Benefits may be received while the Participant is employed by the Employer if the Participant is disabled within the meaning of Code Section 72(m)(3).

   Benefits may be received while the Participant is performing military service if such service qualified as a deemed Severance of Employment in accordance with the provisions of the Code.

3. Benefits attributable to Code Section 414(h) pick-up contributions and after-tax Employee contributions are subject to the same distribution rules as Employer Contributions.
C. **Normal Form of Benefit** under Article VIII of the Plan document shall be (select one):

- X A single life annuity; or
- X A lump sum benefit, to the extent the Funding Vehicle permits; or
- X A joint and 50% survivor annuity for a married participant and spouse.

D. **Optional Forms of Benefit**: In addition to the life annuity income options available under the terms of the Funding Vehicles optional forms of benefit available under Article VIII of the Plan document are (select all that apply):

- X Lump sum benefit, to the extent the Funding Vehicle permits and not otherwise restricted in Section 14.A, above; and/or
- X Fixed-period annuity.

E. **Joint and Survivor Rules**:

Unless otherwise elected below, these rules do not apply to the Plan. If this applies to your Plan, complete the appropriate selection below.

- No Joint and survivor rules will apply; or
- X The full joint and survivor rules described in the Plan Document apply to this Plan; or
  
  If other requirements apply pursuant to state law, please explain:
  
  ____________________________________________________________.

F. **Distribution of Rollover Account Balances** (select one):

- The Plan permits distribution of Rollover Account Balances at any time; or
- X The Plan permits distribution of Rollover Account Balances in accordance with the same terms that apply to Employer Contributions.

G. **Direct Transfers from the Plan** (select one):

- The Plan will NOT permit transfers to other plans; or
- X The Plan will permit direct transfers to another plan qualified under Code Section 401(a) in accordance with the provisions the Funding Vehicles.
H. **Small Account Balances** (select one):

Unless elected below, the Plan does not permit distribution of small Account Balances.

1. Small Account Balances up to $1,000 (select one):
   
   Will NOT; or
   
   X Will

   be distributed in a lump sum to the Participant or Beneficiary.

2. Amounts exceeding $1,000 up to $5,000 (select one):

   X Will NOT; or

   Will

   be directly rolled over to an IRA for the benefit of the Participant or Beneficiary.

3. Amounts of $___________ (between $1,000 and $5,000) (select one):

   Will NOT; or

   Will

   be directly rolled over to an IRA for the benefit of the Participant or Beneficiary.

I. **Purchase of Service Credit** (select one):

The Plan will NOT allow transfers to purchase service credit; or

X The Plan will allow transfers to purchase service credit in accordance with the provisions of the Funding Vehicles.

J. **Normal Retirement Age**:

1. Normal Retirement Age is (select one):

   Age ____ (not earlier than 62 nor later than 65); or

   X Age 55 (between 55 and 65 if the provisions of Treasury Regulation Section 1.401(a)-1(b)(2) are satisfied); or
Age ______ (as permitted by Treasury Regulation Section 1.401(a)-1).

2. Election for qualified public safety employees (select if this will apply to the Plan):

Age 50 for qualified public safety employees.

Note: Except for qualified public safety employees noted above, the rules of this Section shall apply equally to all Participants. The rules must be consistent with administrative policies available through the Funding Vehicle used by the Participant.

15. FUNDING VEHICLES:

Participants can direct the investment of his or her Account among the approved Funding Vehicles available under the Plan subject to any administrative restrictions by the Plan Administrator. The Funding Vehicles may be any fixed or variable annuity contracts or custodial accounts made available by Teacher's Insurance and Annuity Association (TIAA) and College Retirement Equities Fund (CREF) and any other Funding Vehicles held in a trust which are approved for use by the Employer under the Plan.

A list of the permitted Funding Vehicles and investments shall be maintained and updated by the Plan Administrator.

16. LIMITATIONS ON ALLOCATIONS:

A. If the Participant is covered under another qualified defined contribution plan maintained by the Employer, provide the method under which the plans will limit total annual additions to the maximum permissible amount, and will properly reduce any excess amounts.

_________________________________________________________________

_________________________________________________________________

C. The limitation year is the calendar year unless otherwise specified in the following sentence. The limitation year is the following 12-consecutive month period (describe):

______________________________________________________________.
17. **ALLOCATION OF FORFEITURES:**

If the Employer elects deferred vesting for Employer Contributions, forfeitures shall be applied to reduce the Employer’s Contribution for the Plan Year or any succeeding Plan Year unless you check the box below:

Forfeitures shall be applied to pay the Employer’s expenses for Plan administration.

18. **TRUSTEE:** (To be completed if Funding Vehicles other than those made available by TIAA-CREF are available under the Plan):

The Employer must select an institutional trustee (such as a bank) or one or more individuals:

_______________________________________________________________________

_______________________________________________________________________

19. **ADMINISTRATION:**

I am an authorized representative of the Employer. On behalf of the Employer, I state the following:

1. I acknowledge that I have relied upon my own advisors regarding the completion of this Adoption Agreement and the legal and tax implications of adopting this Plan.

2. I understand that this Adoption Agreement and the corresponding basic Plan Document are specimen documents that have not been reviewed or approved by the IRS.

3. I further understand that TIAA-CREF is not a party to the Plan and cannot and does not provide legal or tax advice.

4. I have received a copy of this Adoption Agreement and the corresponding Qualified 401(a) Plan and Trust For Public Employers Plan Document.

In Witness Whereof, the Employer has caused this Adoption Agreement to be executed this ______ day of ______, 20____.

Employer:

By: ______________________________

(Name and Title)
January 18, 2012

Attention: Administrative and Finance Committee

Treasurer’s Report

Attached for review by the Administrative and Finance Committee and the Board of Directors is the Treasurer’s Report as of December 31, 2011. 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 8, 2011. 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.

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

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

The Water Authority’s portfolio is diversified among investment types, with a current concentration toward short-term maturities. This concentration is the result of cash flow needs, as well as the current historic low interest rate environment. The portfolio is comprised of high quality investments, with 78 percent currently invested in AAA rated or AAA/AA+ split-rated securities. The AAA/AA+ split rating is due to Standard & Poor’s August 2011 downgrade of both the United States and government agency credit ratings from AAA to AA+; while the other two credit rating agencies (Fitch and Moody’s) have maintained the ratings at AAA. The Water Authority’s overall portfolio yield decreased to 0.73 percent in December 2011 and continues to exceed the investment benchmark of 0.18 percent in December 2011. 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.

Eric Sandler, Director of Finance/Treasurer
## PORTFOLIO MASTER SUMMARY

as of December 31, 2011

### PORTFOLIO PERCENTAGES

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Permitted By Board Policy</th>
<th>Actual Percentage</th>
<th>Actual Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Agency Investment Fund (LAIF)</td>
<td>$50 Million</td>
<td>15.54%</td>
<td>$49,178,965</td>
</tr>
<tr>
<td>Banker's Acceptances</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Treasury Securities</td>
<td>15% - Minimum</td>
<td>18.49%</td>
<td>58,517,624</td>
</tr>
<tr>
<td>Agency Securities</td>
<td>85%</td>
<td>55.23%</td>
<td>174,800,841</td>
</tr>
<tr>
<td>Reverse Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
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</tr>
<tr>
<td>Certificates of Deposit (CDARS)</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Negotiable Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>25%</td>
<td>6.13%</td>
<td>19,416,700</td>
</tr>
<tr>
<td>Medium Term Notes/Corporates</td>
<td>30%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
<td>25%</td>
<td>4.45%</td>
<td>14,084,450</td>
</tr>
<tr>
<td>Money Market Funds</td>
<td>15%</td>
<td>0.16%</td>
<td>502,974</td>
</tr>
</tbody>
</table>

100.00% $316,501,554

Accrued Interest (unavailable for investing) 21,326
Checking/Petty Cash/Available Funds (unavailable for investing) 99,908

Subtotal for Pooled Funds: $316,622,788

### Bond/CP Fund Excluded from Portfolio Percentages:
- Treasury Securities
- Agency Securities 182,086,643
- Certificates of Deposit (CDARS)
- Commercial Paper 38,005,395
- Local Agency Investment Fund (LAIF) 142,921,391
- JPA Pools (CAMP) 17,855,578
- Money Market Funds and Cash 11

$380,869,018

Accrued Interest (unavailable for investing) 55,692

Subtotal for Bond/CP Fund (available for CIP expenditures): $380,924,710

### Debt Service Reserve (DSR) Funds Excluded from Portfolio Percentages:
- Agency Securities and Money Market Fund - Series 2004A COPs 38,863,267
- FSA - Reserve (GIC) Series 2002A COPs 18,385,750
- Trinity Plus - Reserve (GIC) Series 1998A COPs 12,240,775

$69,489,792

Total Cash and Investments $767,037,290

### PORTFOLIO INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Pooled Funds **</th>
<th>Bond/CP Fund</th>
<th>Debt Service Reserve</th>
<th>Total *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Yield to Maturity - 365 Days</td>
<td>0.51%</td>
<td>0.56%</td>
<td>2.63%</td>
<td>0.73%</td>
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<tr>
<td>Average Term</td>
<td>479</td>
<td>372</td>
<td>206</td>
<td>401</td>
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<tr>
<td>Average Days to Maturity (730 Days Maximum)</td>
<td>228</td>
<td>219</td>
<td>119</td>
<td>214</td>
</tr>
</tbody>
</table>

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

** Pooled Funds include Operating, Pay Go, RSF and Equipment.
On December 13th, the FOMC maintained the target for the federal funds rate at a range of 0-25 basis points. The next meeting is January 25th.
## Portfolio Details - Investments

**December 31, 2011**

<table>
<thead>
<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer Description</th>
<th>Stated Rate</th>
<th>Book Value</th>
<th>Market Value</th>
<th>Purchase Date</th>
<th>Issuer</th>
<th>Manager Pool Accounts</th>
</tr>
</thead>
<tbody>
<tr>
<td>36959HBG1</td>
<td>10030</td>
<td>GENERAL ELECTRIC CAPITAL CORP.</td>
<td>0.260</td>
<td>1,996,143.33</td>
<td>1,996,143.33</td>
<td>05/25/2011</td>
<td>0.260</td>
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<tr>
<td>36959HKF8</td>
<td>10033</td>
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<td>2,493,437.50</td>
<td>09/23/2011</td>
<td>AA+</td>
<td>361 07/06/2012</td>
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<td>2,993,666.67</td>
<td>2,993,666.67</td>
<td>12/15/2011</td>
<td>AA+</td>
<td>392 07/06/2012</td>
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<td>36959HA31</td>
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<td>4,100,000.00</td>
<td>04/08/2011</td>
<td>AA+</td>
<td>310 01/03/2012</td>
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<td>36959HB14</td>
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<td>4,190,550.00</td>
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<td>349 04/02/2012</td>
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<td>AA-</td>
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<td>AA-</td>
<td>619 07/02/2012</td>
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<td>8,981,082.50</td>
<td>11/22/2011</td>
<td>AA-</td>
<td>478 05/01/2012</td>
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</table>

**Subtotal and Average**

| Amount       | 280,265,667.69 | 255,290,967.50 | 255,290,967.50 | 255,290,967.50 | 59,057,545.62 | 57,600,000.00 | 57,423,412.88 | 57,422,095.55 | 0.497 | 150 |

| Value       | 255,290,967.50 | 255,290,967.50 | 255,290,967.50 | 255,290,967.50 | 59,057,545.62 | 57,600,000.00 | 57,423,412.88 | 57,422,095.55 | 0.497 | 150 |

**Report Ver. 5.00**

**Run Date:** 01/03/2012 **CC**

**SDCWA - Fiscal Year 2012**

**Portfolio Management**

**Portfolio Details - Investments**

**December 31, 2011**
SDCWA - Fiscal Year 2012
Portfolio Management

Page 3

Portfolio Details - Investments
December 31, 2011
CUSIP

Investment #

Issuer

Average
Balance

Purchase
Date

Par Value

Market Value

Book Value

Stated
Rate

S&P

07/28/2010
09/24/2010
02/04/2010
02/04/2010
04/06/2011
05/19/2011
05/19/2011
05/19/2011
07/26/2011
10/12/2011
10/31/2011
02/04/2010
02/04/2010
03/29/2011
03/31/2011
03/31/2011
04/06/2011
04/13/2011
04/14/2011
04/20/2011
04/21/2011
05/06/2011
05/25/2011
06/22/2011
06/29/2011
06/29/2011
06/29/2011
07/26/2011
10/13/2011
10/31/2011
09/20/2007
07/28/2010
09/24/2010
09/24/2010
01/28/2011
02/24/2011
03/30/2011
10/12/2011

9,500,000.00
16,120,000.00
9,100,000.00
5,000,000.00
900,000.00
1,250,000.00
2,315,000.00
3,000,000.00
1,500,000.00
1,700,000.00
15,000,000.00
4,100,000.00
4,700,000.00
3,025,000.00
2,900,000.00
4,100,000.00
3,800,000.00
5,000,000.00
5,000,000.00
5,000,000.00
5,000,000.00
6,100,000.00
2,205,000.00
8,600,000.00
3,900,000.00
2,600,000.00
3,600,000.00
4,100,000.00
1,260,000.00
5,000,000.00
2,500,000.00
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7,000,000.00
13,000,000.00

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1,531,830.00
1,709,265.00
15,004,370.83
4,108,774.00
4,729,375.00
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3,050,713.00
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3,889,338.00
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6,209,800.00
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8,895,840.00
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3,386,517.75
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3,872,420.40
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3,924,761.10
2,740,842.00
3,667,788.00
4,161,418.00
1,351,612.85
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18,450,900.00
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13,243,100.00

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2.250
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1.650
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2.375
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1.750
1.750
4.625
0.875
4.625
1.750
1.625
3.250
5.250
5.000
1.125
2.125
4.625
1.720
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1.625
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YTM Days to
365 Maturity

Maturity
Date

Federal Agency - Coupon
31331YC24
31331GNQ8
31331JBL6
31331GNQ8
31331QK22
31331JDT7
31331JBV4
31331KCP3
31331GVD8
313373KA9
3133766Q3
3133XWW47
3133XTAW6
3133XLDG5
3133XSP93
3133XWKV0
3133XXYX9
3133XUK93
313372UV4
3133XW7L7
3133XVNT4
3133XWX87
3133XVNT4
3133XML66
3133XYWB7
3133XML66
3133XVNT4
3133XUUJ0
3133XUMR1
3133XGJ96
3133XJUT3
3128X9D80
3137EABY4
3137EAAZ2
3128X9D56
3137EACJ6
3137EACJ6
3137EACJ6

10014
10017
4014
4018
4048
4062
4063
4064
4073
10036
10037
4016
4017
4042
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4054
4058
4066
4067
4069
4070
4071
4072
4076
4078
8160
10015
10016
10019
10024
10025
10026
10035

Run Date: 01/03/2012 -500
15:22of

564

FEDERAL FARM CREDIT BANK
FEDERAL FARM CREDIT BANK
FEDERAL FARM CREDIT BANK
FEDERAL FARM CREDIT BANK
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FEDERAL HOME LOAN MORTGAGE COR

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1.135
0.954
0.540
0.527
0.527
0.436
0.405
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1.077
1.539
1.295
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0.319
0.320
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0.817
0.485
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0.705
0.444
0.609
0.804
0.910
0.905
0.380

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11
114
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407
417
418
463
481
481
68
103
894
712
803
537
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240
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348
432
348
283
234
283
348
269
985
621
68
115
82
298
466
470
470
470

04/09/2012
04/24/2012
01/12/2012
04/24/2012
05/15/2013
02/11/2013
02/21/2013
02/22/2013
04/08/2013
04/26/2013
04/26/2013
03/09/2012
04/13/2012
06/13/2014
12/13/2013
03/14/2014
06/21/2013
09/14/2012
08/28/2012
01/16/2013
12/14/2012
03/08/2013
12/14/2012
10/10/2012
08/22/2012
10/10/2012
12/14/2012
09/26/2012
09/12/2014
09/13/2013
03/09/2012
04/25/2012
03/23/2012
10/25/2012
04/11/2013
04/15/2013
04/15/2013
04/15/2013

Portfolio CWA2
CC
PM (PRF_PM2) SymRept 6.41.202a


SDCWA - Fiscal Year 2012
Portfolio Management

Page 4

Portfolio Details - Investments
December 31, 2011
CUSIP

Investment #

Average
Balance

Issuer

Purchase
Date

Par Value

Market Value

Book Value

Stated
Rate

S&P

11/30/2011
03/29/2011
03/31/2011
04/06/2011
05/19/2011
05/25/2011
07/26/2011
10/13/2011
10/13/2011
11/19/2010
12/16/2010
02/18/2010
02/04/2010
03/29/2011
04/06/2011
04/28/2011
04/28/2011
05/06/2011
05/12/2011
05/12/2011
06/22/2011

8,000,000.00
3,000,000.00
2,966,000.00
3,500,000.00
3,400,000.00
3,800,000.00
4,400,000.00
7,600,000.00
2,080,000.00
20,000,000.00
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3,900,000.00
5,100,000.00
4,700,000.00
1,400,000.00

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3,550,416.00
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2,076,854.00
19,956,000.00
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775,380.72
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5.000
4.500
4.500
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1.625
1.000
0.750
0.500
1.875
1.875
5.000
2.500
1.750
0.500
4.125
0.750
1.000
0.800
0.500

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AA+

334,278,000.00

340,396,488.94

342,992,268.95

YTM Days to
365 Maturity

Maturity
Date

Federal Agency - Coupon
3137EACB3
3134A4UU6
3128X2TM7
3134A4TZ7
3134A4SA3
3134G1WT7
3137EACJ6
3134G2UA8
3134G2WG3
3136FPUC9
31398AWK4
31398AWK4
31359M5H2
31398AXJ6
31398AJ94
3136FPUC9
31359MUT8
3135G0AK9
31398A4N9
31398A6D9
3136FPUC9

10041
4043
4045
4050
4061
4065
4074
4075
4077
10020
10022
3013
4015
4041
4047
4055
4056
4057
4059
4060
4068

FEDERAL HOME LOAN MORTGAGE COR
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FEDERAL NATION MORTAGE ASSOC.
FEDERAL NATION MORTAGE ASSOC.
FEDERAL NATION MORTAGE ASSOC.
FEDERAL NATION MORTAGE ASSOC.
Subtotal and Average

347,729,268.08

0.604
1.580
1.341
1.036
0.482
0.420
0.420
0.818
0.817
0.614
0.549
1.055
1.006
1.469
0.931
0.508
1.279
0.562
0.873
0.878
0.335

843
926
760
561
380
330
470
962
995
303
110
110
46
865
492
303
835
422
653
687
303

0.716

375

04/23/2014
07/15/2014
01/30/2014
07/15/2013
01/15/2013
11/26/2012
04/15/2013
08/20/2014
09/22/2014
10/30/2012
04/20/2012
04/20/2012
02/16/2012
05/15/2014
05/07/2013
10/30/2012
04/15/2014
02/26/2013
10/15/2013
11/18/2013
10/30/2012

Federal Agency - Discount
313588YJ8

10032

FEDERAL NATION MORTAGE ASSOC.
Subtotal and Average

06/29/2011

13,972,233.33

14,000,000.00

13,996,710.00

13,972,233.33

14,000,000.00

13,996,710.00

13,972,233.33

15,000,000.00
16,000,000.00
5,000,000.00
7,000,000.00
15,000,000.00
38,581,000.00

15,046,290.00
16,032,496.00
5,015,430.00
7,019,964.00
15,300,000.00
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15,329,296.88
38,742,181.77

96,581,000.00

97,112,736.31

97,259,806.09

0.200

AA+

0.206

171 06/20/2012

0.206

171

0.370
0.500
0.429
0.223
0.290
0.210

120
304
120
151
470
212

0.307

244

Treasury Securities - Coupon
912828NB2
912828PD6
912828NB2
912828NE6
912828MX5
912828NQ9

10018
10021
10023
10031
10034
212

UNITED STATES TREASURY
UNITED STATES TREASURY
UNITED STATES TREASURY
UNITED STATES TREASURY
UNITED STATES TREASURY
UNITED STATES TREASURY
Subtotal and Average

Run Date: 01/03/2012 -501
15:22of

564

97,259,806.09

09/24/2010
11/19/2010
12/16/2010
05/25/2011
10/12/2011
07/28/2011

1.000
0.375
1.000
0.750
1.750
0.625

AA+
AA+
AA+
AA+
AA+
AA+

04/30/2012
10/31/2012
04/30/2012
05/31/2012
04/15/2013
07/31/2012

Portfolio CWA2
CC
PM (PRF_PM2) SymRept 6.41.202a


<table>
<thead>
<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer</th>
<th>Average Balance</th>
<th>Purchase Date</th>
<th>Par Value</th>
<th>Market Value</th>
<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P</th>
<th>YTM</th>
<th>Days to Maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total and Average</td>
<td>800,412,234.24</td>
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<td>757,749,967.50</td>
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<td>764,220,315.63</td>
<td>766,937,371.42</td>
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<td>0.727</td>
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<td>214</td>
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SDCWA - Fiscal Year 2012
Portfolio Management
Portfolio Details - Investments
December 31, 2011

Run Date: 01/03/2012
CC
PM (PRF_PM2) SymRept 6.41.202a
### Portfolio Details - Cash December 31, 2011

<table>
<thead>
<tr>
<th>CUSIP</th>
<th>Investment #</th>
<th>Issuer</th>
<th>Average Balance</th>
<th>Purchase Date</th>
<th>Par Value</th>
<th>Market Value</th>
<th>Book Value</th>
<th>Stated Rate</th>
<th>S&amp;P</th>
<th>YTM</th>
<th>Days to Maturity</th>
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</thead>
<tbody>
<tr>
<td>CASH00</td>
<td>50</td>
<td>WELLS FARGO - RETIREE &amp; COBRA</td>
<td>07/01/2011</td>
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<td>3,102.32</td>
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<tr>
<td>CASH01</td>
<td>48</td>
<td>PETTY CASH</td>
<td>07/01/2011</td>
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<td>2,500.00</td>
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<tr>
<td>CASH02</td>
<td>1000</td>
<td>WELLS FARGO - OPERATING/POOLED</td>
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<td>116,599.92</td>
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<td>CASH03</td>
<td>1001</td>
<td>WELLS FARGO - PAYROLL ZBA</td>
<td>07/01/2011</td>
<td>-22,294.47</td>
<td>-22,294.47</td>
<td>-22,294.47</td>
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<tr>
<td>CASH38</td>
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<tr>
<td>CASH30</td>
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<td>WELLS FARGO - 2008A COPS</td>
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**Average Balance:** 0.00

**Total Cash and Investments:**
- Par Value: $800,412,234.24
- Market Value: $757,849,885.95
- Book Value: $764,320,234.08
- Stated Rate: 0.727
- YTM: 214 Days to Maturity
## Activity Summary
### December 2010 through December 2011

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<th>Month</th>
<th>Year</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>
</tr>
</thead>
<tbody>
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<td>December</td>
<td>2010</td>
<td>835,265,201.64</td>
<td>0.769</td>
<td>0.780</td>
<td>1.097</td>
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<td>1</td>
<td>373</td>
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<td>January</td>
<td>2011</td>
<td>841,973,607.62</td>
<td>0.772</td>
<td>0.783</td>
<td>1.114</td>
<td>1</td>
<td>0</td>
<td>383</td>
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<tr>
<td>February</td>
<td>2011</td>
<td>843,895,424.76</td>
<td>0.755</td>
<td>0.765</td>
<td>1.025</td>
<td>5</td>
<td>6</td>
<td>378</td>
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<td>March</td>
<td>2011</td>
<td>850,665,530.99</td>
<td>0.748</td>
<td>0.758</td>
<td>0.946</td>
<td>7</td>
<td>5</td>
<td>387</td>
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<tr>
<td>April</td>
<td>2011</td>
<td>787,364,320.53</td>
<td>0.783</td>
<td>0.793</td>
<td>0.999</td>
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<td>7</td>
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<td>May</td>
<td>2011</td>
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<td>0.790</td>
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<td>2011</td>
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<td>0.771</td>
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<td>October</td>
<td>2011</td>
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<td>1.027</td>
<td>10</td>
<td>12</td>
<td>417</td>
</tr>
<tr>
<td>November</td>
<td>2011</td>
<td>782,405,524.38</td>
<td>0.728</td>
<td>0.739</td>
<td>1.030</td>
<td>7</td>
<td>3</td>
<td>412</td>
</tr>
<tr>
<td>December</td>
<td>2011</td>
<td>766,937,371.42</td>
<td>0.717</td>
<td>0.727</td>
<td>0.982</td>
<td>3</td>
<td>3</td>
<td>401</td>
</tr>
</tbody>
</table>

Average: 805,953,527.94 | 0.753% | 0.763% | 1.008 | 6 | 4 | 402 | 208 |
January 18, 2012

Attention: Administrative and Finance Committee

Water Authority / Member Agency Efficiency Measures (Information).

Purpose
The Water Authority is continually exploring ways to be as efficient and cost effective as possible. It also looks for opportunities to pass along these efficiencies and cost savings to its member agencies. This Board memo outlines two such opportunities - use of the public agency clause in contracts, which has been in practice for a number of years, and the Member Agency Services program, which is a new idea that the Water Authority is developing.

Discussion

Cooperative Procurements (Public Agency Clause)

Cooperative procurement contracts allow for the purchase of goods and services by other public agencies when they are competitively bid and contain a public agency clause. The idea is that the initiating agency has already completed the competitive bid and contract award process, allowing other agencies to “piggy back” off the award and enter into their own contract with the vendor under the same terms and conditions. One caveat is that the agency’s procurement policies must allow the use of cooperative procurement contracts.

Not all contracts lend themselves to the use of a public agency clause because of the specific nature of the goods or services being solicited. As examples, goods and services unique to the Water Authority, such as butterfly valves manufactured to Water Authority specifications or design services for a specific project. The Water Authority currently has 15 contracts with public agency clauses that are available to our member agencies. The majority of these contracts are for as needed services such as traffic control, temporary staffing, survey, and right of way acquisition.

The Water Authority has utilized the public agency clause in other agencies’ agreements as well. A recent example is a contract for uniform laundry services that was competitively bid by the Los Angeles Department of Water and Power (LADWP) which contained a public agency clause. Because LADWP is a large agency, they were able to secure highly competitive pricing for this service. The Water Authority piggy backed off this award and entered into its own contract with the vendor at the same pricing. This resulted in a cost savings to the Water Authority not only in terms of pricing but also in staff time saved.

Water Authority contracts with a public agency clause and contact information are listed on the Water Authority’s website at http://www.sdcwa.org/public-agency-clause-procurements. A listing is also provided as Attachment 1. If a member agency is interested in utilizing these contracts they may call our purchasing manager, Cheryll Stewart, at (858) 522-6653.
Member Agency Services

A new service that the Water Authority is looking into is how it can provide some of its services to member agencies at cost. The thinking behind the program is that there are certain services that the Water Authority currently undertakes for our own purposes which a member agency either needs only sporadically or in such minimal amounts that it does not develop in-house expertise or cannot justify full-time positions. The Water Authority would provide these services with our own in-house staff, effectively augmenting the member agencies’ staffing.

Member agencies were surveyed in 2011 to determine their interest in potential services, such as right of way related and training services (see Attachment 2 for a complete list). The Water Authority expects to further develop this program based on future discussions with those agencies that expressed interest.

Prepared by: Frank Belock, Jr.
Reviewed by: Maureen A. Stapleton

Attachment 1 List of Projects with Public Agency Clause
Attachment 2 List of Potential Member Agency Services
The following procurements contain a public agency clause which allows other public agencies to use. Contact Purchasing at (858) 522-6652 for information.

<table>
<thead>
<tr>
<th>Description</th>
<th>Vendor</th>
<th>Contract End Date</th>
<th>Annual Options Left</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate Water Conservation Programs</td>
<td>A&amp;N Technical Services Inc</td>
<td>06/30/2013</td>
<td>2</td>
</tr>
<tr>
<td>Diesel Particulate Filter Systems</td>
<td>A-Z Bus Sales (dba A-Z Emissions)</td>
<td>12/31/2011</td>
<td>0</td>
</tr>
<tr>
<td>Evaluate Water Conservation Programs</td>
<td>Aquacraft Inc</td>
<td>06/30/2013</td>
<td>2</td>
</tr>
<tr>
<td>Janitorial Services</td>
<td>Business Cleaning Company Inc</td>
<td>07/31/2013</td>
<td>0</td>
</tr>
<tr>
<td>Traffic Control Services</td>
<td>Co's Traffic Control Inc</td>
<td>09/30/2012</td>
<td>1</td>
</tr>
<tr>
<td>Records Storage &amp; Retrieval Services</td>
<td>Corodata</td>
<td>11/08/2015</td>
<td>0</td>
</tr>
<tr>
<td>Video Production Services</td>
<td>MJE Marketing Services Inc</td>
<td>02/01/2012</td>
<td>0</td>
</tr>
<tr>
<td>Temporary Staffing Services</td>
<td>Manpower of San Diego</td>
<td>06/30/2013</td>
<td>0</td>
</tr>
<tr>
<td>Acquisition Services</td>
<td>Overland Pacific &amp; Cutler Inc</td>
<td>04/30/2012</td>
<td>0</td>
</tr>
<tr>
<td>Temporary Staffing Services</td>
<td>PrideStaff</td>
<td>06/30/2013</td>
<td>0</td>
</tr>
<tr>
<td>Quagga Mussel Veliger Lab Testing</td>
<td>Regents of the University of California</td>
<td>02/01/2012</td>
<td>4</td>
</tr>
<tr>
<td>Survey Services</td>
<td>Rick Engineering Company</td>
<td>08/01/2012</td>
<td>0</td>
</tr>
<tr>
<td>Temporary Staffing Services</td>
<td>The Lawton Group</td>
<td>06/30/2013</td>
<td>0</td>
</tr>
<tr>
<td>Water Quality Testing and Analysis</td>
<td>Truesdail Laboratories Inc</td>
<td>03/01/2012</td>
<td>2</td>
</tr>
<tr>
<td>Evaluate Water Conservation Programs</td>
<td>Winzler &amp; Kelly</td>
<td>06/30/2013</td>
<td>2</td>
</tr>
</tbody>
</table>
List of Potential Member Agency Services

CIP Contract/RFP Review
Employee Development
Environmental Compliance
Fleet Maintenance
Graphic Design
Insurance Analysis
IT Help Desk Support
Lab Services
Large Valve Maintenance
Regulatory Agency Permitting
Right-of-Way Services
Safety Program Administration
Safety Training
SCADA & Communication System
Supervisor Training
Water Operator Training Recertification
Insurance Claim Management
January 18, 2012

Attention: Administrative and Finance Committee

Controller’s Report on Monthly Financial Reports (Information)

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

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

The Multi-Year Budget Status Report reflects actual revenues and expenditures, on a budgetary basis, for the five month period of July 1, 2011 through November 30, 2011. It compares actual revenues and expenditures to the adopted budget. Except for water sales and purchases, budgeted amounts for the five month period are presented on a straight-line basis.

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 and storage. Cost of water includes payments to water suppliers such as Metropolitan Water District (MWD) and Imperial Irrigation District (IID). Attachments A, B, and C provide detailed information relative to net water sales revenue.

Total acre-feet (AF) of water sold were budgeted to be 219,821 for the five months ended November 30, 2011, and actual water sales volumes were 217,831 AF, a difference of 1% less volume. The variance from budget to actual is due to the significant amount of rainfall received during November (Attachment A). Water Sales revenue for the five months ended November 30, 2011 were $199.5 million, which is 2% less than budgeted sales revenue of $203.3 million and is due to less treated water sales (Attachment B).

Total Water Purchases and Treatment costs were budgeted to be $147.9 million for the five months ended November 30, 2011, but actual costs were less at $141.3 million, a difference of 4%. The variance from budget to actual are due to the following: lower volume of water purchases for both treated and untreated water, water drafted from storage, and water replenishment purchased from MWD at a reduced rate (Attachment C). This category includes $11.9 million for the 33,335 AF of

---

1 All information regarding water sales volumes, revenues and costs are based on the original multi-year budget adopted by the Board in June 2011.
water purchased from the IID, as well as $22.2 million for MWD’s conveyance charges related to IID, Coachella Canal and All-American Canal water. As a result, Net Water Sales Revenue is $2.8 million or 5% above the adopted budget for the five months ended November 30, 2011.

Revenues
As shown in Attachment D, Total Revenues and Other Income were budgeted to be $41.3 million for the five months ended November 30, 2011, but actual revenues were significantly less at $30.4 million, a difference of $10.9 million or 26% less than budgeted. The variance is primarily due to the timing of receipts of certain revenue accounts, which include three main revenue categories that account for approximately $11.0 million of the total variance. These accounts include revenue from Property Taxes and Water Standby Availability Charges, which are primarily received in December and April. Revenue from Other Income is also trending less than budgeted due to the timing of receipts for operating grants and miscellaneous reimbursements.

As for the other revenue categories, actual revenues were compared to the period-to-date budgeted amounts as of the five months ended November 30, 2011, or 5/12ths (42%) of the fiscal year 2012 adopted budget. Actual revenues which were significantly below the period-to-date budgeted amounts include Investment Income which had a variance of $1.8 million due to lower than anticipated investment earnings. Actual revenues which exceeded the period-to-date budgeted amounts for the five months ended November 30, 2011 include Capacity Charges, Contributions in Aid of CIP, and Hydroelectric Revenue. Capacity Charges revenue is trending higher than budgeted by $1.1 million due to a greater number of meter permits issued by the member agencies in the first half of the fiscal year. Contributions in Aid of CIP were higher than budgeted due to $3.5 million donated land and improvements from Olivenhain Water District to capital assets. Hydroelectric Revenue category was budgeted conservatively for the current two-year budget period and includes only Rancho Penasquitos Pressure Control and Hydroelectric Facility (Rancho Hydro). As a result, Hydroelectric Revenue is trending higher than budgeted by $0.4 million due to higher than anticipated hydroelectric power sales at Rancho Hydro, per the Power Purchase and Sales Agreement with San Diego Gas and Electric. In addition, approximately $0.3 million of the total variance amount is due to hydroelectric power sales at Lake Hodges Pumped Storage Facility which began earning revenue in September.

Expenses
As shown in Attachment D, Total Expenditures were budgeted to be $87.4 million for the five months ended November 30, 2011, but actual costs were significantly less at $60.4 million, a difference of $27.0 million or 31% less than budgeted. The variance is primarily due to the timing of expenditures of certain categories, including Debt Service, Quantification Settlement Agreement (QSA) Mitigation, Other Expenditures, and Operating Departments, which account for approximately $24.2 million of the total variance. Debt Service expenditures are trending lower than budgeted due to the timing of debt service principal payments due May 2012. QSA Mitigation payments to the QSA Joint Powers Authority (JPA) and IID for environmental and socioeconomic impacts are due in December 2011 and June 2012, respectively. Other Expenditures are trending less than budgeted due to the timing of grants and other miscellaneous expenditures. Overall, the Operating Departments expenditures are trending less than budgeted due to the timing of expenditures.
As for the other expenditure categories, actual expenditures were compared to the period-to-date budgeted amounts as of the five months ended November 30, 2011, or 5/12ths (42%) of the fiscal year 2012 adopted budget. Actual expenditures which were significantly below the period-to-date budgeted amounts for the five months ended November 30, 2011 include Stored Water Purchases, Hodges Pumped Storage, and Equipment Replacement. Stored Water Purchases expenditures have not occurred yet. Hodges Pumped Storage and Equipment Replacement categories both had minimal costs during the five month period. Equipment Replacement budgeted amount reflects the deferral of equipment replacement, the extension of the computer replacement schedule, and fleet reduction.

Attachment D also shows that Capital Improvement Program (CIP) Expenditures were budgeted to be $88.8 million for the five months ended November 30, 2011, but actual costs were significantly less at $31.7 million or 64% less than budgeted primarily due to the timing of expenditures during the five month period.

Cash and Investments (Attachment F)

For the months ended November 30, and October 31, 2011, the Water Authority’s cash and investments had an overall balance of $780.4 million and $821.1 million, respectively. Approximately 25% of funds are unrestricted with approximately 75% of funds restricted for specific purposes. In order to maximize investment return, the Water Authority pools the cash of the Pay As You Go Fund with Unrestricted Funds. As of November 30, 2011, the Rate Stabilization Fund is funded at $43.7 million and is anticipated to remain below the target amount due to recent water supply challenges.

Rod Greek, Controller
*Budgeted amounts are based on the adopted two year budget.

**WATER SALES VOLUMES**

Budget Versus Actual (in Acre-Feet)
for the 5 Months Ended November 30, 2011

<table>
<thead>
<tr>
<th>Months</th>
<th>Jul-11</th>
<th>Aug-11</th>
<th>Sep-11</th>
<th>Oct-11</th>
<th>Nov-11</th>
<th>Dec-11</th>
<th>Jan-12</th>
<th>Feb-12</th>
<th>Mar-12</th>
<th>Apr-12</th>
<th>May-12</th>
<th>Jun-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Budget (a)</em></td>
<td>51,006</td>
<td>102,017</td>
<td>148,271</td>
<td>188,293</td>
<td>219,821</td>
<td>248,933</td>
<td>275,085</td>
<td>297,029</td>
<td>322,188</td>
<td>354,292</td>
<td>390,867</td>
<td>434,786</td>
</tr>
<tr>
<td>Actual</td>
<td>49,751</td>
<td>100,056</td>
<td>147,861</td>
<td>189,470</td>
<td>217,831</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>AF Difference (b)</td>
<td>(1,255)</td>
<td>(1,961)</td>
<td>(410)</td>
<td>1,177</td>
<td>(1,990)</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>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Difference (b/a)</td>
<td>-2%</td>
<td>-2%</td>
<td>0%</td>
<td>1%</td>
<td>-1%</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
*Budgeted amounts are based on the adopted two year budget.

**Fiscal Year 2012 Cumulative Water Sales (in Millions $)**

<table>
<thead>
<tr>
<th>Months</th>
<th>Jul-12</th>
<th>Aug-12</th>
<th>Sep-12</th>
<th>Oct-12</th>
<th>Nov-12</th>
<th>Dec-12</th>
<th>Jan-12</th>
<th>Feb-12</th>
<th>Mar-12</th>
<th>Apr-12</th>
<th>May-12</th>
<th>Jun-12</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Budget (a)</em></td>
<td>45.5</td>
<td>91.0</td>
<td>133.2</td>
<td>171.2</td>
<td>203.3</td>
<td>233.4</td>
<td>263.0</td>
<td>289.6</td>
<td>318.9</td>
<td>353.3</td>
<td>391.4</td>
<td>434.7</td>
</tr>
<tr>
<td>Actual</td>
<td>43.6</td>
<td>90.7</td>
<td>132.1</td>
<td>170.8</td>
<td>199.5</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Difference (b)</td>
<td>(1.9)</td>
<td>(0.3)</td>
<td>(1.1)</td>
<td>(0.4)</td>
<td>(3.8)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cum. Actual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Difference (b/a)</td>
<td>-4%</td>
<td>0%</td>
<td>-1%</td>
<td>0%</td>
<td>-2%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</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 2012 Cumulative Cost of Water Purchases and Treatment (in Millions $) |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Months           | Jul-11 | Aug-11 | Sep-11 | Oct-11 | Nov-11 | Dec-11 | Jan-12 | Feb-12 | Mar-12 | Apr-12 | May-12 | Jun-12 |
| *Budget (a)      | 33.8   | 67.6   | 98.5   | 125.7  | 147.9  | 168.4  | 205.6  | 225.3  | 249.3  | 276.5  | 308.2  |        |
| Actual           | 31.7   | 63.4   | 91.0   | 120.5  | 141.3  | -      | -      | -      | -      | -      | -      |        |
| Difference (b)   | (2.1)  | (4.2)  | (7.5)  | (5.2)  | (6.6)  | -      | -      | -      | -      | -      | -      |        |
| Cum. Actual      |         |         |         |         |         | -      | -      | -      | -      | -      | -      |        |
| % Difference (b/a)| -6%    | -6%    | -8%    | -4%    | -4%    | -      | -      | -      | -      | -      | -      |        |
San Diego County Water Authority  
Fiscal Year 2012 Budget Status Report  
For the 5 Months Ended November 30, 2011

<table>
<thead>
<tr>
<th>Net Water Sales Revenue</th>
<th>FY 12 Adopted Budget</th>
<th>FY 12 Budget 5 Months (42%)</th>
<th>FY 12 Actual 5 Months Period-to-Date</th>
<th>Variance with Adopted Budget Positive (Negative)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Sales</td>
<td>$ 434,684,000</td>
<td>$ 203,270,644 (b)</td>
<td>$ 199,489,388</td>
<td>$ (3,781,256)</td>
<td>46%</td>
</tr>
<tr>
<td>Water Purchases &amp; Treatment</td>
<td>308,237,000</td>
<td>147,039,816 (b)</td>
<td>141,318,511</td>
<td>6,621,305</td>
<td>46%</td>
</tr>
<tr>
<td>Total Net Water Sales Revenue</td>
<td>$ 126,447,000</td>
<td>$ 55,330,828</td>
<td>$ 58,170,877</td>
<td>$ 2,840,049</td>
<td>46%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenues and Other Income</th>
<th>Adopted Budget</th>
<th>Period-to-Date</th>
<th>Variance with Adopted Budget Positive (Negative)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Access Charges</td>
<td>$ 27,700,000</td>
<td>$ 11,634,000</td>
<td>$ (11,066,000)</td>
<td>41%</td>
</tr>
<tr>
<td>Property Taxes and In-Lieu Charges</td>
<td>11,105,000</td>
<td>4,664,100</td>
<td>5,440,900</td>
<td>46%</td>
</tr>
<tr>
<td>Investment Income</td>
<td>6,230,000</td>
<td>2,616,600</td>
<td>3,613,400</td>
<td>13%</td>
</tr>
<tr>
<td>Hydroelectric Revenue</td>
<td>900,000</td>
<td>378,000</td>
<td>522,000</td>
<td>57%</td>
</tr>
<tr>
<td>Other Income</td>
<td>24,971,000</td>
<td>10,487,820</td>
<td>6,251,171</td>
<td>25%</td>
</tr>
</tbody>
</table>
| Capital Contributions:  
  Capacity Charges | 10,576,000 | 4,441,920 | 6,134,080 | 58% |
| Water Standby Availability Charges | 11,105,000 | 4,644,100 | 6,460,900 | 58% |
| Contributions in Aid of CIP | 6,760,000 | 2,839,200 | 3,920,800 | 7% |
| Total Revenues and Other Income | $ 98,437,000 | $ 41,434,540 | $ 57,002,460 | 31% |

<table>
<thead>
<tr>
<th>Net Revenues Before Capital Improvement Program (CIP)</th>
<th>Adopted Budget</th>
<th>Period-to-Date</th>
<th>Variance with Adopted Budget Positive (Negative)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Departments (see detail below)</td>
<td>43,490,186 (m)</td>
<td>18,265,877</td>
<td>25,224,309</td>
<td>58%</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$ 208,020,134</td>
<td>$ 87,368,455</td>
<td>$ 120,651,684</td>
<td>32%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net Funds Withdraws</th>
<th>Adopted Budget</th>
<th>Period-to-Date</th>
<th>Variance with Adopted Budget Positive (Negative)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Departments Detail (see Attachment E)</td>
<td>$ 43,490,186 (m)</td>
<td>$ 18,265,877</td>
<td>$ 25,224,309</td>
<td>58%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating Departments</th>
<th>Adopted Budget</th>
<th>Period-to-Date</th>
<th>Variance with Adopted Budget Positive (Negative)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Services</td>
<td>$ 5,638,715</td>
<td>$ 2,368,260</td>
<td>$ 3,270,455</td>
<td>42%</td>
</tr>
<tr>
<td>Colorado River Program</td>
<td>1,254,208</td>
<td>526,767</td>
<td>727,441</td>
<td>36%</td>
</tr>
<tr>
<td>Engineering</td>
<td>3,363,825</td>
<td>1,412,807</td>
<td>1,951,018</td>
<td>42%</td>
</tr>
<tr>
<td>Finance</td>
<td>2,237,064</td>
<td>939,567</td>
<td>1,297,497</td>
<td>33%</td>
</tr>
<tr>
<td>General Counsel</td>
<td>3.070,190</td>
<td>1,289,480</td>
<td>1,780,710</td>
<td>32%</td>
</tr>
<tr>
<td>General Manager &amp; Board of Directors</td>
<td>2,523,881</td>
<td>1,060,030</td>
<td>1,463,851</td>
<td>29%</td>
</tr>
<tr>
<td>Human Resources</td>
<td>1,372,715</td>
<td>576,540</td>
<td>796,175</td>
<td>32%</td>
</tr>
<tr>
<td>MWD Program</td>
<td>1,708,626</td>
<td>717,623</td>
<td>991,003</td>
<td>32%</td>
</tr>
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<td>Operations &amp; Maintenance</td>
<td>14,396,641</td>
<td>6,046,589</td>
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<tr>
<td>Public Outreach and Conservation</td>
<td>4,032,963</td>
<td>1,693,844</td>
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<td>Water Resources</td>
<td>3,891,358</td>
<td>1,634,370</td>
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<tr>
<td>Total Operating Departments</td>
<td>$ 43,490,186 (m)</td>
<td>$ 18,265,877</td>
<td>$ 25,224,309</td>
<td>58%</td>
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</table>
San Diego County Water Authority  
Fiscal Year 2012 Budget Status Report  
For the 5 Months Ended November 30, 2011

Notes to the Budget Status Report:

a) Period-to-date budget amounts are 5/12ths (42%) of fiscal year 2012 adopted budget unless noted.
b) Water sales and water purchases 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 $410,490 for fiscal year 2012 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 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 SDG&E.
f) Other income includes Build America Bonds (BABs) federal subsidies, grants and other miscellaneous revenues.
g) Capacity charges are received quarterly in July, October, January and April.
h) Water standby availability charges are received in December and April.
i) Contributions in aid of capital assets include planned reimbursements for the Lake Hodges Pump Station, Twin Oaks Regulatory Storage, Carlsbad Desalination Aqueduct Improvements, and other miscellaneous projects.
j) Debt Service payments are due semi-annually on May 1 and November 1. Debt Service includes principal, interest expense, and debt service fees. Amortization expense relating to long-term debt, such as discounts, premiums, deferred loss on refunding, and cost of issuance, are excluded because they are non-cash transactions.
k) The QSA mitigation payments includes: QSA JPA contributions of $3,084,803 in December 2011; IID Socioeconomic Mitigation Settlement payments of $2,940,000 in June 2012.
l) Other expenditures include costs incurred for grants and other miscellaneous expenditures.
m) Amounts include capital equipment purchases.
n) Includes withdraws funded by bond proceeds and other fund balances.
San Diego County Water Authority
Comparison of Adopted Budget and Period-to-Date Budget (42% Overall)
to Actual Operating Expenditures by Departments
For the 5 Months Ended November 30, 2011

Actual Operating Expenditures to Adopted Budget in Percentages (%)

FY 12 Adopted Budget $43.5 Million
Period-To-Date Adopted Budget $18.3 Million
Period-to-Date Actual Operating Expenditures $14.1 Million
San Diego County Water Authority
Schedule of Cash and Investments
As of November 30, and October 31, 2011

<table>
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<th>Fund</th>
<th>November</th>
<th>October</th>
<th>Target</th>
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<td>Operating Fund</td>
<td>$101,571,903</td>
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<td>Equipment Replacement Fund</td>
<td>8,887,379</td>
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<td>Rate Stabilization Fund</td>
<td>43,736,669</td>
<td>43,736,669</td>
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<td><strong>Total Unrestricted Funds</strong></td>
<td><strong>25%</strong> 198,828,314</td>
<td><strong>233,629,845</strong></td>
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<td>Pay As You Go Fund (1)</td>
<td>124,422,583</td>
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<td>CIP/Bond Construction Funds</td>
<td>387,675,735</td>
<td>393,900,487</td>
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<td>Debt Service Reserve Funds</td>
<td>69,461,252</td>
<td>69,472,209</td>
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<td><strong>Total Restricted Funds</strong></td>
<td><strong>75%</strong> 581,559,570</td>
<td><strong>587,441,989</strong></td>
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<td><strong>Total Cash and Investments</strong></td>
<td>$780,387,884</td>
<td>$821,071,834</td>
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</table>

Notes:

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

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

3. In 2006, the Board adopted a policy governing the Rate Stabilization Fund (RSF). The policy created a target and a maximum RSF balance. The target balance is set equal to the negative financial impact of 2.5 years of extremely wet weather and the RSF maximum balance is set equal to the negative financial impact of 3.5 years of extremely wet weather. Wet weather adversely impacts the Water Authority by reducing water sales and net water sales revenue. The balance in this fund represents approximately 80% of the targeted value.
January 18, 2012

Attention:   Administrative and Finance Committee

Board of Directors’ Fourth Quarter 2011 Expenses and Attendance.  (Information)

Discussion
The fourth quarter 2011 expenses report includes payments made during each quarter, but not necessarily expenses incurred in 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 in excess of ten a month.

The Special Assignment column indicates Board officers and Board members who represented the Water Authority at outside boards during the fourth quarter 2011 such as: Bud Pocklington at San Diego Area Wastewater Management District; Mark Muir and Javier Saunders at SANDAG; Howard Williams and Elsa Saxod at SANDAG Borders Committee and SANDAG Regional Planning Committee; Bill Knutson and Jim Bond at Colorado River Board; and Jim Bowersox and Yen Tu at Water Conservation Garden JPA.

The attendance report shows the number of formal and special Board meetings held during the fourth quarter 2011 and the attendance record of each Board member.

Prepared by:   Petra L. Koenig, Accounting Assistant
Doria F. Lore, Clerk of the Board
Reviewed by:   Rod Greek, Controller
Shelli Budai Ellison, Administrative Services Manager
Attachments:   Board of Directors’ 4th Quarter 2011 Expenses
Board of Directors’ 4th Quarter 2011 Attendance
<table>
<thead>
<tr>
<th>Director</th>
<th>Per Diem Payments</th>
<th>Mileage &amp; Parking</th>
<th>Travel &amp; Meetings</th>
<th>TOTAL</th>
<th>MWD Rep Assignment</th>
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**TOTALS:** $54,030.00 $6,517.87 $6,088.49 66,636.36

This report includes expenses paid directly to, or on behalf of each Director, during the months of October, November, December 2011.
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<tr>
<th>Director</th>
<th>Formal Board (2)</th>
<th>Special Board (1)</th>
<th>Total Meetings Attended (of 3 Held)</th>
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BOARD CALENDAR

FEBRUARY 2012
• 8 MWD Delegates – 11:00 a.m.
• 9 Special meeting of the Water Planning Committee – Water Shortage & Drought Management Plan and Update on the Regional Master Facilities and Optimization Plan – 1:30 p.m.
• 23 Regular Board meeting – 3:00 p.m.

MARCH 2012
• 6 SCOOP meeting – 9:30 a.m.
• 7 MWD Delegates – 11:00 a.m.
• 8 Special meeting of the Legislation, Conservation & Outreach Committee – Conservation – 1:30 p.m.
• 22 Regular Board meeting – 3:00 p.m.

APRIL 2012
• 4 MWD Delegates – 11:00 a.m.
• 12 Tentative Special Board meeting – 1:30 p.m.
• 26 Regular Board meeting – 3:00 p.m.
January 18, 2012

Attention: Administrative and Finance Committee

CLOSED SESSION:
Conference with Labor Negotiator, Government Code §54957.6

Agency Designated Representatives: Frank Belock, Sandy Kerl, Susan Leone

Employee Organization: California Teamsters Public, Professional and Medical Employees Union Local 911

Purpose
The General Manager has asked that the above-referenced closed session be scheduled for the Administrative and Finance Committee at the January 26 2012, Board meeting.

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

Prepared by: Daniel S. Hentschke, General Counsel
ENGINEERING AND OPERATIONS COMMITTEE

AGENDA FOR

JANUARY 26, 2012

Bill Knutson – Chair     Marty Miller
Marilyn Dailey – Vice Chair    Vincent Mudd
Bud Pocklington – Vice Chair    Ron Morrison
Roger Bailey        Elsa Saxod
Michael Hogan        Richard Smith
Dennis Lamb        Ken Williams
Keith Lewinger    Doug Wilson
Ralph McIntosh


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 Progress report on Engineering and Operations Committee Goals for 2011 and 2012.
   4-B Directors’ comments.

I. CONSENT CALENDAR

1. Accept the Settlement Agreement design-build work for the Twin Oaks Valley Water Treatment Plant.
   Staff recommendation: Authorize the General Manager to accept the Settlement Agreement design-build work as complete, and release the letter of credit to CH2M Hill Constructors, Inc.
   (Action) Tim Suydam

II. ACTION/DISCUSSION

III. INFORMATION

1. Presentation on San Vicente Dam Raise Construction update. Bill Rose

2. Proposed PUC modifications affecting existing solar projects. Gary Eaton
IV. CLOSED SESSION

V. ADJOURNMENT

Doria F. Lore
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 (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 18, 2012

Attention: Engineering and Operations Committee


Purpose
This report provides a progress report on the Engineering and Operations Committee’s goals that were adopted by the Board on March 24, 2011 and amended on July 20, 2011.

Background
The Engineering and Operations Committee is responsible for matters of design, construction, replacement, maintenance and operation of the 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 year, the committee expects to review, discuss and make decisions pertaining to these matters.

Previous Board action: The Board adopted the Engineering and Operations Committee goals for 2011 and 2012 on March 24, 2011. On July 20, 2011, the Board amended the goals to reflect issues addressed at the March 31, 2011 Board retreat.

Discussion
The attached report lists the Engineering and Operations Committee goals for 2011 and 2012 and provides an update on the activities taken to achieve the goals. The goals were prepared under the direction of the Engineering and Operations Committee Chair and Vice Chairs.

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

Reviewed by: W.D. “Bill” Knutson, Chair, Engineering and Operations Committee

Attachment: Progress Report on Engineering and Operations Committee goals for 2011 and 2012
Progress Report on Engineering and Operations Committee Goals
Calendar Years 2011 and 2012

Business Plan Goals

Asset Management

Ensure the implementation of the Board’s Asset Management Plan by:

1. Completion of the condition assessment of 400 pipeline appurtenances and 35 major facilities and develop a rehabilitation/repair schedule. (July 2012 – Business Plan Goals #3 and #4)

   Activities:
   The field assessment of the 400 pipeline appurtenances has been completed and a rehabilitation/repair schedule has been finalized for those sites. Assessment of the 35 major facilities is scheduled to begin February 2012.

2. Authorize implementation of the relining of Pipelines 3 and 4 (Miramar Hill to Scripps Ranch), a 15,000 foot project and complete the design and award a construction contract for Pipeline 3 (30-Inch Interconnect to the future location of the Lake Murray Control Valve) and Pipeline 4 (State Route 52 to Lake Murray) – approximately 20,000 feet of existing prestressed concrete cylinder pipe. (August 2012)

   Activities: Relining of Pipelines 3 and 4 from Miramar Hill to Scripps Ranch is in construction and work is progressing on schedule. The relining of Pipelines 3 and 4 from State Route 52 to Lake Murray is at about 90% design and a construction contract is scheduled for Board action in June 2012. Midpoint design has been completed. Project is now in the final design phase and expected to be advertised in March 2012 with construction expected to start in June 2012 and be complete in the fall of 2013.

Capital Improvement Program

1. ESP Pump Station Lake Hodges Facility – Complete and record the Notice of Completion for ESP Pump Station Facility to link Lake Hodges to the Water Authority’s aqueduct system, ultimately providing 20,000 acre-feet of emergency storage and 40 megawatts of hydroelectric power for regional use in accordance with the Water Authority’s Power Purchase Agreement with SDG&E. (June 2011, CIP Business Plan Goal #3)

   Activities: Unit 2 at Lake Hodges is in final testing and is expected to be on-line in February 2012. Unit 1 is currently off-line while Unit 2 is being tested. A leak was discovered within the Unit 1 system that the equipment manufacturer and contractor are investigating during the scheduled downtime to determine if a repair is required. Once the assessment is finished and prior to the end of the scheduled downtime period, a
decision will be made whether to repair the leak or monitor the leak while continuing normal operations moving forward.

2. San Vicente Dam Raise – Complete the roller compacted concrete portion of the Package 3 construction contract at the San Vicente site, and begin preparation for start-up and testing of the entire facility which will provide 152,000 acre-feet of emergency and carryover storage for regional use. (December 2012, CIP Business Plan Goal #5)

**Activities:**
Construction is currently 34% complete (Project is 47% complete inclusive of planning and Design). RCC placement of the main dam raise began in September 2011 and current production rates for RCC are lower than anticipated. The contractor is developing a recovery plan which includes extended work hours and performing other construction activities concurrently. Staff will be evaluating the contractor’s recovery plan using Olivenhain as the baseline. We have formally put the contractor on notice about the schedule and are conducting weekly schedule audits and executive level meetings with the contractor to address this issue.

3. San Vicente Reservoir Marina Facilities – Complete the design of the new marina facilities at the San Vicente Reservoir site for City of San Diego building permit review and approval, in preparation to advertise a construction contract that will begin following completion of the Package 3 construction contract at the San Vicente site. (December 2012, CIP Business Plan Goal #6)

**Activities:**
Design is being accomplished in-house. Coordination with the City of San Diego is continuing and design is on schedule.

4. Carlsbad Desalination – If approved by the Board consider and authorize a strategy for the oversight of the design and construction of the Carlsbad Desalination effort.

**Activities:**
This item is being reported on in the Water Planning Committee. This will ensure a consistent message is presented to the board.

5. Project Risk Management - For larger or complex upcoming Capital Improvement Program projects or programs, prepare a risk analysis identifying potential problems as well as their likelihood of occurrence. Considering prior projects lessons learned, develop strategies to preclude or mitigate these potential problems.

**Activities:**
A formal Project Risk Management process was presented to a Board E&O Workshop in November 2011. The process as well as a list of CIP projects required to follow this process was approved. This item is complete.
Facilities Security and Emergency Preparedness
1. Ensure appropriate security measures through the updating of the existing Supervisory Control and Data Acquisition System (SCADA) vulnerability assessment using the Department of Homeland Security's Control System Cyber Security Self-Assessment Tool, comparing results with past SCADA assessments. (December 2012 – Business Plan Goal #5)

Activities: The assessment has been completed and recommendations are being prioritized for implementation.

Operations and Maintenance
1. Resolve top three ROW enforcement cases identified on an annual basis. (Annually – Business Plan #9)

Activities: Three encroachment cases have been successfully resolved, including: the removal of a barn on the First Aqueduct at Crocker Road; the removal of trees and one of two structures on the First Aqueduct at Hubbard Hill with the removal of the second structure scheduled for the first quarter of 2012; and the removal of covered horse corrals on the First Aqueduct at Sycamore Canyon.

2. Develop an online reporting system that allows member agencies to access Water Quality information. (December 2012 – Business Plan Goal #6)

Activities: The system is online and successfully being used by member agency staff.

3. Consider and if approved, authorize the issuance of a contract for the operations and maintenance of the Lake Hodges Pump Storage Facility if it’s determined to be advantageous for fiscal and other considerations.

Activities: A firm has been selected and negotiations are in progress. The contract is expected to go to the Board for approval in February or March 2012.

4. Review and develop baseline energy consumption data, recommend changes to existing energy purchase contracts (gas, solar, electric, etc.) and evaluate alternative energy technology to further reduce energy consumption and GHG emissions. (August 2012)

Activities: Energy consumption data has been developed, third party energy audits are underway, and we are currently evaluating alternative rate structures and additional alternative technology to reduce energy consumption and GHG emissions.
January 18, 2012

Attention: Engineering and Operations Committee

Accept the Settlement Agreement design-build work for the Twin Oaks Valley Water Treatment Plant project. (Action)

Staff recommendation
Authorize the General Manager to accept the Settlement Agreement design-build work as complete, and release the letter of credit to CH2M Hill Constructors, Inc.

Alternative
Do not accept the Settlement Agreement design-build work as complete. This will result in a delay in releasing the letter of credit, and possible dispute with CH2M Hill.

Fiscal impact
There are sufficient funds to support this recommendation within the project budget and the fiscal 2012 Capital Improvement Program appropriation. The rate category of this project is supply.

Background
In September 2005, the Water Authority awarded a service contract to CH2M Hill Constructors, Inc., to design, construct, and operate the Twin Oaks Valley Water Treatment Plant. The Twin Oaks Valley Water Treatment Plant is a 100 million gallon per day submerged membrane facility including ozonation and biologically active carbon contactors. CH2M Hill has been operating and maintaining the Twin Oaks Valley Water Treatment Plant since meeting Acceptance Testing criteria in June 2008. The operations and maintenance component of the service contract continues for a 15 year term, expiring in June 2023. The plant also includes untreated and treated water flow control facilities and an Emergency Storage Project pump station operated and maintained by the Water Authority.

As presented to the Engineering and Operations Committee during meetings held from June 2007 through February 2010, CH2M Hill submitted claims for additional compensation due to alleged uncontrollable circumstances, and the Water Authority claimed CH2M Hill breached several service contract requirements. In January 2010, the Water Authority and CH2M Hill formally mediated the disputed issues and developed a Settlement Agreement.

Previous Board action: At the February 25, 2010 meeting, the Board authorized General Counsel and the General Manager to execute the Settlement Agreement previously approved by CH2M Hill, funded with $3.35 million from CIP and $1.2 million from the Operating Budget, accept $1.7 million payment from CH2M Hill into the General Fund, and direct implementation of the Settlement Agreement according to its terms.
Discussion
The Settlement Agreement between the Water Authority and CH2M Hill was executed subsequent to Board approval on February 25, 2010. As part of the Settlement Agreement the Water Authority issued the Notice of Completion immediately following its execution and released the Bond for Faithful Performance in March 2010. The Settlement Agreement required CH2M Hill to provide funding, complete administrative items, and implement significant design-build work. Funding was received from CH2M Hill in accordance with the Settlement Agreement on March 18, 2010. Administrative documentation supporting solids processing testing, operations and maintenance, and costs were also completed by CH2M Hill in July 2011. In addition, CH2M Hill implemented the following design-build work at the TOVWTP:

- Installation of aluminum covers on the biologically active carbon contactors to mitigate issues with open contactors. The 10 contactors remove organic compounds and treat for taste and odor causing compounds. CH2M Hill completed installation of the covers in June 2011.

- Modifications to the chemical mix chamber and chemical feed systems to consistently meet the service contract’s water quality requirements at flows below 35 million gallons per day. The chemical mix chamber could not consistently meet service contract water quality requirements at flows between 25 and 35 mgd. The chemical mix chamber is where residual disinfection, fluoridation and corrosion control chemicals are added. CH2M Hill completed these modifications and associated testing in July 2010 confirming this design-build work mitigated this issue.

- Installation of two new pressurized backwash strainers to replace the non-pressurized backwash strainers at the untreated water flow control facility. The non-pressurized backwash strainers utilized aqueduct pressure to backwash solids collected on the strainers. This affected plant production during algae and zooplankton blooms. The pressurized backwash strainers are anticipated to mitigate production issues during algae and zooplankton blooms. CH2M Hill completed the installation and testing of the pressurized backwash strainers in December 2011.

CH2M Hill has successfully completed all items in accordance with the Settlement Agreement. CH2M Hill was required to issue a letter of credit for the estimated value of that work ($2 million), and it’s staff’s recommendation that the Water Authority release CH2M Hill’s letter of credit after Board acceptance.

This project’s small business participation is 28 percent. The minority and women-owned business participation for this project is 2 percent. This information is provided for statistical purposes.

Prepared by: Tim Suydam, Operations and Maintenance Manager
Reviewed by: Gary A. Eaton, Director of Operations and Maintenance
Approved by: Frank Belock, Jr., Deputy General Manager
January 18, 2012

Attention: Engineering and Operations Committee

Proposed PUC Modifications Affecting Existing Solar Projects. (Information)

Background
In June of 2010 the Water Authority executed a power purchase agreement with Borrego Solar Systems for the installation of solar power projects at our Kearny Mesa, Escondido, and Twin Oaks facilities. These projects were completed and dedicated in August of 2011.

Discussion
An underpinning of the power purchase agreement was the understanding that ‘net energy metering’, a component of the existing rate structure, would be used by SDGE, the electricity provider for the county. This means that SDGE would charge us for the amount of electricity we use at all of our facilities less the amount of electricity we put on the grid from our three projects.

This past October, SDGE petitioned the Public Utilities Commission to change the existing rate structure and add a Network Use Charge (NUC). The proposed rate design changes would require solar installation owners to pay SDGE’s transportation charges (a portion of their total charge) for electricity we take from the grid plus the transportation charges for the electricity we return to the grid. Currently it is unclear whether or not we or Borrego would bear these additional costs. In either respect, staff is concerned that changing the rules after the completion of our project is inequitable as it fundamentally changes the calculations that are made in determining whether or not to move forward with such a project.

Due to this proposed modification to the rules subsequent to the completion of our project, the Water Authority has joined six of our Member Agencies (Carlsbad, Fallbrook, Helix, Padre Dam, Valley Center, and Vallecitos), the North County Transit District, the San Diego County Office of Education, and three school districts in retaining joint legal counsel to resist these changes by filing a protest with the California Public Utilities Commission (CPUC). It is our understanding that the City of San Diego is filing their concerns separately. Additionally, Borrego has informed us they will also be filing a protest as a member of the Solar Alliance and the Utilities Consumers Action Network (UCAN). A coalition made up of several public agencies in Northern California is also filing a protest with the CPUC. In addition to challenging the proposed changes as being counter to the development of alternative forms of energy, the groups will be stating that they circumvent state policy favoring and encouraging distributed generation. If necessary to assure that our existing solar projects remain as viable as when developed, we will be advocating that projects that were completed prior to any change in the applicable regulations, such as ours, should be allowed to continue with the regulations that were in place at the time of our signing the power purchase agreement.

Prepared by: Gary A. Eaton, Director of Operations and Maintenance
Reviewed by: Frank Belock, Jr., Deputy General Manager
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 26, 2012
3:00 p.m.

1. Call to Order.

2. Salute to the flag.

3. Roll call, determination of quorum.
   3-A Report on proxies received.

4. Additions to agenda. (Government code Sec. 54954.2(b)).

5. Approve the minutes of the Special Imported Water Committee meeting of November 10, 2011 and the Formal Board of Directors’ meeting of December 8, 2011.

6. Opportunity for members of the public who wish to address the Board on matters within the Board’s jurisdiction.

7. PRESENTATIONS & PUBLIC HEARINGS
   7-A Retirement of Director. Adopt Resolution No. 2012-__ honoring Betty Ferguson upon her retirement from the Board of Directors.
   7-B Appointment of Director. Dennis O. Lamb representing Vallecitos Water District. Term expires March 13, 2016.
   7-C Appointment of Director. Mark Weston representing City of Poway. Term Expires April 22, 2014.

8. REPORTS BY CHAIRS
   8-A Chairs report: Chair Hogan.

   8-B Report by Committee Chairs
      Imported Water Committee Director Watton
      Water Planning Committee Director Dion
      Legislation, Conservation and Outreach Committee Director Saxod
      Administrative and Finance Committee Director Wight
      Engineering and Operations Committee Director Knutson
9. CONSENT CALENDAR

9- 1. Authorization to enter into an agreement with Imperial Irrigation District for Environmental Cost Sharing.

9- 2. Resolution approving Otay Water District’s proposed Peaceful Valley Ranch Annexation.
Adopt Resolution No. 2012-__ that resolves that the Final EIR certified by the County of San Diego as Lead Agency complies with CEQA and the State CEQA Guidelines, and adequately addresses the potential environmental effects resulting from annexation, issues findings required by CEQA as a Responsible Agency; and Sets final terms and conditions and approves the concurrent annexation of Otay Water District’s proposed Peaceful Valley Ranch 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.

Approve the consultant contract amendments listed on Tables 1 and 2. Increase the current Capital Improvement Program 2 year appropriation and life budget for the Carlsbad Desalination Project by $2,783,904 and amend the project name and description to reflect the current Water Purchase Agreement negotiation.

9- 4. Amendment to professional services contract for Franklin G. DeFazio, Incorporated for hydraulic transient analysis support services.
Approve Amendment 4 for $220,000 to provide additional hydraulic analysis as-needed support services, increasing the contract amount from $686,800 to $906,800.

9- 5. Adopt the Amended and Restated 457(b) and 401(a) Deferred Compensation Plans.
Approve Resolution 2012-__ adopting the Amended and Restated Water Authority’s 401(a) and 457(b) deferred compensation plans, terminating The Hartford and Reliance Trust Company agreements, and appoint TIAA-CREF as recordkeeper and JP Morgan Chase as custodian for the plans and establish a qualified 457(b) Roth Program.

9- 6. Presentation on monthly Treasurer’s report.
Note and file the monthly Treasurer’s report.

9- 7. Accept the Settlement Agreement design-build work for the Twin Oaks Valley Water Treatment Plant.
Authorize the General Manager to accept the Settlement Agreement design-build work as complete, and release the letter of credit to CH2M Hill Constructors, Inc.
10. ACTION / DISCUSSION

11. CLOSED SESSION(S)

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

11-B CLOSED SESSION:
Conference with Legal Counsel - Existing Litigation
Government Code §54956.9(a) –
SDCWA v Metropolitan Water District of Southern California;
Case No. CPF-10-510830

11-C CLOSED SESSION:
Conference with Labor Negotiator, Government Code §54957.6
Agency Designated Representatives: Frank Belock, Sandy Kerl, Susan Leone
Employee Organization: California Teamsters Public, Professional
and Medical Employees Union Local 911

12. Action following Closed Session

13. SPECIAL REPORTS
13-A GENERAL MANAGER’S REPORT – Ms. Stapleton
13-B GENERAL COUNSEL’S REPORT – Mr. Hentschke
13-C SANDAG REPORT – Director Saunders
SANDAG Subcommittee: Borders/Regional Planning Committee –
Director Saxod
13-D AB 1234 Compliance Reports – Directors

14. OTHER COMMUNICATIONS

15. ADJOURNMENT

Doria F. Lore
Clerk of the Board

NOTE: The agendas for the Formal Board meeting and the meetings of the Standing Committees
held on the day of the regular Board meeting are considered a single agenda. All information or
possible action items on the agenda of committees or the Board may be deliberated by and become
subject to consideration and action by the Board.
CALL TO ORDER / ROLL CALL
Chair Watton called the Imported Water Committee meeting to order at 1:35 p.m. Committee members present were Chair Watton, Vice Chair Arant, Directors Bond, Knutson, Lewinger, Linden, McIntosh, Morrison*, Steiner, and Wilson. Vice Chair Tu and Directors Bowersox, Brady, Heidel, McIntosh, and Wight were absent. Also present were Directors Bailey, Dailey, Dion, Hogan, Jungreis*, Pocklington, Price, Saxod, Smith, Walson, K. Williams, and Wornham. At that time there was a quorum of the Board.

Staff present included General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Kerl and Belock, Assistant General Manager Cushman, MWD Program Chief Chen, and others.

*Directors Morrison and Jungreis arrived at 1:40 p.m. and 2:16 p.m., respectively.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no public comments.

CHAIR’S REPORT
Chair Watton welcomed everyone to the second session of a two-part workshop on Bay Delta activities and introduced each presenter by providing a brief biography of each presenter.

DIRECTORS’ COMMENTS
There were no comments by Directors.

I. CONSENT CALENDAR
There were no items on the consent calendar.
II. ACTION/DISCUSSION

1. Bay Delta presentations by:
   - Delta Stewardship Council – Phil Isenberg, Chair
   - Delta Protection Commission – Mike Machado, Executive Director
   - State and Federal Water Contractors Agency – Byron Buck, Executive Director
   - Metropolitan Water District of Southern California – Roger Patterson, Assistant General Manager
   - State Water Resources Control Board – Tom Howard, Executive Director

The representatives from the above agencies made their presentations on the long-term Bay-Delta plans and the efforts in progress to meet the co-equal goals. The speakers provided overview of their agencies and the agencies’ role in the Bay-Delta Conservation Plan. Each speaker also addressed their view of issues pertaining to the Bay-Delta and how to fix and fund the Bay-Delta selected alternative. Following the presentations, directors asked questions and made comments.

Chair Watton thanked all the speakers and stressed the importance of the Delta fix. He reported that staff will return to the committee and board in January for direction on Bay Delta issues.

III. INFORMATION

There were no information items.

IV. ADJOURNMENT

There being no further business to come before the Imported Water Committee, Chair Watton adjourned the meeting at 3:51 p.m.

_______________________
Mark Watton, Chair
MINUTES OF THE FORMAL BOARD OF DIRECTORS’ MEETING
DECEMBER 8, 2011

IMPORTED WATER COMMITTEE
CALL TO ORDER / ROLL CALL
Chair Watton called the Imported Water Committee meeting to order at 9:02 a.m.
Committee members present were Vice Chair Arant, Directors Bond, Brady, Knutson, Lewinger, Linden, McIntosh, Steiner, Weston, Wight, and Wilson. Vice Chair Tu and Directors Heidel and Morrison were absent. Also present were Directors Hogan, Smith, and Wornham. At that time, there was a quorum of the committee.

Staff present included General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Kerl and Belock, Colorado River Program Director Razak, MWD Program Chief Chen, and others.

Chair Watton welcomed Director Weston as the newest member of the Board.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no public comments.

DIRECTORS’ COMMENTS
There were no comments by Directors.

Chair Watton asked General Counsel Hentschke to take the Committee into closed session. Mr. Hentschke took the Committee into closed session at 9:04 a.m.

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

2. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation and Potential Litigation
   Government Code §54956.9(a) – SDCWA v Metropolitan Water District of Southern California; Case No. CPF-10-510830
   Government Code §54956.9(c) – One Case

Mr. Hentschke brought the Committee out of Closed Session at 10:51 a.m. and stated that there was no reportable action.
CHAIR'S REPORT
Chair Watton reported that State Water Project Table A allocation for 2012 were at 60 percent, which would provide MWD with approximately 1.15 million acre-feet. He also informed the Board that Imperial Irrigation District was expected to go over its apportionment of water this year. Chair Watton announced that the Coachella Canal Lining project was transferred from construction status to operations and maintenance status. He pointed out that with this step, the Water Authority would be able to receive $960,000 in state funds that were retained by the Department of Water Resources. Chair Watton also reported that Coachella Valley Water District had 4,850 af/yr available for canal lining project environmental mitigation purposes, but only estimated to have used 2,585 af of water in calendar year 2011. The remaining 2,265 af would become available to the Water Authority.

I. CONSENT CALENDAR
1. Amend agreement for Special Consulting Services with SCN Strategies.
   Staff recommendation: Amend the agreement with SCN Strategies for continued special consulting services to the Water Authority through June 30, 2013, for a period of 17 additional months, and increasing total funding to an amount not-to-exceed $387,500.

   Director Steiner made a motion and Director Knutson seconded the motion. The motion passed unanimously to approve the staff recommendation.

II. ACTION/DISCUSSION
1. Metropolitan Water District Issues and Activities update.
   1-A Metropolitan Water District’s Delegates report.

   Director Steiner reported that the complete report was available in the board supplemental materials packet.

2. Colorado River Programs.
   3-A Colorado River Board representative’s report.

   Director Knutson announced that the report was available in the board supplemental materials packet.

III. INFORMATION
The following item was continued to the January 26, 2012 Board meeting:
1. Presentation on Draft Environmental Impact report on Delta Plan.

   The following information item was noted and filed:
2. Metropolitan Water District Program report.
V. ADJOURNMENT
There being no further business to come before the Imported Water Committee, Chair Watton adjourned the meeting at 10:56 a.m.

ENGINEERING AND OPERATIONS COMMITTEE
CALL TO ORDER/ROLL CALL
Chair Knutson called the Engineering and Operations Committee to order at 11:02 a.m. Committee members present were Chair Knutson, Vice Chairs Dailey and Pocklington, Directors Bailey, Ferguson, Hogan, Lewinger, McIntosh, Miller, Mudd, Morrison, Saxod, Smith, Williams and Wilson. There was a quorum of the Committee. Other Board members present were Directors Arant, Bond, Boyle, Brady, Croucher, Douglas, Heidel, Hilliker, Linden, Price, Steiner, Topolovac, Tu, Walson, Watton, and Weston.

Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Engineering Rose, Director of Operations and Maintenance Eaton, Lead Construction Administrator Griffis and Water Resources Manager Purcell.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no members of the public who wished to address the Committee.

CHAIR'S REPORT
Chair Knutson welcomed new Board members Miller and Topolovac. Chair Knutson and Mr. Belock introduced special guests from Mexico visiting the Water Authority through the International Water Association’s Water Operator Partnership.

I. CONSENT CALENDAR
There were no Consent Calendar items on the agenda.

II. ACTION/DISCUSSION
1. San Vicente Dam Raise.
   1-A Construction Update.
1-B Change Orders to Shimmick/Obayashi Joint Venture for the San Vicente Dam Raise Package 3 – Roller Compacted Concrete Dams and Appurtenant Facilities project.

Staff recommendation: Accept Shimmick/Obayashi Joint Venture Change Orders 17 and 18 for $324,127; and authorize the General Manager to execute Change Orders for up to $750,000 to address design modifications, differing site conditions and outside agency requirements, increasing the authorized contract amount from $142,709,806.70 to $143,783,933.70.

Mr. Rose gave a construction update. Mr. Griffis gave a presentation on the change orders. Following a few questions from the Committee, Director Lewinger moved, Director Ferguson seconded and the motion to accept staff’s recommendation passed unanimously.

III. INFORMATION
1. Presentation on San Vicente Tunnel and Pipeline Systems Projects.

Mr. Belock and Mr. Purcell gave a presentation on the San Vicente Tunnel and Pipeline projects.

2. Proposed PUC modifications affecting existing solar projects.

This item was continued to the January 26, 2011 Board meeting.

IV. CLOSED SESSION
The Committee went into Closed Session at 12:11 p.m.

1. CLOSED SESSION:
   Conference with Legal Counsel – Existing Litigation
   Government Code §54956.9(a) – Traylor-Shea Joint Venture v SDCWA; Case No. 37-2009-00090545-CU-BC-CTL
   Traylor-Shea Joint Venture v SDCWA;
   Case No. 37-2011-00092666-CU-BC-CTL

   Mr. Hentschke brought the Committee out of Closed Session at 12:28 p.m. He announced the Committee authorized the General Counsel and Special Counsel to execute a settlement agreement for Case No. 37-2009-00090545-CU-BC-CTL according to instructions given in Closed Session. The vote was unanimous.

V. ADJOURNMENT
There being no further business to come before the Engineering and Operations Committee, Chair Knutson adjourned the meeting at 12:30 p.m.
ADMINISTRATIVE AND FINANCE COMMITTEE
CALL TO ORDER / ROLL CALL
Director Wight called the Administrative and Finance Committee meeting to order at 1:40 p.m. Committee members present were Chair Wight, Vice Chairs Bond and Croucher, Directors Arant, Bailey, Brady, Dion, Douglas, Hilliker, Price, Saunders, Smith, Topolavac and Wornham. At that time, there was a quorum of the Board, and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Also present were Directors Boyle, Dailey, Ferguson, Hogan, Jungreis, Heidel, Knutson, Lewinger, Linden, McIntosh, Miller, Mudd, Pocklington, Saxod, Steiner, Tu, Walson, Watton, Weston, Williams, and Wilson. Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Director of Finance/Treasurer Sandler, Controller Greek, Director of Human Resources Leone, and Director of Administrative Services Young.

ADDITIONS TO AGENDA
There were no additions to the agenda.

PUBLIC COMMENT
There were no members of the public who wished to speak at that time, however there was a speaker later in the meeting for the Special Agricultural Water Rate Program item.

CHAIR’S REPORT
Chair Wight announced the 2010-2011 Comprehensive Annual Financial Report would be distributed at the Formal Board meeting and congratulated Eric Sandler and staff for a clean audit and a job well done. She also mentioned there was an updated Board Calendar provided to them.

DIRECTORS’ COMMENTS
There were no Directors’ comments.

I. CONSENT CALENDAR
1. Vote Entitlement Resolution for Calendar Year 2012.
   Staff recommendation: Adopt Resolution No. 2011-___ establishing the vote and representative entitlements of each member agency to be effective January 1, 2012.

   Director Dion moved, Director Saunders seconded, and the motion passed unanimously to approve the consent calendar.
II. ACTION/DISCUSSION

1. Ordinance requiring member agencies to pass the entire Special Agricultural Water Rate Program discount to the Program users.
   Staff recommendation: Adopt Ordinance No. 2011-___ requiring member agencies to pass the entire Special Agricultural Water Rate Program discount to the Program users.

   Ms. Friehauf gave a brief presentation on the Special Agricultural Water Rate Program reviewing the background, the revised program that will begin January, 2013, program intent, purpose of the ordinance, and the requirements.

   Ms. Friehauf explained there was an alternative staff recommendation, which was to approve the ordinance but modify the effective date from April 1 to June 30, 2012.

   Chair Wight announced there was one public speaker on this item and introduced Casey Anderson from the San Diego County Farm Bureau.

   Mr. Anderson made a few comments in favor of the staff recommendation. Directors made a few comments and asked questions. Director Hilliker moved the motion to approve the alternative recommendation, Director Croucher seconded, and the motion passed unanimously to approve the alternative staff recommendation.

2. Presentation on Fiscal Sustainability Project Overview.

   Mr. Sandler reviewed the agenda. Mr. Weinberg explained the history of the Water Authority covering major reliability planning decisions, annual debt service and CIP projects, rate and charge development, and business cycle volatility and impacts. Mr. Sandler reviewed the existing rate and charge structure and stated that it had worked well for the Water Authority. He also explained changes in the environment had resulted in new challenges, and identified how the focus of the project would be to make continuous improvements to rates and charges to meet new challenges. Mr. Sandler reviewed several questions and potential discussion topics that the Fiscal Sustainability project would include the project approach and timeline for the Workgroup. Chair Wight thanked Mr. Sandler and Mr. Weinberg for the presentation then handed it over to Director Hogan to describe the Workgroup. Chair Hogan announced that he appointed Barbara Wight to Chair the Workgroup and appointed Directors Bond, Croucher, Dion, Smith, and Wornham to serve on the committee.

3. Treasury Management.
   3-A Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2012.
   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 2012.
3-B  Presentation on monthly Treasurer’s report.

Chair Wight announced due to time, the Treasurer’s report presentation would be continued to the January, 2012 Board meeting. Chair Wight mentioned that item 3-A would be presented by David Shank and he would then introduce Richard Babbe of PFM Asset Management, LLC regarding administrative and policy changes made to the Investment Policy. Mr. Shank reviewed background information on the Annual Statement of Investment Policy and introduced Senior Managing Consultant, Mr. Babbe from PFM, who was hired as a third-party consultant to conduct a comprehensive review of the investment policy and investment portfolio. Mr. Babbe gave a brief presentation starting with PFM’s company profile and accomplishments. He then explained the scope of the engagement, a summary of findings, and recommended policy changes. He stated that a mark-up copy was provided in the board packet.

Director Douglas moved the motion, seconded by Director Arant and the motion passed unanimously to adopt the staff recommendation.

III. INFORMATION
1. Controller’s report.
2. Board Calendar

IV. CLOSED SESSION
There were no Closed Session items.

V. ADJOURNMENT
There being no further business to come before the Administrative and Finance Committee, Chair Wight adjourned the meeting at 2:22 p.m.

WATER PLANNING COMMITTEE
CALL TO ORDER/ROLL CALL
Chair Dion called the Water Planning Committee Meeting to order at 2:30 p.m. Committee members present were Chair Dion, Vice Chairs Price and Saunders, Directors Boyle, Ferguson, Heidel, Hogan*, Jungreis, Linden, Pocklington*, Steiner, Walson, Watton and Williams. Also present were Directors Arant, Bailey, Bond, Brady, Croucher, Dailey, Douglas, Lewinger, McIntosh, Miller, Saxod, Smith, Topolovac, Tu, Weston, Wight, Wilson and Wornham. At that time, there was a quorum of the Board and the meeting was conducted as a meeting of the Board; however, only committee members participated in the vote.

Staff present was General Manager Stapleton, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Water Resources Director Weinberg, Water Resources Managers Purcell and Roy, Principal Water Resources Specialist Friehauf and Operations and Maintenance Manager Galleher.
PUBLIC COMMENT
There were no public comments.

DIRECTORS’ COMMENTS
There were no comments made by Directors.

CHAIR’S REPORT
Chair Dion advised that proposed refinements by staff to the Water Authority’s Supply Allocation Methodology would be presented for review and discussion in January and at a committee workshop in February for possible action in March. Chair Dion also reported that the San Diego Regional Water Management Program was updating the 2007 San Diego Integrated Regional Water Management Plan and staff would present details to the committee in January. In addition, a progress report on 2011-2012 committee goals would be provided in January, and both the Carlsbad Desalination Project Water Purchase Agreement and the Regional Water Facilities Master Plan would require more of the committee’s time in the year ahead.

I. CONSENT CALENDAR
1. Professional services contract to Helix Environmental Planning, Inc. to provide environmental construction monitoring and support services for a 24-month period for a not-to-exceed amount of $315,000.
   Staff recommendation: Authorize the General Manager to execute a professional services contract with Helix Environmental Planning, Inc. to provide environmental construction monitoring and support services for a 24-month period for a not-to-exceed amount of $315,000.

   Director Steiner moved, Director Ferguson seconded, and the motion passed unanimously to approve the staff recommendation.

   *Directors Hogan and Pocklington arrived at 2:33 p.m.

II. ACTION/DISCUSSION
1. Presentation on Indirect Potable Reuse/local supply.

   Mr. Weinberg introduced Ms. Marci Steirer, Deputy Director Public Utilities Department for the city of San Diego. Ms. Steirer provided a comprehensive presentation on the city’s advanced water purification facility and the water purification demonstration project. Ms. Steirer responded to questions from Directors Pocklington and Jungreis.

   Mr. Weinberg presented a short video in draft form on indirect potable reuse produced by Water Authority and member agency staff. Ms. Stapleton confirmed the finished video would be distributed to member agencies and made available on the Water Authority’s website.
2. **Presentation on status of Carlsbad Desalination Project.**

Mr. Weinberg provided an update on activities associated with the Carlsbad Desalination Project including status of term sheet conditions precedent, status of water purchase agreement negotiations, status of due diligence activities and status of water authority distribution improvements. Mr. Galleher provided remarks on the assessment of Pipeline 3, and Mr. Weinberg provided information on remaining conveyance and distribution system improvements. Mr. Weinberg reviewed next steps, and reported staff would provide a comprehensive project schedule in January that would lead to a draft water purchase agreement for the board’s consideration. Staff responded to questions posed by Director Brady regarding the electrical costs and reliability.

**III. INFORMATION**
Chair Dion advised the following would be postponed:

1. Presentation on water supply and demand conditions

The following item was received and filed:
2. Water Resources report

**IV. CLOSED SESSION**
There were no Closed Session items.

**V. ADJOURNMENT**
Chair Dion adjourned the meeting at 3:10 p.m.

**LEGISLATION, CONSERVATION AND OUTREACH COMMITTEE CALL TO ORDER/ROLL CALL**
Chair Saxod called the Legislation, Conservation and Outreach Committee to order at 3:14 p.m. Committee members present were Chair Saxod, Vice Chairs Hilliker and Jungreis, and Directors Croucher, Dailey, Miller, Topolovac, Tu, Walson, Weston, and Wornham. Committee members absent were Directors Boyle, Douglas, and Mudd. Other Board members present were Directors Arant, Bailey, Bond, Brady, Dion, Ferguson, Heidel, Hogan, Lewinger, Linden, McIntosh, Pocklington, Price, Smith, Steiner, Watton, Wight, 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, General Counsel Hentschke, Deputy General Managers Belock and Kerl, Assistant General Manager Cushman, Director of Public Outreach and Conservation Foster, Public Affairs Senior Manager Westford, and Government Relations Manager Volberg.

**ADDITIONS TO AGENDA**
There were no additions to the agenda.
PUBLIC COMMENT
There were no members of the public who wished to address the Committee.

CHAIR’S REPORT
Chair Saxod announced that Administrative Assistant Rodriguez would be retiring on December 29, 2011, and thanked her for her 20 years of service.

She also announced that the third Water Talks was scheduled for January 31, 2012, in the South County. The topic would focus on emergency storage and maintaining safe and secure pipelines. She advised more information would be forthcoming.

Chair Saxod welcomed Board members Miller, Topolovac, and Weston to the Legislation, Conservation, and Outreach Committee.

DIRECTORS’ COMMENTS
Director Hilliker announced that Director Arant had received the first Friend of Agriculture Award at the Annual Farm Bureau Farmer of the Year Dinner.

I. CONSENT CALENDAR
There were no items on the Consent Calendar.

II. ACTION/DISCUSSION
1. Legislative Issues.
   1-A Report by Carpi and Clay.

   Mr. Carpi reported on issues in Washington, D.C. He introduced Mr. Tyler Kruzich, Principal at Carpi & Clay, who provided a summary of federal government bills relating to water policy.

   Mr. Clay reported on issues in Sacramento.

   1-B Adopt proposed 2012 Legislative Policy Guidelines.
   Staff recommendation: Adopt the proposed 2012 Legislative Policy Guidelines.

   Director Dailey moved, Director Wornham seconded, and the item was discussed. Director Jungreis requested to amend the Water Use Efficiency section by adding a bullet that supported reasonable tracking of water use in the commercial industrial and institutional sector and opposed legislation that creates unachievable best management practices in commercial industrial and institutional enterprises in the San Diego region.

   Chair Saxod requested the Power Supply section, under item number 5, be amended to broaden the type of projects, not only to include desalination projects.
Chair Saxod called for the question for adopting the amended Legislative Guidelines and the motion passed unanimously.

1-C Sponsorship of two bills in the state Legislature to address water quality standards.

Staff recommendation: Sponsor legislation that:

1. Moves augmentation of raw water supplies with advanced treated purified water and direct potable reuse to the Health and Safety Code, instead of defining it as a waste in the Water Code.
2. Requires the State Water Resources Control Board to develop a policy that matches standards for fluoride in wastewater and recycled water with standards for drinking water in which the state has mandated the addition of fluoride.

Director Weston moved, Director Tu seconded and the motion passed unanimously to sponsor legislation that moves augmentation of raw water supplies with advanced treated purified water and direct potable reuse to the Health and Safety Code, instead of defining it as a waste in the Water code.

Director Tu moved, Director Jungreis seconded, and the motion passed unanimously to sponsor legislation that requires the State Water Resources Control Board to develop a policy that matches standards for fluoride in wastewater and recycled water with standards for drinking water in which the state has mandated the addition of fluoride.

III. INFORMATION

The following items were received and filed:
1. Water Conservation Program evaluations.
2. Small Contractor Outreach and Opportunities Program Quarterly report.
3. Quarterly report on Public Outreach and Conservation activities.
4. Government relations update

IV. ADJOURNMENT

There being no further business to come before the Legislation, Conservation and Outreach Committee, Chair Saxod adjourned the meeting at 3:51 p.m.
FORMAL BOARD OF DIRECTORS’ MEETING OF DECEMBER 8, 2011

1. **CALL TO ORDER** Chair Hogan called the Formal Board of Directors’ meeting to order at 4:00 p.m.

2. **SALUTE TO THE FLAG** Director Weston led the salute to the flag.

3. **ROLL CALL, DETERMINATION OF QUORUM**
   Director Weston led the roll call. Directors present were Arant, Bailey, Bond, Brady, Dailey, Dion, Ferguson, Heidel, Hilliker, Hogan, Jungreis, Lewinger, Linden, McIntosh, Miller, Pocklington, Price, Saunders, Saxod, Smith, Topolovac, Tu, Watson, Watton, Wight, Williams, Wilson, and Wornham. Directors absent were Boyle, Croucher, Douglas, Knutson, Morrison, Mudd, Steiner, and Representative Slater-Price.

   3-A **Report on proxies received.** Director Watton was the proxy for Director Croucher.

4. **ADDITIONS TO AGENDA** There were no additions to the agenda.

5. **APPROVAL OF MINUTES** Director Pocklington moved, Director Saxod seconded, and the motion carried at 88.39% of the vote to approve the minutes of the Formal Board of Directors’ meeting of October 27, 2011. Directors McIntosh and Weston abstained.

6. **OPPORTUNITY FOR MEMBERS OF THE PUBLIC WHO WISH TO ADDRESS THE BOARD ON MATTERS WITHIN THE BOARD’S JURISDICTION**
   There were no members of the public that wished to speak.

7. **PRESENTATIONS AND PUBLIC HEARINGS**
   7-A **Retirement of Director.** The Board adopted Resolution No. 2011-23 honoring Howard Williams upon his retirement from the Board of Directors.

   Director Wight moved, Director Dailey seconded, and the motion carried at 92.14% of the vote to adopt Resolution No. 2011-23.

   7-B **Appointment of Director.** Marty Miller representing Vista Irrigation District. Term expires November 22, 2017.

   7-C **Retirement of Director.** The Board adopted Resolution No. 2011-24 honoring Mark Muir upon his retirement from the Board of Directors.

   Director Bond moved, Director Pocklington seconded, and the motion carried at 92.14% of the vote to adopt Resolution No. 2011-24.

7-E Presentation of Directors’ service certificates. Directors Lewinger and Wornham were presented certificates for their years of service.

7-F Recognition of employee of the 1st quarter, Gary Tannahill, Facilities Services Technician. Mr. Tannahill was honored and received his award.

8. REPORTS BY CHAIRS
8-A Chairs report: Chair Hogan: Chair Hogan announced the upcoming Water Talks event scheduled for January 31, 2012.
8-B Report by Committee Chairs.
   Imported Water Committee. Director Watton reviewed the meeting and the actions taken.
   Engineering and Operations Committee. Director Dailey reviewed the meeting and the actions taken.
   Administrative and Finance Committee. Director Wight reviewed the meeting and the actions taken.
   Water Planning Committee. Director Dion reviewed the meeting and the actions taken.
   Legislation, Conservation and Outreach Committee. Director Saxod reviewed the meeting and the actions taken.

9. CONSENT CALENDAR
Director Tu moved, Director Heidel seconded, and the motion carried at 92.14% of the vote to approve the consent calendar. Directors voting no or abstaining are listed under the item number.

9-1. Amend agreement for special consulting services with SCN Strategies. The Board amended the agreement with SCN Strategies for continued special consulting services to the Water Authority through June 30, 2013, for a period of 17 additional months, increasing total contract funding to an amount not-to-exceed $387,500.

9-2. Change Orders to Shimmick/Obayashi Joint Venture for the San Vicente Dam Raise Package 3 – Roller Compacted Concrete Dams and Appurtenant Facilities project. The Board accepted Shimmick/Obayashi Joint Venture Change Orders 17 and 18 for $324,127; and authorized the General Manager to execute Change Orders for up to $750,000 to address design modifications, differing site conditions and outside agency requirements, increasing the authorized contract amount from $142,709,806.70 to $143,783,933.70.
9-3. **Vote entitlement resolution for calendar year 2012.**
The Board adopted **Resolution No. 2011-22** establishing the vote and representative entitlements of each member agency effective January 1, 2012.

9-4. **Ordinance requiring member agencies to pass the entire Special Agricultural Water Rate Program discount to the Program users.**
The Board adopted **Ordinance No. 2011-05** an Ordinance of the Board of Directors of the San Diego County Water Authority amending the Transitional Special Agricultural Water Rate Program.

9-5. **Annual Statement of Investment Policy, as amended, and continue to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2012.**
The Board adopted the Annual Statement of Investment Policy, as amended, and continued to delegate authority to the Treasurer to invest Water Authority funds for calendar year 2012.

9-6. **Professional services contract to Helix Environmental Planning, Inc. to provide environmental construction monitoring and support services for a 24-month period for a not-to-exceed amount of $315,000.**
The Board authorized the General Manager to execute a professional services contract with Helix Environmental Planning, Inc. to provide environmental construction monitoring and support services for a 24-month period for a not-to-exceed amount of $315,000.

9-7. **Adopt proposed 2012 Legislative Policy Guidelines.**
The Board adopted the proposed 2012 Legislative Policy Guidelines.

9-8. **Sponsorship of two bills in the state Legislature to address water quality standards.**
The Board Sponsored legislation that: Moves augmentation of raw water supplies with advanced treated purified water and direct potable reuse to the Health and Safety Code, instead of defining it as a waste in the Water Code. Requires the State Water Resources Control Board to develop a policy that matches standards for fluoride in wastewater and recycled water with standards for drinking water in which the state has mandated the addition of fluoride.

9-9. **Treasurer’s report.**
The Board noted and filed the monthly Treasurer’s report.
10. **ACTION/DISCUSSION**

10-A **Appointment of Director Doug Wilson to the Metropolitan Water District of Southern California Board of Directors.**

The Board adopted **Resolution No. 2011-25** approving the appointment of Doug Wilson as a representative of the San Diego County Water Authority on the Board of Directors of the Metropolitan Water District of Southern California.

Director Pocklington moved, Director Ferguson seconded, and the motion passed at 92.14% of the vote to appoint Doug Wilson to the Metropolitan Water District of Southern California Board of Directors.

10-B **Audit Committee Annual Report.**

The Board accepted and filed the Audit Committee Annual Report pursuant to the Administrative Code, Section 2.00.066. The Board accepted and filed the Comprehensive Annual Financial Report for fiscal year ended June 30, 2011.

Director Wight moved, Director Wilson seconded, and the motion passed at 92.14% of the vote.

11. **CLOSED SESSION(S)**

11-A **CLOSED SESSION:**

Conference with Legal Counsel – Existing Litigation

Government Code §54956.9(a)

Name of Case: QSA Judicial Council Coordination Proceeding No. 4353

11-B **CLOSED SESSION:**

Conference with Legal Counsel - Existing Litigation and Potential Litigation

Government Code §54956.9(a) - SDCWA v Metropolitan Water District of Southern California; Case No. CPF-10-510830

Government Code §54956.9(c) - One Case

11-C **CLOSED SESSION:**

Conference with Legal Counsel – Existing Litigation

Government Code §54956.9(a) – Traylor-Shea Joint Venture v SDCWA;

Case No. 37-2009-00090545-CU-BC-CTL

Traylor-Shea Joint Venture v SDCWA;

Case No. 37-2011-00092666-CU-BC-CTL
12. **Action following Closed Session.**
Mr. Hentschke announced the Board authorized the General Counsel and Special Counsel to execute a settlement agreement for Case No. 37-2009-00090545-CU-BC-CTL according to instructions given in Closed Session. Director Arant moved, Director Miller seconded and the motion carried at 92.14% of the vote.

13. **SPECIAL REPORTS**
13-A GENERAL MANAGER’S REPORT – Ms. Stapleton reminded the Board about the updated calendar.
13-B GENERAL COUNSEL’S REPORT – No report was given.
13-C SANDAG REPORT – Director Saunders stated there was nothing to report.
  SANDAG BORDERS/REGIONAL PLANNING COMMITTEE – Director Saxod announced there was nothing to report.
13-D AB 1234 COMPLIANCE REPORTS – No reports were given.

14. **OTHER COMMUNICATIONS** - Director Jungreis expressed appreciation for the Board’s support of the Semper Fi fund.

15. **ADJOURNMENT**
There being no further business to come before the Board, Chair Hogan adjourned the meeting at 4:25 p.m.

Michael T. Hogan, Chair

Richard K. Smith, Secretary

Doria F. Lore, Clerk of the Board
RESOLUTION NO. 2012-_______

RESOLUTION OF THE BOARD OF DIRECTORS OF THE
SAN DIEGO COUNTY WATER AUTHORITY
HONORING MARGARET “BETTY” FERGUSON
UPON HER RETIREMENT FROM THE BOARD OF DIRECTORS

WHEREAS, Margaret Ferguson served as a member of the Board of Directors of the San Diego County Water Authority, representing the Vallecitos Water District, from June 24, 2004 to her retirement on January 12, 2012; and

WHEREAS, she served as Chair on the Engineering and Operations Committee, and as Vice-Chair on the Engineering and Operations Committee, and Water Planning Committee, and as a member on the Engineering and Operations Committee, Imported Water Committee, Legislation Conservation and Outreach Committee, Planning and Environmental Committee, Water Planning Committee, and Water Policy Committee; and

WHEREAS, she served as a member on the Audit Subcommittee, Colorado River Programs AD HOC Committee, Comprehensive Reliability and Cost Assessment AD HOC Committee, Construction Costs AD HOC Committee, and Twin Oaks Treatment Plant DBO AD HOC Committee; and

WHEREAS, her contributions to the community extend beyond the activities with the San Diego County Water Authority; and

WHEREAS, her service, both public and private, has resulted in benefit to all people of San Diego County.

NOW, THEREFORE, BE IT RESOLVED, that on behalf of its individual members, past and present, its staff, and the people of San Diego County, the Board of Directors offers its most sincere appreciation to Margaret “Betty” Ferguson for her dedicated service to the San Diego region.
PASSED, APPROVED, and ADOPTED this 26th day of January, 2012.

Ayes:

Noes:

Abstain:

Absent:

_______________________________
Michael T. Hogan,  
Chair

ATTEST:

______________________________
Richard K. Smith,  
Secretary

I, Doria F. Lore, Clerk of the Board of the San Diego County Water Authority, certify that the vote shown above is correct and this Resolution No. 2012- _____ was duly adopted at the meeting of the Board of Directors on the date stated above.

_____________________________
Doria F. Lore  
Clerk of the Board
DATE: January 18, 2012
TO: Board of Directors
FROM: Daniel S. Hentschke, General Counsel
RE: Credentials of Dennis O. Lamb
Vallecitos Water District

Transmitted herewith is information submitted appointing Dennis O. Lamb to the Water Authority's Board of Directors. His term will expire on March 13, 2016.

The credentials furnished are sufficient for the qualifications of Mr. Lamb as a member of the Water Authority Board.

Daniel S. Hentschke
General Counsel

dfl
Attachment
RESOLUTION NO. 1386

RESOLUTION OF THE BOARD OF DIRECTORS OF THE VALLECITOS WATER DISTRICT DESIGNATING THE DISTRICT REPRESENTATIVE, DENNIS O. LAMB, AS A MEMBER OF THE BOARD OF DIRECTORS OF THE SAN DIEGO COUNTY WATER AUTHORITY

WHEREAS, Vallecitos Water District is a member of the San Diego County Water Authority and entitled to one representative to serve as a member of the Board of Directors of the San Diego County Water Authority; and

WHEREAS, the Board of Directors adopted Resolution No. 1366 on December 8, 2010, appointing Margaret E. Ferguson as the District's representative on the Board of Directors of the San Diego County Water Authority; and

WHEREAS, the term of office of Margaret E. Ferguson as representative of the Vallecitos Water District on the Board of Directors of the San Diego County Water Authority expires on March 13, 2016;

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors of the Vallecitos Water District hereby appoints Dennis O. Lamb as a member of the Board of Directors of the San Diego County Water Authority as a representative of this District for the remainder of the term ending March 13, 2016.

BE IT FURTHER RESOLVED, that the Secretary is hereby authorized and directed to provide a certified copy of this resolution to the San Diego County Water Authority at 4677 Overland Avenue, San Diego, CA 92123.

PASSED, APPROVED AND ADOPTED by the Board of Directors of the Vallecitos Water District at a regular meeting held on the 7th day of December, 2011, by the following roll call vote:

AYES: FERGUSON, HERNANDEZ, POLTL, SHELL, GENTRY

NOES: 

ABSTAIN: 

ABSENT: 

Darrell Gentry, President
Board of Directors
Vallecitos Water District

ATTEST:

Dennis O. Lamb, Secretary
Board of Directors
Vallecitos Water District
DATE: January 18, 2012
TO: Board of Directors
FROM: Daniel S. Hentschke, General Counsel
RE: Credentials of Mark Weston
     City of Poway

Transmitted herewith is information submitted appointing Mark Weston to the Water Authority's Board of Directors. His term will expire on April 22, 2014.

The credentials furnished are sufficient for the qualifications of Mr. Weston as a member of the Water Authority Board.

[Signature]
Daniel S. Hentschke
General Counsel

dfl
Attachment
December 7, 2011

Doria Lore
Clerk of the Board
San Diego County Water Authority
4677 Overland Ave.
San Diego, CA 92123

Re: Appointment of a Representative to the Board of Directors for the San Diego County Water Authority

At their meeting held December 6, 2011, the City Council adopted Resolution No. 11-062 appointing Mark Weston as the City of Poway's Representative to the San Diego County Water Authority Board of Directors for one year. A copy of the Resolution is enclosed for your files.

If you have any questions or need additional information, please contact Eric Heidemann, Legislative Services Administrator, at (858) 668-4505.

Sincerely,

[Signature]

Rosa Martinez
Senior Administrative Assistant
City Clerk's Office

Enclosure

cc: Eric Heidemann, Legislative Services Administrator
    Penny Riley, City Manager
    Mark Weston
RESOLUTION NO. 11-062

A RESOLUTION OF THE CITY COUNCIL
OF THE CITY OF POWAY, CALIFORNIA,
APPOINTING MARK WESTON AS ITS REPRESENTATIVE
TO THE BOARD OF DIRECTORS OF THE
SAN DIEGO COUNTY WATER AUTHORITY

WHEREAS, Don Higginson, Mayor of the City of Poway, has designated and appointed Mark Weston to serve as the representative on the Board of Directors of the San Diego County Water Authority; and

WHEREAS, the City Council approves said designation and appointment.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Poway that the designation and appointment of Mark Weston is hereby approved beginning December 6, 2011.

PASSED, ADOPTED AND APPROVED by the City Council of the City of Poway at a regular meeting this 6th day of December, 2011.

ATTEST:

Don Higginson, Mayor

Linda A. Troyan, MMC, City Clerk

STATE OF CALIFORNIA )
COUNTY OF SAN DIEGO ) SS

I, Linda A. Troyan, MMC, City Clerk of the City of Poway, do hereby certify under penalty of perjury that the foregoing Resolution No. 11-062 was duly adopted by the City Council at a meeting of said City Council held on the 6th day of December, 2011, and that it was so adopted by the following vote:

AYES: BOYACK, GROSCH, MULLIN, CUNNINGHAM, HIGGINSON
NOES: NONE
ABSENT: NONE
DISQUALIFIED: NONE

Linda A. Troyan, MMC, City Clerk
City of Poway
January 18, 2012

Attention: Board of Directors

General Counsel’s Report – December 2011/January 2012

Purpose
This report discusses certain legal matters receiving attention during the months of December 2011-January 2012.

Significant Developments in Pending Litigation
MWD Rate Case. On October 27, 2011, the Water Authority filed its amended complaint adding five new claims relating to Metropolitan's unlawful rate setting practice, unlawful termination of contracts with the Water Authority in retaliation for the rate case, and under-calculation of the Water Authority's preferential rights to water. Metropolitan demurred to four of the five new claims in the amended complaint and also filed a special motion to strike commonly referred to as an “anti-SLAPP motion.” On January 4, 2012, Judge Kramer denied the special motion to strike and allowed two of the four challenged causes of action to proceed. Although the Judge did sustain Metropolitan’s demurrer to two of the new causes of action, he left the door open to future amendments. In all, three of the Water Authority's five new claims are now included in the case. On January 6, Judge Kramer stated that he would permit discovery, and directed the parties to cooperate in the development of discovery plans and selection of an independent discovery referee. He also denied Metropolitan's motion to bifurcate the Water Authority's three new claims from its original claims, and try the original claims first, although he left open the possibility that he might do so at a later date. A further case management conference was set for February 17, 2012.

State QSA Litigation. Petitions for review by the California Supreme Court were filed on January 17, 2012 by the County of Imperial, POWER, the Morgan-Holtz parties, and Cuatro del Mar. Answers to the petitions are due within 20 days. Briefing on the merits will occur only if the Supreme Court grants review. Filing the petitions does not affect the status of the water transfers contemplated by the QSA.


Lake Hodges Pump Storage Project. Trial has been set for May 10, 2013. The case is currently in discovery.
San Vicente Pipeline Project. Traylor Shea Joint Venture’s lawsuit for reimbursement of shift differential pay has been settled. The Water Authority paid no money to settle the case. A case management conference for the lawsuit damages alleged to arise from differing site conditions is scheduled for January 27, 2012.

**Other Activities**
In October, I reported that this office filed an appeal of the administrative law judge’s decision to grant the unemployment insurance application of former board member Dan McMillan. In December 2011, the Unemployment Insurance Appeals Board reversed the decision of the administrative law judge and found the claimant ineligible for benefits under the provisions of Unemployment Insurance Code § 634.5 (c) (2), which excludes service by “a member of a legislative body … of a state or political subdivision of a state” from the definition of employment for unemployment insurance purposes. Assistant General Counsel Leslie Gallagher handled the appeal.

**Special Counsel Expenditures**
Funds approved for payments to special counsel during December 2011-January 2012 from the General Counsel’s Operating Budget totaled $206,250.50 for work related to the Metropolitan rate dispute, Metropolitan public records request, QSA litigation and personnel benefit matters. In addition, $9,438.50 was approved for payment from the Human Resources Operating Budget for work related to personnel issues, and $27,248.50 was approved for payment from Water Resources Operating Budget for work related to desalination. CIP expenditures during December 2011-January 2012 were $198,453.47 for work related to the Olivenhain-Lake Hodges Pump Storage Project, Traylor-Shea Joint Venture, and SDG&E contract.
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<th>Total $ Expended FYs 10 &amp; 11 (Fees &amp; Costs)</th>
<th>OP Budget Invoices Approved for Payment this Period</th>
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<th>Total $ Expended FYs 12 &amp; 13 (Fees &amp; Costs)</th>
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* Concluded matters or assignments.

1 Not included in totals, legal expenses related to proposed desalination project are coming out of Water Resources budget, not GC budget
2 Not included in totals, legal expenses related to personnel issue are coming out of Human Resources budget, not GC budget
<table>
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<tr>
<th>Special Counsel</th>
<th>Project</th>
<th>Total $ Expended FYs 08 &amp; 09 (Fees &amp; Costs)</th>
<th>OP Budget Invoices Approved for Payment this Period</th>
<th>CIP Budget Invoices Approved for Payment this Period</th>
<th>Total $ Expended FYs 10 &amp; 11 (Fees &amp; Costs)</th>
<th>Budget Allocation FYs 12 &amp; 13 for Legal Services</th>
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* Concluded matters or assignments.

3 Not included in totals, legal expenses related to copyright matter are coming out of Conservation budget, not GC budget
4 Not included in totals, legal expenses related to personnel issue are coming out of Human Resources budget, not GC budget