



WATER PLANNING COMMITTEE

AGENDA FOR

SEPTEMBER 23, 2010

Javier Saunders – Chair
Rua Petty – Vice Chair
Brian Boyle
Marilyn Dailey
Trish Hannan
Lynne Heidel
Keith Lewinger

Bud Lewis
John Linden
Dan McMillan
Mark Muir
Fern Steiner
Mark Watton

1. Roll call – determination of quorum.
2. Additions to agenda (Government Code Section 54954.2(b)).
3. Public comment – opportunities for members of the public to address the Committee on matters within the Committee’s jurisdiction.
4. Chair’s report.
4-A Directors’ comments.

I. CONSENT CALENDAR

II. ACTION/DISCUSSION

1. PUBLIC HEARING: Mitigated Negative Declaration for the Pipelines 3 and 4 Relining Project—State Route 52 to Lake Murray and Pipeline 3 30-inch Interconnect to Lake Murray Control Valve. Mark Tegio
2. Authorize submittal of Proposition 84 integrated regional water management planning grant application. Mark Stadler
Staff recommendation: Adopt Resolution No. 2010-___ authorizing the General Manager to submit a Proposition 84 integrated regional water management planning grant application. (Action)



San Diego County Water Authority

3. Add funding to the FY 2011 Water Resources Budget for legal and technical services for the preparation and negotiation of a potential Water Purchase Agreement with Poseidon Resources (Channelside) for desalinated seawater from the Carlsbad Desalination Project and amend the Professional Services Agreement with Clean Energy Capital. Ken Weinberg
Staff recommendation:
- a) Approve the second amendment to the Professional Services Agreement with Clean Energy Capital and increase the not-to-exceed amount from \$149,500 to \$299,500 for financial and economic analysis related to the preparation and negotiation of a Water Purchase Agreement with Poseidon Resources (Channelside).
 - b) Add \$500,000 from FY 2011 operating reserves to the Water Resources Department FY 2011 budget for specialized legal and financial expertise to support the negotiating team in the development of a Water Purchase Agreement. (Action)

III. INFORMATION

1. Presentation on Unit Cost of New Local Water Supply Alternatives. (provided under separate cover) Bob Yamada
2. Presentation on Fiscal Year 2011 Municipal and Industrial supply allocation targets and delivery tracking. (pickup packet) Dana Frieauf
3. Water Resources report. Ken Weinberg

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.



September 15, 2010

Attention: Water Planning Committee

Authorize submittal of Proposition 84 integrated regional water management planning grant application. (Action)

Staff recommendation

Adopt Resolution No. 2010-_____ authorizing the General Manager to submit a Proposition 84 integrated regional water management planning grant application.

Other recommendation

The Regional Advisory Committee, the San Diego Integrated Regional Water Management Program's official advisory panel, voted to recommend the planning grant application to the Water Authority Board.

Alternative

Do not adopt Resolution No. 2010-_____ authorizing the General Manager to submit a Proposition 84 integrated regional water management planning grant application.

Fiscal Impact

The Department of Water Resources (DWR) has initiated a grant program to support integrated regional water management (IRWM) planning in California. The first round, which is under way, will award up to \$20 million in grants; round two, not yet scheduled, will award approximately \$10 million in grants. The maximum amount of a planning grant will be \$1 million per region. DWR requires that applicants for a planning grant provide a minimum funding match of 25 percent. As one of three members of the San Diego Regional Water Management Group (RWMG), the Water Authority is responsible for approximately one-third of the match, which it will provide primarily through in-kind services that already are in the Water Resources Department budget. This project relates to the customer service rate category.

Background

The Water Authority, the county of San Diego and the city of San Diego joined in 2005 to form an RWMG, develop the first San Diego IRWM Plan and apply for IRWM implementation funding under the state's Proposition 50 grant program. The Water Authority was designated the lead agency for purposes of applying for grants, administering grant funding that is received and representing the RWMG to funding agencies such as DWR.

The RWMG completed the IRWM Plan, which was adopted by the Board in 2007 and approved by DWR in 2009. In addition, DWR in 2008 awarded a \$25 million Proposition 50 IRWM implementation grant to the San Diego Planning Region. These funds are supporting 19 water-related projects by public agencies and non-profit organizations in the San Diego region, including three by the Water Authority and nine by Water Authority member agencies.

New funding opportunities were created when California voters approved Proposition 84 in 2006. Proposition 84 allocated \$1 billion to DWR to support IRWM planning and implementation in California. DWR has announced that it will offer two grant programs of interest to the San Diego Planning Region this year. Already under way is a planning grant program that offers \$20 million for the development, updating or improvement of an IRWM plan; applications are due September 28. These funds, which will be awarded on a statewide competitive basis, also may be used for planning efforts specific to a topic such as salt/nutrient management planning or integration of flood management issues into an IRWM plan. The maximum grant for this program is \$1 million. DWR plans to unveil its list of recommended grant recipients in November and the final list in January.

Next on DWR's schedule will be the first of an anticipated three rounds of Proposition 84 IRWM implementation grant programs. The deadline for submittal of applications for this first implementation grant application period is January 7. The first round will offer \$100 million statewide, with \$10.1 million allocated to the San Diego IRWM Funding Area. The San Diego RWMG expects to receive approximately \$7.9 million of this amount.

Discussion

The San Diego RWMG is preparing an application for a \$1 million grant from DWR's Proposition 84 planning grant program. The budget for the planning effort also includes \$515,210 in local matching funds (representing primarily consultant services and RWMG staff time), for a total budget of \$1.515 million. With this funding, the RWMG will hire a qualified consultant to assist the management group in revising the 2007 San Diego IRWM Plan. The revision will include updated information, an expanded scope and compliance with new state requirements. It also will involve conducting related studies that will support the plan.

The scope of the planning effort is divided into four categories, which are described below:

- **Outreach and communication.** Community outreach is an essential element of IRWM, which seeks to incorporate input from the widest possible variety of stakeholders and the general public. DWR will evaluate the grant application in part based on the extent of public outreach that is included, with an emphasis on outreach to disadvantaged communities and tribes in the region. In addition, DWR will evaluate the updated San Diego IRWM Plan in several ways, including the extent of public involvement in the plan development. The RWMG will hold community meetings and use the San Diego IRWM website (<http://www.rmcwater.com/clients/sdirwmp/home.html>) to inform the public about the San Diego IRWM planning efforts and solicit community input. This funding also will support meetings of the RWMG and the San Diego Regional Advisory Committee (RAC) and coordination with the Tri-County Funding Area Coordination Committee, which comprises the three planning regions in the San Diego IRWM Funding Area. Along with San Diego, the other two planning regions in the funding area are Upper Santa Margarita and South Orange County.

- **Planning studies.** The RWMG will conduct three planning studies that will be incorporated into the updated IRWM Plan. One study, carried out in coordination with the San Diego Regional Water Quality Control Board, will develop salinity and nutrient management planning guidelines that will guide stakeholders in meeting requirements established by the State Water Resources Control Board's Recycled Water Policy. Funding will be provided to local agencies that use these guidelines to support development of their required salinity and nutrient management plans. The RWMG also will conduct separate planning studies in the areas of floodplain management and coordination with land-use planning coordination.
- **Plan update.** The RWMG will update the 2007 plan to comply with new state guidelines and requirements. A portion of this funding also will be used to do related tasks required by DWR, such as analysis of the potential impacts of climate change on the region's water supply and strategies for adapting to these impacts. Another task involves an examination of alternatives for long-term governance and financing of the San Diego IRWM Program. The RWMG, working with the RAC, also will update IRWM program priorities and plan metrics.
- **Proposal administration.** The application sets aside \$50,000 in grant funds to defray the Water Authority's costs to administer the planning grant. (Water Authority staff time for other aspects of the plan update is included in the Water Resources budget.)

The RAC voted at its September 8 meeting to recommend the planning grant application to the Water Authority Board. The RAC comprises 32 members who represent a wide variety of public agencies, non-profit organizations and other interests related to water management. The memorandum of understanding that established the San Diego IRWM Program states that the RWMG governing bodies will give primary consideration to the RAC's recommendations regarding adoption of the important issues, including approval and submittal of grant applications.

Prepared by: Mark Stadler, Principal Water Resources Specialist
Reviewed by: Ken Weinberg, Director of Water Resources
Approved by: Sandra L. Kerl, Deputy General Manager

Attachment: Resolution No. 2010-___ of the Board of Directors of the San Diego County Water Authority authorizing the General Manager to submit a Proposition 84 IRWM planning grant application

RESOLUTION No. _2010-___

**RESOLUTION OF THE BOARD OF
DIRECTORS OF THE SAN DIEGO COUNTY
WATER AUTHORITY AUTHORIZING
THE GENERAL MANAGER TO SUBMIT A
PROPOSITION 84 IRWM PLANNING GRANT
APPLICATION**

WHEREAS, Proposition 84, the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Public Resources Code section 75001 *et seq.*), authorized the California Legislature to appropriate \$1 billion to encourage integrated regional water management planning in California; and

WHEREAS, Section 83002.(b)(3)(A)(ii) of the California Water Code appropriated to the Department of Water Resources (DWR) \$39 million for integrated regional water management (IRWM) planning grants and other purposes; and

WHEREAS, DWR has made \$20 million of this funding available through a competitive planning grant program; and

WHEREAS, the San Diego Regional Water Management Group (RWMG) needs to updated the 2007 San Diego IRWM Plan to comply with new state guidelines for IRWM plans; and

WHEREAS, having an IRWM Plan that complies with state guidelines will be required to seek future DWR funding for IRWM implementation projects; and

WHEREAS, the San Diego RWMG, in close cooperation with the Regional Advisory Committee (RAC), is preparing an application for a Proposition 84 planning grant to be used to update the 2007 Plan; and

WHEREAS, grant application procedures established by DWR require applicants to provide a copy of a resolution adopted by the applicant's governing body designating an authorized representative to file application for an IRWM grants; and

WHEREAS, the memorandum of understanding that established the San Diego IRWM Program identifies the Water Authority has the program's authorized representative; and

WHEREAS, the Water Authority Board of Directors is the decision-making body for the Water Authority; and

WHEREAS, the Board of Directors has considered the reports submitted by Water Authority staff on IRWM planning dated February 14, 2007; May 16, 2007; July 18, 2007; September 19, 2007; January 16, 2008; June 18, 2008; December 10, 2008; January 14, 2009; March 18, 2009; August 19, 2009; October 14, 2009; July 14, 2010; and September 15, 2010

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

1. The foregoing facts are true and correct.
2. The General Manager is authorized to prepare the necessary data, conduct investigations, and submit a Proposition 84 planning grant application.
3. The General Manager is authorized to enter into an agreement to receive a Proposition 84 planning grant from the California Department of Water Resources.

PASSED, APPROVED AND ADOPTED, this 23rd day of September, 2010, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

Claude A. Lewis
Chair

ATTEST:

Thomas V. Wornham
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. 2010- _____ was duly adopted at the meeting of the Board of Directors on the date stated above.

Doria F. Lore
Clerk of the Board



September 15, 2010

Attention: Water Planning Committee

Add funding to the FY 2011 Water Resources Budget for legal and technical services for the preparation and negotiation of a potential Water Purchase Agreement with Poseidon Resources (Channelside) for desalinated seawater from the Carlsbad Desalination Project and amend the Professional Services Agreement with Clean Energy Capital. (Action)

Staff recommendation

1. Approve the second amendment to the Professional Services Agreement with Clean Energy Capital and increase the not-to-exceed amount from \$149,500 to \$299,500 for financial and economic analysis related to the preparation and negotiation of a Water Purchase Agreement with Poseidon Resources (Channelside).
2. Add \$500,000 from FY 2011 operating reserves to the Water Resources Department FY 2011 budget for specialized legal and financial expertise to support the negotiating team in the development of a Water Purchase Agreement.

Alternative

1. Do not approve the amendment and do not increase the Water Resources Department FY 2011 operating budget.

Fiscal Impact

Approval of the staff recommendations will result in a \$500,000 increase to the Water Resources Fiscal Year 2011 Operating Budget. These additional funds will be allocated to Water Resources from the Water Authority's operating reserves. Supply is the related rate category.

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 and was incorporated into the 2003 Water Facilities Master Plan and the Water Authority's 2005 Update of the Urban Water Management Plan. 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. In 2020, the Project would account for approximately eight percent of the total projected regional supply and 30% 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. 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. Now that significant progress

has been made conducting project due diligence and the process for agreement preparation and approval are better defined, staff is requesting additional funding and contract authorization to complete those activities.

Discussion

Staff is currently conducting project due diligence activities and preparing the first draft of a Water Purchase Agreement based on the term sheet approved by the Board of Directors at its July 22, 2010 meeting. As per the approved Term Sheet (Attachment 1), negotiations between the Water Authority and Poseidon cannot commence until Poseidon meets certain conditions precedent. Poseidon has met the condition of terminating all existing confidentiality agreements and is working on meeting the other conditions precedent. The outstanding conditions include the submission to the Water Authority of a binding commitment from a construction equity investor and the acknowledgement in writing by Poseidon and the nine member agencies with water purchase agreements to cancel those agreements and release the Water Authority from any and all claims. Poseidon is also currently engaged in the procurement of additional engineering and construction services for the Project and is procuring a project operator. Finalization and execution of both those contracts by Poseidon are necessary to finalize costs and price in the Water Purchase Agreement and are additional conditions precedent to Board consideration of any agreement.

Based on the current level of activity and progress to date, staff is tentatively scheduling two workshops for the Board and the public in November, prior to consideration of any action relative to the Water Purchase Agreement. Holding the workshops in November is contingent on Poseidon successfully meeting all conditions precedent required in the Term Sheet. In the event that there are any potential delays in the schedule, staff will revise the dates of the two workshops.

Poseidon will be constructing the project through a non-recourse project financing using tax exempt Private Activity Bonds through the California Infrastructure Bank. Project Financing is a complex and specialized transaction with multiple parties involved. Financibility of the project is solely dependent on the terms and conditions of the Water Purchase Agreement and all of the underlying construction, operating and financial agreements for the project to obtain an investment grade bond rating. Because of the specialized nature of this transaction, staff retained the services of highly experienced outside financial, legal and engineering expertise to evaluate the economic and engineering feasibility of the project, identify and allocate risks associated with financing and implementation and recommend the appropriate role of the Water Authority in the project. Under the General Manager's contracting authority, staff obtained the services of Clean Energy Capital (CEC), RW Beck and Hawkins Delafield and Wood. These three firms provided necessary support to staff during the evaluation of the project's financial and engineering feasibility and the preparation and negotiation of the Board approved Term Sheet.

CEC is a specialist in investment banking and project and municipal financing, with extensive experience in commodity purchase agreements and deal structures. CEC has provided advice and conducted economic analysis of Poseidon's financial information and pricing methodology. RW Beck was brought on to provide desalination engineering expertise to review the feasibility of construction and operation of the facilities being proposed by Poseidon and provide advice on business related matters of the proposal. RW Beck is an internationally recognized engineering

consultant with special expertise in project financing and seawater desalination. RW Beck has provided support previously to the Water Authority in prior negotiations with Poseidon and is the current Owner's Engineer for the Tampa Bay Desalination Project. Hawkins Delafield and Wood was selected by the General Counsel to provide specialized legal services in the development of the Term Sheet and, when directed by the Board, preparation of a full Water Purchase Agreement. Hawkins Delafield and Wood were outside counsel for the Twin Oaks Water Treatment Plant Design Build Operate (DBO) contract and the Lake Hodges-Olivenhain Tunnel Design Build (DB) agreement. Counsel from Hawkins Delafield and Wood also represented the Water Authority in prior negotiations with Poseidon.

At the July 22, 2010 Board meeting, \$300,000 was added to the Water Resources FY 2011 budget to conduct project due diligence activities and assist in the preparation and negotiation of a full agreement. At that meeting staff also noted that, to complete the process, a future request for additional funding would be necessary once the extent and pace of negotiations were better defined.

The pace and scope of the process has reached a level of definition so that staff estimates that an additional \$500,000 will be required to complete the drafting and negotiation of a final Water Purchase Agreement. Because of the intensiveness and importance of the financial and pricing components of the agreement, staff is recommending an increase of \$150,000 to CEC's contract amount. This amendment will allow CEC to provide analytical support on alternative pricing methods and assist the negotiating team at the table in drafting a final Water Purchase Agreement. It is estimated that the services of special counsel to complete the drafting and negotiation and approval process will be \$450,000, requiring an additional \$350,000 over currently available funds. There are sufficient funds in the RW Beck contract to complete their role in the process. It is recommended that the funds be taken from FY 2011 operating reserves.

Prepared and Reviewed by: Ken Weinberg, Director of Water Resources
Reviewed by: Eric Sandler, Director of Finance
Reviewed by: Dan Hentschke, General Counsel
Reviewed by: Sandra L. Kerl, Deputy General Manager
Approved by: Maureen A. Stapleton, General Manager

Attachment: Term Sheet - Proposed Water Purchase Contract -
Carlsbad Seawater Desalination Project

Term Sheet

**Proposed Water Purchase Contract
Carlsbad Seawater Desalination Project**

**The San Diego County Water Authority
and
Poseidon Resources (Channelside) LP**

July 22, 2010

TERMINOLOGY

Subject	Meaning
1. Parties	San Diego County Water Authority (the “Water Authority”). Poseidon Resources (Channelside) LP (“Poseidon”).
2. Plant, Delivery System, and Project	A reverse osmosis seawater desalination plant, including the seawater intake and concentrate disposal facilities to be located on a site adjacent to the NRG Encina Power Station (“Plant”), and the associated pipeline and booster pumps (“Delivery System”) capable of delivering 56,000 acre-feet/year of desalinated water (“Product Water”) into the San Diego County Water Authority’s distribution system. The “Project” consists of the Plant and Delivery System, and is consistent with the EIR.
3. Water Purchase Contract	A contract (“Contract”) between Poseidon and the Water Authority under which the Water Authority will purchase Product Water under terms set forth in the Contract following completion of construction of the Project.
4. Contract Date	The date on which the Contract is executed and delivered by the parties.
5. EPC Contractor	A proposed contract between Poseidon and a Joint Venture Partnership of IDE Technologies, Inc. and a construction contractor to be selected by Poseidon from a pre-qualified list approved by the Water Authority (the “EPC Contractor”) for the design and construction of the Project.
6. Operating Agreement	A proposed contract between Poseidon and Ambient Technologies, Inc. (the “Operating Contractor”), and guaranteed by IDE Technologies, Inc. for the operation and maintenance of the Plant.
7. MWD	Metropolitan Water District of Southern California.
8. MWD Agreement	The MWD Seawater Desalination Program Agreement between the Water Authority and MWD.
9. EIR	The environmental impact report for the Project certified by the city of Carlsbad in June, 2006, and one addendum in September, 2009.

NEGOTIATION AND APPROVAL PROCESS

Subject	Understanding
1. Purpose	The purpose of this Term Sheet is to set forth the basis for negotiations toward a possible Contract between the parties. It is a summary only and is not comprehensive or definitive. The parties understand that substantive terms and detailed provisions not noted or fully developed in this Term Sheet are expected to be included in any final Contract.
2. Not a Contract	This Term Sheet is not a contract. The proposed terms and conditions set forth herein do not bind either party in any manner, and in particular do not commit the Water Authority to purchase Product Water.
3. Definitive Equity Commitment	<p><u>A. Definitive Equity Commitment Date</u></p> <p>The parties understand that Poseidon intends to continue to seek a definitive equity commitment from one or more financial institutions, based on this Term Sheet, to provide equity in an amount and upon terms sufficient to obtain Project debt financing for Project construction. The date on which a definitive equity commitment is delivered to the Water Authority is the “Equity Commitment Date.” While Poseidon pursues a definitive equity commitment, the Water Authority intends to prepare a draft form of the Contract and provide it to Poseidon.</p> <p><u>B. Definitive Equity Commitment Defined</u></p> <p>A definitive equity commitment is an executed agreement, in form and substance satisfactory to the Water Authority, setting forth detailed terms for equity investment in the Project, including the investment amount, the form of investment, ownership interest, timing of investment, target closing date, Project governance, and conditions to funding. The definitive equity commitment shall be from an entity with adequate capitalization to fund the full equity investment necessary for Project funding, and shall not be contingent on the need to raise any further capital.</p>
4. Contract Negotiations	<p><u>A. Commencement</u></p> <p>The parties intend to enter into negotiations for a definitive Contract following (1) the Equity Commitment Date, (2) Poseidon terminating all existing confidentiality agreements with the Water Authority, and waiving any claims based thereon, (3) Poseidon, and all member agencies that have existing water purchase agreements with Poseidon,</p>

Subject	Understanding
	<p>executing agreements or taking other action assuring the Water Authority that no previous agreements with respect to the Project will cause potential liability for the Water Authority or otherwise impede the implementation of the Project pursuant to this Term Sheet (which actions may include executing an acknowledgement of this Term Sheet, requesting that the Water Authority enter into the negotiations contemplated by this Term Sheet and waiving any claims they may have as a consequence thereof, including claims that such negotiations interfere with an existing business relationship, and agreeing to terminate all existing agreements with each other relating to the Project on or prior to the Contract Date), and (4) authorization by the Water Authority board of the commencement of negotiations.</p> <p><u>B. Negotiating Parties</u> The Water Authority intends to receive reasonable assurances that the individuals and counsel representing Poseidon in the negotiations fully represent the interests of Poseidon and of the providers of all necessary construction equity, and that the Water Authority will not face Poseidon change of control issues.</p> <p><u>C. Termination of Negotiations</u> The parties acknowledge that either party may suspend, terminate or renew negotiations at any time and for any reason without consequence.</p>
5. Water Authority Due Diligence	<p>During the equity commitment and negotiating periods, the Water Authority intends to conduct a complete due diligence examination of Poseidon and the Project. Poseidon intends to fully cooperate with the examination, and provide all documents and information requested by the Water Authority in connection therewith. Due diligence will address, among other things, (1) Poseidon’s investors, ownership structure, management, financial condition and contingent liabilities; (2) any existing agreements, commitments, understandings, rights and claims of any other party pertaining to Poseidon and the Project; (3) Plant and Delivery System design specifications, (4) the proposed EPC Agreement and EPC Contractor; (5) the proposed Operating Agreement and operating contractor; (6) legal entitlements; (7) litigation; (8) development equity, construction equity and debt arrangements, participation and terms; (9) financial projections for the Project; (10) all procurements, negotiations</p>

Subject	Understanding
	and discussions Poseidon has engaged in for contractors and subcontractors for the Project; (11) any and all land leases for property or appurtenant facilities including, but not limited to, the site lease with NRG and land lease with the State Lands Commission; and (12) pre-treatment pilot testing protocols, results and issues.
6. No Water Authority Responsibility for the Project	Poseidon understands and acknowledges that its proposal for the Project is unsolicited and that the Water Authority does not assume any responsibility for the Project whatsoever. Any Contract resulting from the negotiations will be a contract solely for the purchase of Product Water. Poseidon has planned and developed and will implement the Project completely at its own risk. Poseidon will be solely responsible for the efficacy of the Project and its permitting, financing, design, construction, commissioning and capability of successfully passing acceptance tests producing Product Water to the standards of the Contract. No due diligence performed by the Water Authority shall represent or constitute an endorsement of the Project or any transfer of liability to the Water Authority for the Project or its performance.

**TERMS AND CONDITIONS OF
THE PROPOSED WATER PURCHASE CONTRACT**

Subject	Proposed Term/Condition
1. Term	The term of the Contract will begin on the Contract Date and will terminate 30 years from the Commercial Operation Date. The Contract may be extended for up to three additional years, under the conditions described in Item 13J.
2. Roles of the Parties	<p><u>A. Poseidon</u> Poseidon will design, permit, finance, construct, commission, start-up, and acceptance test the Project, all in conformity with applicable law, prudent industry practices and the requirements of the Contract. Upon the completion of construction, passage of acceptance tests and commencement of the commercial operation of the Project (“Commercial Operation Date”), Poseidon will operate and maintain the Plant (and, until its potential purchase by the Water Authority as contemplated in Item 9, the Delivery System) in accordance with prudent industry practices and applicable laws and regulations sufficient to meet the performance and regulatory requirements of the Contract.</p> <p><u>B. The Water Authority</u> Without bearing any responsibility or liability, the Water Authority will cooperate with Poseidon during the construction period. The Water Authority will provide rights of way necessary for the Delivery System, and any information, reviews and approvals by the Water Authority necessary to connect the Delivery System to the Water Authority’s distribution system. From and after the Commercial Operation Date, the Water Authority will purchase Product Water as provided for under the Contract.</p>
3. Financing Period	<p><u>A. Initial Financial Close Date</u> In the event a Contract is successfully negotiated and executed, Poseidon shall achieve financial close (with all permanent financing in place for the Project) by July 1, 2011 (the “Initial Financial Close Date”).</p> <p><u>B. Failure to Achieve Financial Close by Initial Financial Close Date</u> If Poseidon fails to achieve financial close for the Project by the Initial Financial Close Date, the Water Authority may terminate the Water Purchase Contract. Poseidon may, however, extend its right to achieve financial close until</p>

Subject	Proposed Term/Condition
	<p>January 1, 2012 (the “Extended Financial Close Date”) by posting, on or before the Initial Financial Close Date, a Letter of Credit (“LOC”) in a negotiated stated amount.</p> <p><u>C. Achievement of Financial Close</u> If Poseidon succeeds in achieving financial close before the Initial Financial Close Date or, if the LOC has been posted, the Extended Financial Close Date, as the case may be, Poseidon will proceed to construct the Project and, if applicable, the Water Authority will return the LOC.</p> <p><u>D. Failure to Achieve Financial Close by Extended Financial Close Date</u> If Poseidon fails to achieve financial close by the “Extended Financial Close Date”, the Water Authority may draw on the letter of credit in its full stated amount, retain the LOC proceeds for its own account, and terminate the Contract.</p>
4. Financing Plan	<p><u>A. Poseidon Responsibilities</u> Poseidon will be solely responsible for the financing of the Project. Poseidon will keep the Water Authority regularly informed of its progress in executing the plan of financing.</p> <p><u>B. Amount of Financing</u> Poseidon may not issue additional Project debt without the approval of the Water Authority given in its sole discretion, except (1) debt for Project completion, (2) refinancing debt, (3) debt necessary to pay capital costs resulting from uninsured force majeure events and Included Changes in Laws, and (4) debt for other purposes to be negotiated.</p> <p><u>C. Capital Amortization Period</u> The amortization term of any Project debt financing or refinancing undertaken will not exceed the term of the Contract, unless agreed to by the Water Authority in its sole discretion.</p>
5. Design and Construction of the Plant and Delivery System	<p><u>A. Construction Period Design Reviews for the Plant</u> During the Construction Period, the Water Authority will have the right, but not the obligation, to periodically review the design of the Plant for compliance with the EPC Agreement and design specifications as set forth in the Contract. The Water Authority will not have approval authority over the design of the Plant, except as such may relate to compliance with the requirements of the Contract.</p>

Subject	Proposed Term/Condition
	<p>Poseidon will agree to consider and respond to any other comments or concerns made by the Water Authority.</p> <p><u>B. Construction Period Design Reviews for the Delivery System</u> The Water Authority will review, comment and agree upon the design and construction quality requirements for the Delivery System to be included in the Contract and the EPC Agreement. During construction, the Water Authority will periodically review and comment on the evolving design for consistency with the contractual design and construction quality requirements and for consistency with the Water Authority’s standards and requirements for similar facilities. The procedures, extent and nature of such reviews will be determined during negotiations. The Water Authority will not have design approval rights once the Contract is signed, except for such consistency determinations. Poseidon will retain all design liability.</p> <p><u>C. Construction Period Reporting and Review for the Project</u> Poseidon will attend monthly progress meetings with the Water Authority and will provide the Water Authority access to information regarding the Delivery System. Poseidon will consider and respond to any other comments or concerns made by the Water Authority. The Water Authority will have the right to observe and inspect construction of the Project at any reasonable time. The Contract will detail the Water Authority’s inspection rights and requirements, and Poseidon’s obligations during the construction of the Delivery System and the Connection Facilities.</p> <p><u>D. Start-Up and Acceptance Testing of the Plant</u> The Contract will set forth acceptance test standards and procedures designed to assure the Water Authority that the Plant will be capable, on a long term basis, of meeting the requirements of the Contract. The Water Authority will have the right to review and comment on the acceptance test protocol to be developed in accordance with the requirements of the Contract, and to observe Plant start-up and acceptance testing.</p> <p><u>E. Construction and Start-Up of the Delivery System</u> The Contract will also set forth acceptance test standards specifically for the Delivery System, and provide the Water Authority with the right to review and comment on the</p>

Subject	Proposed Term/Condition
	<p>acceptance test protocol for the Delivery System. The Water Authority will have inspection oversight rights for the Delivery System throughout the construction and testing phases. Upon completion of start-up and acceptance testing of the Delivery System, the Water Authority will conduct a final inspection of the Delivery System and provide Poseidon with a written punch list. Upon satisfactory completion of the punch list, the Water Authority will provide a written recommendation to Poseidon to proceed with the filing of the notice of completion.</p> <p><u>F. Modifications Due to Included Changes in Law During the Construction Period</u></p> <p>In the event that capital improvements or modifications are required due to an Included Change in Law occurring during the Construction Period, Poseidon will inform the Water Authority of such need and of the schedule for and an estimated cost of addressing such need. Poseidon will mitigate the effects of the Included Change in Law, and minimize the delay in design or construction and minimize the cost of such capital improvements or modifications. The Water Authority will be responsible for such costs, but only if: (1) the Commercial Operation Date is achieved; and (2) such Included Change in Law is not imposed as the result of the acts or omissions of Poseidon. Poseidon will inform the Water Authority as to the occurrence of any Excluded Changes in Law during the Construction Period and their impacts, but the Water Authority shall bear no risk with respect thereto.</p>
6. Pre-Treatment Pilot Testing	<p>The parties recognize the potential necessity of further pre-treatment pilot testing based on the selected Plant technology, and the potential need to conduct such testing during the final design phase following the Contract Date if the additional testing work cannot be completed during the equity commitment and negotiating periods. The Contract will contain all necessary assurances that Poseidon will have the financial and technical resources necessary to provide for any additional pre-treatment facilities and capacity that may be demonstrated to be required, either upon completion of such additional pre-treatment pilot testing or during Plant commissioning and acceptance testing.</p>

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7. Delay in Achieving Commercial Operation Date	<p><u>A. Scheduled Commercial Operation Date</u> The Scheduled Commercial Operation Date will be the earlier of (1) January 1, 2015, or (2) the date that is 40 months following the actual date of financial close, as such date may be extended due to Uncontrollable Circumstances. Poseidon shall pay negotiated daily delay liquidated damages for each day of unexcused failure to achieve the Commercial Operation Date by the Scheduled Commercial Operation Date.</p> <p><u>B. Scheduled Commercial Operation Date Extension</u> If Poseidon fails to achieve the Commercial Operation Date by January 1, 2015, the Water Authority may terminate the Contract, without the obligation to pay any termination fee or to purchase the Project, and bring a damage action.</p>
8. Delivery System	<p><u>A. Delivery System Description</u> The Delivery System will be defined as in the current Carlsbad Municipal Water District water purchase agreement with Poseidon.</p> <p><u>B. Delivery System Adequacy</u> The Delivery System will be adequate to transport and deliver Product Water at all times to the Water Authority's delivery point in the quantities required by the Contract.</p>
9. Delivery System Purchase	<p>Within a negotiated period following the Commercial Operation Date, and following the achievement of an output factor of no less than an average of 85% during that period and other purchase conditions to be established, the Water Authority will either be obligated, or have the option, to purchase the Delivery System for a purchase price to be stipulated in the Contract. Following any such purchase, the Water Purchase Price will be adjusted appropriately.</p>
10. Operation	<p><u>A. Poseidon's Obligation to Operate the Plant</u> Upon the achievement of the Commercial Operation Date, Poseidon will operate and maintain the Plant in accordance with the terms of the Contract, prudent industry practices and applicable laws and regulations sufficient to meet the contractual performance and regulatory requirements.</p> <p><u>B. Operation and Maintenance of the Delivery System</u> The Delivery System will be operated and maintained by Poseidon, unless operated by the Water Authority following</p>

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	<p>any purchase of the Delivery System.</p> <p><u>C. Operator</u> Poseidon will, prior to the Contract Date, contract for the operation and maintenance of the Plant with the Operating Contractor. The Operating Contractor will not be replaced without the Water Authority’s approval. Poseidon will deliver a copy of the proposed Operating Agreement to the Water Authority for review and comment prior to execution.</p> <p><u>D. Operations and Maintenance Manual</u> Two months prior to the Commercial Operation Date, Poseidon will provide the Water Authority with a draft copy of the Plant’s operation and maintenance manual for review and comment.</p> <p><u>E. Life-Cycle Maintenance</u> The Contract will contain all necessary assurances that the Plant will be properly maintained, repaired and replaced over the term of the Contract. These will include a requirement to have a CMMS system and use it to perform ordinary and capital maintenance; periodic maintenance inspections; establishing the required condition of the Plant at the end of the term; and conducting a maintenance deficiency assessment near the end of the term, coupled with the posting of security for the performance of the work and price offsets for failure to rectify any such deficiency.</p> <p><u>F. Restoration of the Plant</u> In the event of damage to the Plant, Poseidon will be obligated to repair or replace damaged components to enable the restoration of full operations and the full performance of its obligations under the Contract, whether through the application of insurance proceeds or Poseidon’s own capital. In order to provide for the circumstance under which Poseidon is not able to restore the Plant, Poseidon agrees that the Project’s financing documentation will enable the Water Authority, at the Water Authority’s sole option, to purchase the Plant for an amount equal to Poseidon’s outstanding indebtedness, net of available insurance proceeds. The parties will negotiate whether and to what extent there will be any recognition given in the Water Authority’s end-of-term purchase option price in circumstances where: (1) an uninsurable force majeure event occurs after the 20th year of operations; (2) Poseidon invests</p>

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	<p>money in the restoration costs; and (3) such investment increases the value of the Plant beyond the value the Plant would have had at the end of the term absent such investment.</p> <p><u>G. Water Authority’s Right to Monitor</u> The Water Authority will have the right to monitor the operation and maintenance of the Plant in order to confirm compliance with the requirements of the Contract. The Water Authority will have the right to conduct periodic inspections of the Plant, and will notify Poseidon of any operations and maintenance deficiencies found for rectification by Poseidon. The Water Authority will have the right to engage consultants and advisors for inspections and to review Poseidon performance and provide performance reports and recommendations to the Water Authority.</p>
<p>11. Capital Modifications, Merchant Capacity and Excess Production</p>	<p>Poseidon will not substantially change or modify the Plant, or expand the capacity of the Plant (including developing any merchant capacity for the production of water for sale to third parties), without the approval of the Water Authority, which may be withheld in its sole discretion.</p> <p>Without the prior approval of the Water Authority, which may be withheld in its sole discretion, Poseidon may not access the Project’s associated seawater intake or concentrate discharge facilities for use in a separate standalone seawater desalination plant or other type of municipal and industrial water supply project located on or near the Encina Power Station.</p> <p>Commencing on the twentieth anniversary of the Commercial Operations Date, the Water Authority may propose modifications to the Plant to extend the useful life of one or more components of the Plant and Poseidon shall use commercially reasonable efforts to implement such modifications, subject to: (1) such modifications not adversely affecting Poseidon’s ability to perform its obligations under the Contract; (2) Poseidon being able to raise sufficient financing for such modifications and obtain any necessary consent from its then-current lenders for such modification; and (3) the Water Purchase Price being equitably adjusted to compensate Poseidon for its cost of implementing such modification.</p>

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	Poseidon shall not produce excess Product Water without prior agreement with the Water Authority to take and purchase the excess Product Water at a marginal or variable rate, exclusive of fixed capital and operations costs. Excess Product Water shall not be sold to any person other than the Water Authority.
12. Water Authority Directed Capacity Expansions	The Water Authority shall have the right to direct the expansion of the capacity of the Plant and purchase the additional Product Water, subject to mutual agreement between Poseidon and the Water Authority as to terms and conditions.
13. Water Quantity	<p><u>A. Water Quantity Commitments</u> Poseidon will agree to produce and deliver, and the Water Authority will agree to take (on a “take-if-delivered” basis), 56,000 acre-feet per year of Product Water. For the actual quantity of Product Water taken, the Water Authority will pay a per-acre foot unit charge as set forth in Item 18.</p> <p><u>B. Payment for Available Water that is Not Taken</u> In the event that the Water Authority does not take the Product Water it is required to take under Item 13A, the Water Authority will nonetheless pay Poseidon a per-acre foot charge, based on the Delivery Schedule.</p> <p><u>C. Delivery Schedule</u> The schedule for periodic deliveries of Product Water (daily, monthly, quarterly) will be mutually agreed to by the parties on an annual basis. The annual delivery plan will be incorporated into the Water Authority’s Annual Aqueduct Operation Plan.</p> <p><u>D. Operating Committee</u> Poseidon, the Operating Contractor, and the Water Authority will establish an Operating Committee to address daily flow changes and operations.</p> <p><u>E. Delivery Point</u> Prior to Water Authority’s purchase of the Delivery System, Poseidon will deliver Product Water to the Delivery Point, which will be located in San Marcos, adjacent to the Water Authority’s Second Aqueduct.</p>

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	<p><u>F. Delivery Point after Water Authority Purchase of the Delivery System</u> After the Water Authority’s purchase of the Delivery System, Poseidon will deliver Product Water to the Delivery Point, which will be located at the fence line adjacent to the Plant.</p> <p><u>G. Water Ownership</u> The Water Authority will own all Product Water received and accepted at the Delivery Point.</p> <p><u>H. Product Water Pressure and Hydraulic Transients Guarantee</u> Poseidon will guarantee Product Water pressure, and guarantee against hydraulic transients damaging the Water Authority’s Delivery System, distribution system and other property.</p> <p><u>I. Distribution System Emergencies</u> In the event of emergencies in its distribution system, the Water Authority may demand a curtailment of Plant operation and Product Water deliveries, with such curtailments treated as a Water Authority Uncontrollable Circumstance excusing the Water Authority from its purchase obligation for the duration of the emergency.</p> <p><u>J. Product Water Not Delivered Due to Uncontrollable Circumstances</u> Product Water which Poseidon would have delivered to the Water Authority but which Poseidon is unable to deliver due to a Poseidon Uncontrollable Circumstance or a Water Authority Uncontrollable Circumstance shall be delivered by Poseidon and purchased by the Water Authority from any excess Product Water on a negotiated basis, or during an extension of the term of the Water Purchase Contract not to exceed three years.</p> <p><u>K. Respective Cost Obligations of the Parties</u> Poseidon will be responsible for all costs incurred in producing and delivering Product Water to the Delivery Point, and the Water Authority will be responsible for all costs incurred in receiving and distributing Product Water after the Delivery Point.</p>
14. Water Quality	<p><u>A. Product Water Quality Requirements Generally</u> Product Water delivered by Poseidon will meet all legal</p>

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	<p>potable water quality requirements and not exceed regulatory or maximum contaminant levels established by the state, federal, and local agencies. A detailed set of water quality specifications will be incorporated in the Contract.</p> <p><u>B. Third Party Claims Regarding Product Water Quality</u> Poseidon will be solely liable for any fines, penalties or damages that may be incurred by either party due to Poseidon’s failure to meet water quality requirements. Poseidon will indemnify the Water Authority against any fines, penalties or damages (including third party tort claims) that may be incurred by the Water Authority due to the delivery of Product Water that does not meet the Product Water quality requirements.</p> <p><u>C. Limitation on the Water Authority’s Obligation to Accept Product Water</u> The Water Authority will not be obligated to accept or pay for Product Water that does not meet the Product Water quality requirements.</p>
15. Performance Liquidated Damages	<p><u>A. Product Water Quantity Failures</u> At any time following the third month after the Commercial Operation Date, if Poseidon fails to deliver on a quarterly basis at least 11,900 acre feet of Product Water meeting the Product Water quality requirements, Poseidon will pay to the Water Authority negotiated liquidated damages for each acre-foot of the shortfall.</p> <p><u>B. Product Water Quality Failures</u> The Contract will specify liquidated damages for Product Water quality non-compliance.</p> <p><u>C. Poseidon Failure to Comply With Testing and Reporting Requirements</u> Poseidon will pay liquidated damages per incident for the failure to comply with testing and reporting requirements under the Contract, the amount of such damages to be specified in the Contract.</p>
16. Raw Water Risks	<p>The Contract will set forth the assumed raw water quality parameters upon which Poseidon’s performance guarantees are based. If (1) actual raw water quality parameters are outside those assumed, or (2) specific negotiated events occur affecting raw water quality (such as pollution events),</p>

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	Poseidon will be entitled to relief from its water quantity production guarantee, but not its water quality guarantee, nor shall it be entitled to any price relief.
17. NRG	Poseidon shall bear all risks relating to NRG and NRG's generating plant and property, except (1) the occurrence of force majeure events damaging or destroying the raw water intake, outfall and any other NRG facilities necessary for the conveyance of raw water to the Plant and the discharge from the Plant, and (2) other reasonable exceptions negotiated by the parties (in which event Poseidon shall be entitled only to relief from its water quantity production guarantee, but not its water quality guarantee or any price relief). Such NRG risks include NRG sale, merger or bankruptcy; NRG lease breach, default and termination; changes in law, permit modifications or denials, or regulatory orders affecting the NRG plant.
18. Water Purchase Price	<p><u>A. Water Authority's Obligation to Pay for Product Water</u> The Water Authority will only pay for Product Water that meets the Product Water quality requirements and is actually delivered or ready to be delivered to the Delivery Point.</p> <p><u>B. Water Purchase Price</u> The price payable by the Water Authority for Product Water shall consist of (1) the negotiated Unit Price per acre-foot, multiplied by (2) the number of acre-feet of Product Water purchased by the Water Authority. Any extraordinary items (such as costs payable by the Water Authority associated with Included Changes in Law and amounts payable by Poseidon for non-compliance with the MWD Agreement, liquidated damages or indemnity payments) shall be paid or credited as a separate element of the Water Purchase Price, or shall be reflected in a revised Unit Price, as appropriate.</p> <p><u>C. Unit Price</u> The negotiation of the Unit Price will be determined in accordance with the following principles:</p> <ol style="list-style-type: none"> 1. The Unit Price will be based on the capital and operating costs of the Project (as opposed to the "avoided cost" of water). 2. The Unit Price will not exceed the Base Price

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	<p>established in the existing Carlsbad water purchase agreement.</p> <ol style="list-style-type: none"> 3. Poseidon will provide full transparency to the Water Authority with respect to capital costs, operating costs, and financial returns to Poseidon, the equity investor(s), and lenders to the Project. 4. The Unit Price will support the financing, construction and operation of a high-quality desalination facility that operates in a highly reliable manner. 5. The Unit Price will provide financial incentive to Poseidon for efficient plant operations. The Water Authority will reserve the right to provide wholesale power to the Project. 6. The Unit Price will be the lowest and least volatile price that is consistent with the other principles. 7. The Unit Pricing structure will determine how actual debt service costs, and future refinancing savings will be reflected in the Unit Price. 8. The Unit Price will not be finalized until the underlying capital and operational costs of the Project have been established through binding contracts, and these contracts and the financing costs and draft financing documents have been received, reviewed and accepted as reasonable by the Water Authority. <p><u>D. Site Conditions Risk</u> Poseidon shall bear all performance and price risk associated with any differing site conditions and regulated site conditions (such as hazardous substances and cultural resources).</p> <p><u>E. Grants and Subsidies Benefit Water Authority</u> Any subsidy, grant or contribution received directly or indirectly by the Water Authority or Poseidon from the MWD or any other local, regional, state or federal governmental agency will be for the full benefit of the Water Authority. The parties will also consider alternative approaches regarding federal, state, regional and local financial support to help reduce the cost of the Product Water.</p>

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	<p><u>F. Notification of Annual Price Adjustments</u> For budgetary purposes, Poseidon will notify the Water Authority no later than a date to be specified in the Contract prior to the start of the next succeeding contract year of the Water Purchase Price that will be in effect for the coming contract year based on the specified index adjustments.</p> <p><u>G. Annual “True-Up” Process</u> There will be an annual “true-up” process, based upon the Water Purchase Price paid by the Water Authority and other costs or liabilities that may have been incurred by either party, for which responsibility is addressed in the Contract, through which the amounts that were paid by the Water Authority and the amounts that were due from the Water Authority will be confirmed or reconciled. If it is determined that the Water Authority paid less than the amounts actually due, the Water Authority will pay any such additional costs to Poseidon within 60 days of such determination. If it is determined that the Water Authority paid more than was actually due, Poseidon will credit such overpayment against the next immediate billing to the Water Authority.</p>
<p>19. No Payment Obligation Before Commercial Operation Date; Exception</p>	<p><u>A. General</u> The Water Authority will have no obligation to purchase Product Water or make any payment whatsoever to Poseidon prior to the Commercial Operation Date. If that date does not occur, the Water Authority will not have any payment obligations. If Included Change in Law costs are incurred prior to the Commercial Operation Date, the Water Authority will be obligated to pay such costs only as an increase in the Water Purchase Price payable after the Commercial Operation Date, on a negotiated, amortized basis (subject to the limitations specified in Item 23).</p> <p><u>B. Exception</u> Following approval by the State Department of Public Health of the introduction of Product Water into the Water Authority’s distribution system and prior to the Commercial Operation Date, the Water Authority will purchase Product Water meeting quality standards. The price of the water and the duration of this commitment will be negotiated.</p>

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20. Public Information and Outreach	<p><u>A. Public Outreach Regarding the Plant and Delivery System</u> After the Contract Date, the Water Authority will have the right to review and approve public communications regarding the Plant and the Delivery System prepared by Poseidon or its contractors or subcontractors, prior to the release of such communications.</p> <p><u>B. Plant Tours</u> Poseidon and its contractors or subcontractors will make the Plant available for and help conduct Water Authority tours during the construction period and after start of commercial operations, subject to reasonable notice by the Water Authority.</p> <p><u>C. Site Access</u> Water Authority staff, consultants and contractors will be provided access to the site and all facilities owned or leased by Poseidon during the construction period and after the start of commercial operations, subject to reasonable notice by the Water Authority.</p>
21. Insurance	<p><u>A. Poseidon Insurance Obligations</u> Poseidon will obtain and maintain, in amounts to be agreed upon with the Water Authority, insurance as follows: commercial general liability insurance; builder's risk and property and casualty insurance that will provide for the full replacement value of the Project; motor vehicle insurance; workers compensation; business interruption insurance in an amount sufficient to cover a minimum of one year of fixed operating and financing costs and, as appropriate, pollution liability insurance.</p> <p><u>B. Insurance Costs and Risks</u> Poseidon will bear all costs associated with any insurance deductibles, and replacement cost exceedences associated with builders' risk and property insurance coverage. Poseidon will also bear the risk of any insurance unavailability.</p> <p><u>C. The Water Authority's Right to Obtain Insurance</u> The Water Authority may purchase such insurance on behalf of Poseidon, if Poseidon fails to do so, and will be reimbursed by Poseidon for any costs so incurred.</p>

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22. Uncontrollable Circumstances	<p><u>A. Defined</u> Uncontrollable Circumstances are force majeure and other events beyond a party’s reasonable control (after exercising diligence to prevent the occurrence and to mitigate the effect of the occurrence) that materially and adversely affect a party. Inclusions and exclusions will be negotiated. Changes in Law are handled separately from Uncontrollable Circumstances.</p> <p><u>B. Poseidon Performance Relief</u> A Poseidon Uncontrollable Circumstance will entitle Poseidon to schedule and water quantity guarantee relief, to the extent that they are adversely affected by Uncontrollable Circumstances.</p> <p><u>C. No Poseidon Price or Water Quality Relief</u> A Poseidon Uncontrollable Circumstance will not entitle Poseidon to any price relief or any water quality guarantee relief.</p> <p><u>D. Mitigation and Restoration</u> In the event of an Uncontrollable Circumstance, the affected party will use commercially reasonable efforts to respond to the event and to mitigate its effects and, as soon as is practicable, to restore conditions to the level at which it can fully perform its obligations under the Contract.</p> <p><u>E. Water Authority Performance Relief</u> The Water Authority will be entitled to relief from its obligation to take and purchase Product Water to the extent its ability to receive delivery of Product Water is adversely affected by a Water Authority Uncontrollable Circumstance. The Water Authority will purchase “make-up” Product Water following any such occurrence as described in Item 13J.</p>
23. Changes in Law	<p><u>A. Defined</u> A Change in Law is the enactment of a new law, or an amendment to an existing law, after the Contract date applying generally to water treatment facilities, treated water quality, and wastewater discharge that materially delays completion of the Project or increases the cost of producing Product Water, because of new or different equipment, construction, or processes required to comply with the new or amended law. “Law” includes any federal, state or local laws, statutes, codes and regulations; and all governmental</p>

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	<p>approvals, such as licenses, permits, consents and entitlements.</p> <p><u>B. General Exclusions</u> Changes in Law do not include: (1) any law enacted or adopted on or before the Contract date to take effect after the Contract date; (2) any change in tax law; (3) any increases in fines or penalties for violation of applicable law; (4) any increase in the severity of enforcement actions typically taken by a regulatory agency; (5) any change in law that does not require greater stringency than the Contract itself requires; and (6) changes in permits, approval, entitlements in consequence of enforcement, lapse, or invalidation of an existing permit.</p> <p><u>C. Changes in Law Affecting NRG’s Facility</u> If a change in law occurs that requires the Plant’s raw water intake system, wastewater discharge system and related pumping facilities to be modified and operated on a “stand-alone” basis, separate from NRG facility operations, the water purchase price will be increased to reflect the capital and operating costs necessary to respond to the change in law up to a maximum amount of \$20 million (index linked) and \$2.5 million (indexed linked) for the capital and operating costs, respectively. Any excess cost will be borne by Poseidon.</p> <p><u>D. Changes in Law Affecting NRG’s Seawater Intake Structure</u> A Change in Law also will not include any change in law pertaining to the operation by NRG of its existing seawater intake structure, including any requirement under Section 316(b) of the federal Clean Water Act or similar regulation.</p> <p><u>E. Changes in Law Affecting NRG Discharge Facility Operations</u> A Change in Law also will not include any change in law pertaining to the operation by NRG of its discharge facilities under its NPDES permit, similar permit or any provision of the federal Clean Water Act or California Porter- Cologne Act.</p> <p><u>F. Compliance With Environmental Mitigation Measures</u> Poseidon will bear the risk of complying with all environmental mitigation measures required by or in connection with the EIR and governmental approvals for the Project, excluding measures required due to a Change in</p>

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	<p>Law.</p> <p><u>G. Construction Government Approval Risk</u> Poseidon will be responsible for obtaining and maintaining all governmental approvals required for the Project during construction and acceptance testing (including the California Department of Public Health’s drinking water permit) through the Commercial Operation Date. Poseidon will bear the risk of the denial, delay in issuance of, or imposition of any term or condition in connection with any such governmental approval and of compliance with all such governmental approvals. The occurrence of any such risk will not be Change in Law unless it is caused by the enactment of a statute or the promulgation of regulations of general applicability.</p> <p><u>H. Operating Governmental Approvals</u> Poseidon will also be responsible for obtaining and maintaining all governmental approvals required during the operating period, through the end of the Contract term. Poseidon will bear the risk of the denial, delay in issuance of or imposition of any term or condition in connection with any such governmental approval. The occurrence of any such risk will not be a Change in Law unless (1) it is caused by the enactment of a statute or the promulgation of regulations of general applicability, or (2) it is imposed by a regulatory body, in either case imposing standards more stringent than those existing in law on the Contract date.</p> <p><u>I. Relief</u> Poseidon will be entitled to both performance relief (excluding, however, water quality guarantee relief) and price relief (including increases in the Water Purchase Price to reflect mitigated cost increases) associated with responses to Changes in Law. Poseidon will be responsible for an initial amount (index linked and to be negotiated and included in the Contract) of such costs in each contract year. Poseidon will use all commercially reasonable efforts to implement responses to Changes in Law at the lowest cost practicable. The Water Authority’s maximum exposure for Change in Law costs will not exceed an amount (index linked and to be negotiated and included in the Contract) per contract year.</p> <p><u>J. Water Purchase Price Increase Limitation</u> There will be a maximum water purchase price increase</p>

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	<p>limitation that will cap the Water Authority’s annual exposure to Change in Law costs.</p> <p><u>K. Poseidon Actions</u> No relief of any kind will be permitted for Changes in Law which are imposed as the result of the acts or omissions of Poseidon.</p>
24. MWD Agreement Compliance	<p>Poseidon acknowledges that the contribution payments required to be made by MWD under the MWD Agreement are material inducements for the Water Authority to execute the Contract, and that the MWD Agreement is subject to automatic termination if Plant construction has not commenced by January 1, 2012, or if no allowable yield is produced by January 1, 2015. If MWD terminates the MWD agreement under either such circumstance (and the termination is not caused by an Uncontrollable Circumstance or Water Authority fault), there shall be deducted from the Water Purchase Price the amount of all MWD contribution payments that would have been made but for such termination. Poseidon shall perform the Water Authority’s obligations under the MWD Agreement, notwithstanding the fact that Poseidon is not a party thereto.</p>
25. Events of Default and Termination	<p><u>A. Events of Default</u> The Contract will include negotiated events of default.</p> <p><u>B. Remedies</u> Upon the occurrence of an event of default, the non-defaulting party may pursue any remedies available at law or in equity.</p> <p><u>C. Water Authority Step-In Rights</u> The Water Authority will have the right to step in and cure defaults that are not cured by Poseidon or Poseidon’s debt holders.</p>
26. Record Keeping, Reporting	<p><u>A. Poseidon Maintenance and Retention of Records</u> Poseidon will maintain records pertaining to its performance under the Contract. The Water Authority will have the right to inspect such records during regular business hours (including audit rights for up to five years after each year of the Contract, or as provided for under applicable law, whichever is longer), to verify performance, quantity, quality, delivery of Product Water to the Delivery Point and price.</p>

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	<p>Poseidon will establish and maintain accounting records of all costs in conformance with the MWD Agreement between the Water Authority and MWD. MWD and the Water Authority will have the right to audit in accordance with the MWD Agreement.</p> <p><u>B. Poseidon Reporting Requirements</u> Poseidon will provide monthly and annual reports to the Water Authority regarding Plant performance, including: Product Water quantities produced; Product Water quality (subject to additional water quality reporting requirements); maintenance and capital repairs and replacements performed; any operating problems encountered and corrective measures taken; regulatory and Contract compliance.</p> <p><u>C. Measurement Devices Inspection</u> The Water Authority will have the right to inspect Poseidon’s measurement devices periodically during regular business hours to verify that calibration is accurate. The Water Authority will also have the right to conduct independent verification of calibration. If Poseidon’s measurement devices are found to be in need of recalibration, Poseidon will pay for and undertake such recalibration, and will also reimburse the Water Authority for all costs associated with the Water Authority inspection and testing.</p>
27. Water Authority Plant Purchase Options	<p><u>A. Plant Purchase Option During the Term</u> The Water Authority will have the right to purchase the Plant at any time following the tenth anniversary of the Commercial Operation Date. The purchase price will be an amount equal to outstanding debt, debt breakage fees, an equity return, actual contractor breakage costs, and actual demobilization costs, or another amount to be negotiated.</p> <p><u>B. The Water Authority Purchase Option Upon Poseidon Default</u> Upon a Poseidon default, the Water Authority may terminate the Contract and may, but will not be obligated to, purchase the Plant for a negotiated purchase. Poseidon’s Plant financing, lease and other agreements and arrangements will accommodate this purchase option.</p> <p><u>C. End of Term Plant Purchase Option</u> The Water Authority will have the right to purchase the Plant</p>

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	for one dollar at the end of the term of the Contract. The Cabrillo Ground Lease will be modified, as required, to effectuate this purchase option.
28. Security for Performance by Project Contractors	<p><u>A. Construction Bond</u> Poseidon will obtain and maintain or will cause the EPC contractor to obtain and maintain performance and payment bonds in an amount sufficient to obtain non-recourse financing (or as otherwise agreed to by the parties) for the construction of the Project.</p> <p><u>B. Operations Bond</u> Poseidon will obtain and maintain or will cause the Operating Contractor to obtain and maintain an operations performance bond in an amount sufficient to obtain non-recourse financing (or as otherwise agreed to by the parties) for the operation and maintenance of the Plant.</p>
29. Security for Performance by Poseidon	On the financial close date, Poseidon will provide to the Water Authority an evergreen letter of credit in an amount to be negotiated (and index linked) as security for the performance of its obligations to the Water Authority under the Contract.
30. General Indemnity	Poseidon will indemnify the Water Authority for claims arising from Poseidon's misrepresentation, negligence or breach of the Contract.
31. Litigation Risk Indemnity	Poseidon will also indemnify the Water Authority against third party litigation of the kind typically initiated by opponents of projects similar to the Project seeking to prevent project construction and operation (such as litigation) involving environmental reviews, permits, and legal entitlements, other than third party lawsuits challenging the Water Authority's power or authorization to enter into the Contract, or resulting from a Water Authority breach of the Contract.
32. Representations and Warranties	The Contract will include customary representations and warranties regarding: legal standing in California; legal authority to enter into the Contract; absence of material adverse litigation or legal conditions; no conflict with other agreements or commitments; proper approvals of Contract. Poseidon will make representations and warranties as to CEQA compliance.

Subject	Proposed Term/Condition
33. Tax Risks	Poseidon will bear all tax risks. This includes all existing taxes payable with respect to construction, operation, maintenance, management, services on water purchases; income, sales, possessory interest, excise and value added taxes; tax law changes; new taxes; and adverse tax law determinations pertaining to bond tax exemption, tax accounting treatment, tax credit depreciation, amortization or otherwise. A tax is a governmental imposition of any kind, and includes fees and charges.
34. Liability Limitations	The Contract will contain no stated dollar limitation on damages for non-performance. Special, consequential and punitive damages will be mutually waived.
35. Dispute Resolution	The parties will agree to attempt to resolve disputes, first, through negotiation and non-binding mediation and, if negotiations and mediation are unsuccessful, then to pursue other remedies available in law or in equity.
36. Assignment by Poseidon	Poseidon will not assign the Contract without the prior written approval of the Water Authority, which approval may be given or withheld in its sole discretion. Notwithstanding the foregoing, Poseidon will have the right to collaterally assign the Contract to its lenders, and the Water Authority will reasonably consent to such assignment.
37. Poseidon's Contractors and Subcontractors	The Contract will specify minimum financial, technical and experience qualifications, standards and requirements for any Poseidon contractors and subcontractors, and for any party it may engage to replace or substitute for such contractor or subcontractors. Poseidon will provide adequate information to the Water Authority regarding the qualifications of any proposed initial or substitute contractor or contractor. Notwithstanding the above, Poseidon may not replace or substitute the EPC Contractor or the Operating Contractor without the Water Authority's approval, which will not be unreasonably withheld.
38. Governing Law	California



September 15, 2010

Attention: Water Planning Committee

Unit Cost of New Local Water Supply Alternatives (Information)

Purpose

This report discusses current unit costs for new local water supply alternatives including water recycling, indirect potable reuse, brackish groundwater desalination and seawater desalination. In addition, this report includes a follow-up on the unit costs estimated for the Water Authority's supply diversification strategy discussed at the August 2010 Board meeting.

Background

The Water Authority and its member agencies are in the process of preparing 2010 updates to their Urban Water Management Plans (UWMP) and continue to plan for and evaluate new local water supply alternatives. The comparative unit cost of various water supply alternatives is a key parameter in that evaluation. There has been much attention lately given to the comparative costs of local water supply options and their relative cost effectiveness. Although an important measurement, unit cost does not provide the complete picture of a resource's overall potential or limitations, the feasibility of its implementation, or other direct or indirect benefits that may occur because of its development. In order to compare unit costs for different water supply alternatives, it is critical to define the basis for calculating a unit cost for a particular water supply. For the purposes of this report, unit cost will generally be defined as the following:

$$\frac{\text{Amortized annual capital cost (\$)} + \text{Annual Operating Cost (\$)}}{\text{Annual beneficially used water production in acre-feet (AF)}} = \text{Unit Cost (\$/acre-foot)}$$

A major factor influencing unit cost is the location, size and configuration of the project. For example, non-potable recycled water projects, such as those in Los Angeles County with large industrial customers, with year-round demand and less extensive distribution systems have lower unit costs than non-potable projects in San Diego County that are more reliant on seasonal irrigation customers and have more extensive distribution systems. Similarly, brackish and seawater desalination project unit costs can vary based on the extent of the product water conveyance required, pumping requirements, access to existing infrastructure and the distance to, or method of brine discharge. Projects with easy access to sewer lines or outfalls and close to existing potable distribution lines have lower unit costs than projects that have to construct disposal lines, pump to higher elevations and convey water greater distances to connect to existing potable pipelines.

Ultimately, the decision to pursue the development of a new water supply is a comprehensive business decision of the agency considering that supply. That decision will consider not just the unit cost of the new supply, but also the improved reliability associated with the supply and avoided operating and capital costs, external funding and offsetting revenue. For example, a water recycling project may avoid expansion of a potable water treatment plant by reducing the demand for potable water or may avoid wastewater operating costs associated with pumping wastewater to a coastal

treatment plant for disposal. Agencies contracting with the Metropolitan Wastewater System or the Encina Wastewater Authority avoid certain variable costs of wastewater treatment that often serves to incentivize the development of a recycled water project. Brackish and seawater desalination plants avoid additional surface water treatment capacity and may also avoid the construction of pipelines and pump stations to bring in additional imported supplies. All local supply projects avoid the cost of purchasing imported water. Brackish and seawater desalination projects, as well as Indirect Potable Reuse (IPR) projects, can also improve the overall water quality of the potable water system due to the high quality and low Total Dissolved Solids (TDS) of those supplies. IPR projects also free up wastewater outfall capacity by eliminating discharges to the ocean. Unit costs can be reduced further through external funding including grants, incentives, or some other revenue source that offsets the cost of creating the water supply. The credits a project takes to reduce the net impact to the agency's ratepayers varies from project to project and is specific to that agency's circumstances. For this report, staff is unable to generalize as to those credits. Where available, this report notes a net unit cost to the agency, after accounting for avoided costs, revenues and benefits, separate from the actual marginal unit cost of developing the supply.

Discussion

While the unit costs for similar water supply projects outside the San Diego region will be considered in this report, the primary focus of this report are the unique unit costs of existing and proposed water supply projects in the San Diego region. Where possible, these costs are based on reconciled costs of projects receiving funding from the Water Authority's Local Water Supply Development Program (LWSDP), or from Metropolitan Water District's Local Resources Program (LRP) or Groundwater Recovery Program (GRP). Where reconciled costs are not available, information comes from publicly available information or the project sponsor. Finally, all unit costs are shown in 2010 dollars. Where needed, referenced unit costs have been escalated to 2010 using the Consumer Price Index for All Urban Consumers (CPI-U) for local projects within San Diego County and national CPI-U data for projects located outside San Diego County.

Recycled Water

Existing Projects: There are 17 water recycling projects currently operating in San Diego County, all of which deliver non-potable recycled water. These projects deliver approximately 28,000 AF annually (FY 2010). The range of existing unit costs of those projects is illustrated in a sampling of four representative projects. These projects were chosen because they represent both projects that include a treatment plant and a non-potable distribution system as well as projects that purchase recycled water from another agency. The table below shows the annual yield and unit cost for each project based on available project cash flow information developed as part of the administration of the LWSDP.

<i>Existing Recycled Water Project</i>	<i>Annual Yield (AF)</i>	<i>Unit Cost (\$/AF)</i>
San Elijo	1,308 (FY 09)	1,308 ¹
Carlsbad	3,944 (FY 09)	1,544 ²
Fallbrook	591 (FY 09)	1,662 ³
Otay	4,707 (FY 09)	1,259 ⁴

Proposed Projects: Future recycled water projects being considered to meet goals in the Urban Water Management Plan include both potable and non-potable supplies. A significant portion of the projected increase in non-potable recycling will be driven by the expansion of existing facilities. These are very cost effective projects that maximize already sunk investments. However, the relative amount of yield at these costs is limited. For entirely new non-potable projects requiring new treatment and distribution facilities, there is limited information available for the San Diego region. One data point identified for new treatment and distribution facilities is from the City of Oceanside. It is important to point out that no final decision has been made to develop these projects.

A subset of water recycling, IPR projects use advanced treatment technologies including reverse osmosis membrane technology to purify tertiary-treated wastewater (i.e. non-potable recycled water) into potable water. This purified water is then conveyed to a groundwater basin or a surface water reservoir for blending with potable source water supplies and detention. As a final barrier in the multi-barrier approach to IPR, the water is subsequently re-treated at a conventional water treatment plant before ultimate distribution as potable water supply.

Two IPR projects are currently under development in San Diego County, and one operating project using similar treatment technology is located within close proximity in Orange County. The city of San Diego is currently preparing an IPR demonstration project that will be constructed at the city's North City Water Reclamation Plant. The purpose of the demonstration facility is to evaluate the feasibility of developing a full-scale IPR project at the North City site and refine earlier cost estimates for the project. The North City IPR project would convey and blend advanced treated recycled water with surface water at the enlarged San Vicente Reservoir. Helix Water District and Padre Dam MWD are also jointly developing an IPR project known as the El Monte Valley Project that will recharge a groundwater aquifer with advanced treated recycled water where it will be blended with native waters. It will then be extracted from the basin and re-treated at the R.M. Levy Water Treatment Plant. An important element of this project is a revenue-producing sand mining operation.

The Orange County Water District (OCWD) Groundwater Replenishment System (GWRS) is a large scale, 70,000 AFY IPR project recharging the northern Orange County groundwater basin with advanced treated recycled water. One of the key benefits of the GWRS IPR project is the economy of scale that can be achieved due to the volume of water produced by the project that can be retained in the ground given the size of the Orange County groundwater basin. This economy of scale is not achievable in the currently planned projects in San Diego County and results in lower unit costs for the GWRS when compared to similar projects in San Diego County. The OCWD GWRS project considers the cost of extraction separate from the GWRS and typically cites the project cost as \$887/AF⁵. In order to be more comparable to local San Diego County projects in terms of the cost delivered to the retail agency distribution system, Water Authority staff included the estimated cost for extraction of \$412/AF⁶.

<i>Proposed Recycling Projects</i>	<i>Annual Yield (AF)</i>	<i>Unit Cost (\$/AF)</i>
Infill Projects	(insufficient data)	490 ⁷ - 1,000 ⁸
Oceanside Phase 4	570	2,250 ⁸
North City IPR	10,500	2,437 ⁹
El Monte Valley IPR	5,000	2,300 ¹⁰
OCWD GWRS	70,000	1,299 ^{5,6}

Both the North City IPR project and the El Monte Valley IPR project provide significant benefits, avoided costs and the potential for external funding to offset development costs to each agency. When these credits are taken into account in their respective planning studies, the net costs to the respective agencies are provided below. As an example, the escalated net unit cost of \$1,815/AF (equivalent to \$1,630/AF in 2005\$) for the North City IPR project shown below is based on unit costs presented in the 2006 City of San Diego Water Reuse Study. In that study, a net unit cost of \$1,630/AF (2005\$) is shown for the project based on a total unit cost of \$2,190/AF (2005\$) less cost credits equal to \$560/AF (2005\$).

<i>Proposed IPR Project</i>	<i>Avoided Costs/Benefits /Other Revenue (\$/AF)</i>	<i>Net Cost to Agency (\$/AF)</i>
North City IPR	623 ⁹	1,814 ⁹
El Monte Valley IPR	900 ¹⁰	1,400 ¹⁰

Groundwater Desalination

Existing projects: While there are existing municipal groundwater extraction efforts located primarily in the Sweetwater Authority service area, in Lakeside, in the Yuima MWD service area and on Camp Pendleton, additional groundwater development will most likely involve brackish groundwater that will require desalination treatment. There are two existing groundwater desalination projects currently operating in San Diego County: The Reynolds Groundwater Demineralization Project (Sweetwater Authority) and the Mission Basin Groundwater Desalting Facility (Oceanside). For comparison, the unit cost for the Menifee Basin Desalter, a groundwater desalter in Riverside County, is also shown. The table below shows the yield and unit cost for each project based on available project cash flow information.

<i>Existing Groundwater Desalination Project</i>	<i>Annual Yield (AF)</i>	<i>Unit Cost (\$/AF)</i>
Sweetwater (Reynolds)	3,454 (FY 09)	835 ¹¹
Oceanside (Mission Basin)	1,876 (FY 08)	1,236 ¹²
Menifee Basin Desalter	1,638 (FY 08)	1,210 ¹³

Proposed projects: According to the local groundwater supply development data recently collected as part of the development of the 2010 Urban Water Management Plan, verifiable groundwater yield is projected to increase from 18,557 AF in 2010 to 26,970 AF in 2030. The overwhelming majority of this increase will be driven by the expansion of existing facilities. These expansions include proposed Sweetwater and Oceanside project expansions.

Beyond these expansions, other conceptual groundwater desalination facilities are being considered by member agencies including Sweetwater, Otay and the city of San Diego. One significant issue facing these new projects is concentrate disposal. Both the Reynolds facility and the Mission Basin facility utilize straightforward, cost effective solutions for concentrate disposal (discharge to the adjacent Sweetwater River (Reynolds) and use of an existing outfall (Mission Basin)). New projects will likely require additional infrastructure to convey concentrate to an available disposal pipeline for ultimate discharge. As an example, the proposed Otay River Brackish Desalination Project assumes both a cost contribution towards a regional brine disposal pipeline and a 1.3 mile disposal pipeline for the project. The table below summarizes the unit cost information for proposed groundwater desalination projects.

<i>Proposed Groundwater Desalination Project</i>	<i>Annual Yield (AF)</i>	<i>Unit Cost (\$/AF)</i>
Sweetwater Expansion	5,500	769 - 850 ¹⁴
Mission Basin Expansion	4,500	900 ¹⁵
Otay River Brackish Desalination	4,050	1,475 - 2,086 ¹⁶

Seawater Desalination

Existing Projects: With no operating seawater desalination projects currently in San Diego County, the unit costs for existing projects must come from outside the region. For this comparison, the table below shows unit costs for three recently constructed projects in Australia, along with the recently completed Hadera, Israel project, the design of which is mirrored by the Carlsbad Desalination Project. The relatively low cost for Hadera is reflective of a price “at the fence” (no distribution costs), low electricity costs (\$0.04/kw-hr), the use of existing collocated discharge facilities and the economies of scale for a large desalination facility. As a reference, the latest unit costs for the Tampa Bay desalination project are also included, even though the source water salinity for the Tampa project is less than the Pacific Ocean.

<i>Existing Seawater Desalination Plant</i>	<i>Annual Production (AF)</i>	<i>Unit Cost (\$/AF)</i>
Perth 1	36,500	1,515 ¹⁷
Gold Coast	37,000	3,034 ¹⁷
Sydney	74,000	2,542 ¹⁷
Hadera	97,000	814 ¹⁸
Tampa	28,000	1,100 ¹⁹

Proposed Projects: There are two proposed projects located in San Diego County: the fully permitted Carlsbad Desalination Project developed by Poseidon Resources (Poseidon) and the recently completed feasibility study for the Camp Pendleton Seawater Desalination Project. While not yet under full construction, the Carlsbad project is fully planned to the point that construction

bids are currently being prepared. With the approval of the July 22, 2010, Board approved Term Sheet that provides the framework and basic conditions for a yet-to-be negotiated water purchase agreement between the Water Authority and Poseidon, a unit cost ceiling has been established.

For the Camp Pendleton project, a recently completed feasibility study identified two sites in the southwest part of Camp Pendleton that would provide the rare opportunity (along the San Diego County coastline) to develop a large, regional desalination project. The project would be constructed in multiple phases over time, with an initial phase of 50 million gallons per day (GPD) including construction of much of the necessary infrastructure to facilitate future expansions. Additionally, unit costs for two other proposed southern California projects – the West Basin Desalination Project and the MWDOC South Orange Coastal Ocean Desalination Project – were identified. The proposed desalination project costs are shown in the table below.

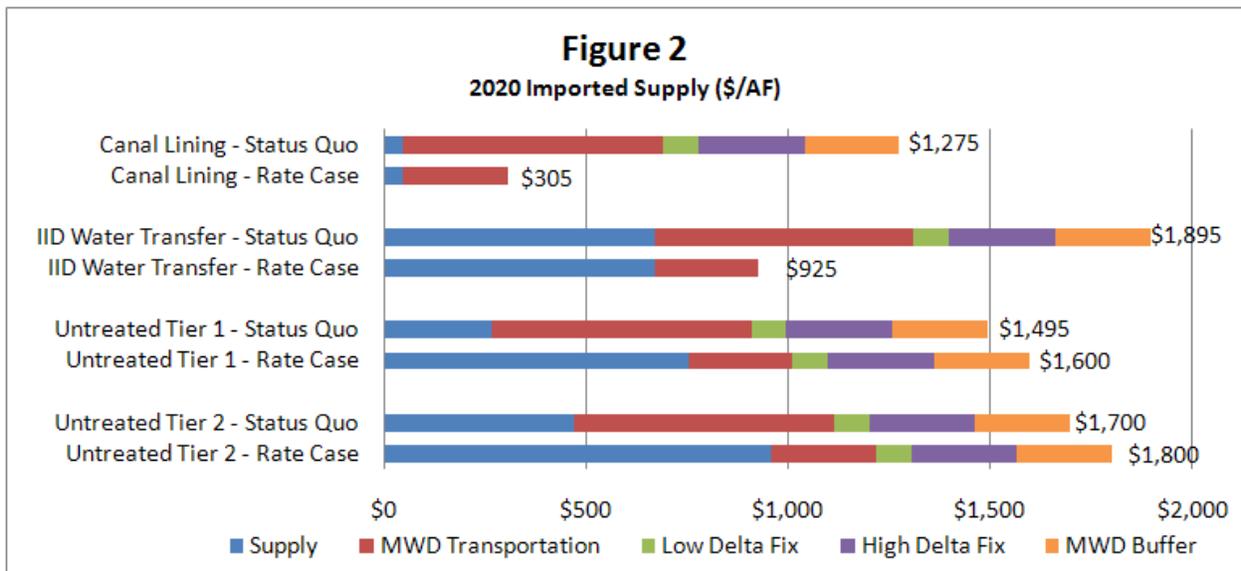
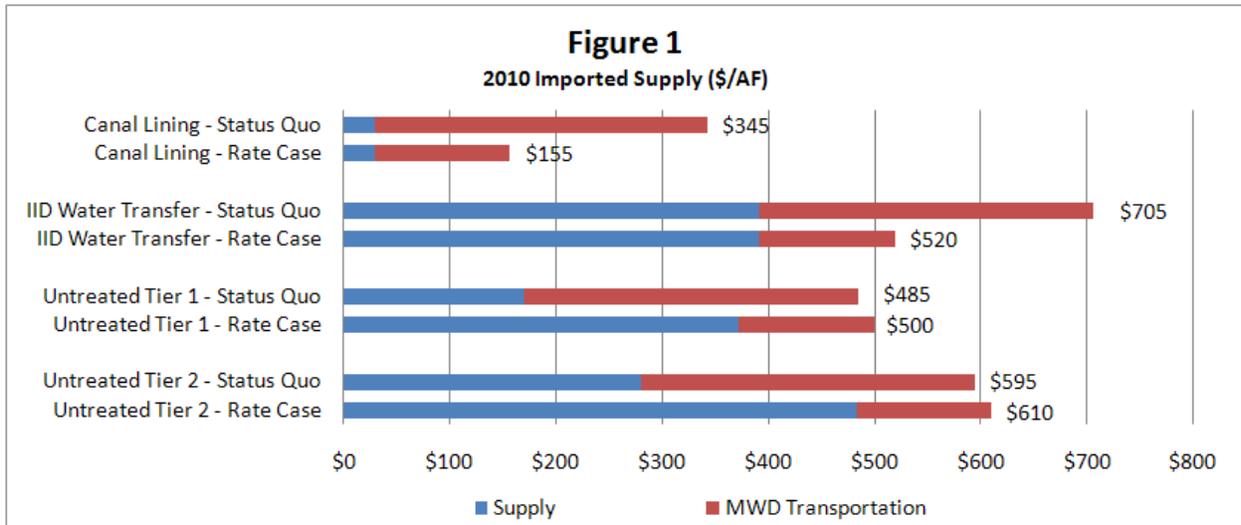
<i>Proposed Seawater Desalination Plant</i>	<i>Annual Production (AF)</i>	<i>Unit Cost (\$/AF)</i>
Carlsbad	56,000	1,600 ²⁰
Camp Pendleton	56,000 (Phase 1)	2,340 ²¹
	112,000 (Phase 2)	1,880 ²¹
West Basin	22,000 - 112,000	1,265 - 1,700 ²²
MWDOC (Dana Point)	16,500	1,300 ²³

One key factor in the lower unit cost of the Carlsbad project compared to other projects, in particular the Australia projects, is the ability of the Carlsbad project to utilize the existing power plant intake and discharge infrastructure as well as a proposed straightforward construction of the product water conveyance pipeline. This compares, for example, to the Sydney plant where a new \$600 million distribution pipeline crosses Botany Bay and new 13 foot diameter intake and discharge tunnels extend offshore over 8,000 feet. Even with planned intake modifications that will occur as part of the Carlsbad project when the power plant ceases its once-through-cooling requirements, not having to construct new intake infrastructure has been estimated by Poseidon to save between \$200/AF²⁴ and \$570/AF²⁴ in capital costs, depending on the type of intake constructed. Such is not the case with the proposed Camp Pendleton project. That project will require new intake and discharge infrastructure similar to the Australia projects.

Supply Portfolio Unit Cost Comparison

All of the above referenced local supply costs are calculated as delivered into an existing distribution system, meeting all state and federal water quality requirements. It is more appropriate to compare the unit costs of imported water to the components of imported supply that make up the region's supply portfolio. In reviewing the untreated imported water purchased at the wholesale level by the Water Authority, unit costs are established for existing imported supplies, both current (Figure 1) and projected (Figure 2). These costs are shown both as "Status Quo" and "Rate Case" assuming the Water Authority is successful in its MWD rate challenge. The projected costs shown in Figure 2 include a range for the projected cost impact to MWD water from a Bay-Delta fix,

currently projected to cost between \$10 billion and \$40 billion. The costs shown in Figure 2 for the range of Delta Fix costs (“Low Delta Fix” and “High Delta Fix”) are assumed to be transportation costs under Status Quo and supply costs under the Rate Case. In addition, the costs for the MWD Buffer proposed in MWD’s draft Integrated Resources Plan are also assumed to be transportation costs under Status Quo and supply costs under the Rate Case. The cost of MWD Tier 2 water in both figures is assumed to be the “marginal cost” of imported water.



When comparing the unit costs of imported supplies to the marginal cost of new local supply development, it is important to point out that MWD rates reflect a melding of low cost older

supplies and newer more costly supplies. Also, in general, the ability to develop additional increments of the lower cost imported supplies, such as the canal linings, were unique opportunities that are not anticipated to be duplicated in the future.

Prepared by: Robert Yamada, Water Resources Manager
Reviewed by: Ken Weinberg, Director of Water Resources

¹ San Diego County Water Authority Local Water Supply Development Program, draft independent review of the cumulative net balance and cash flow information for San Elijo Joint Powers Authority, dated July 9, 2010

² San Diego County Water Authority Local Water Supply Development Program, draft independent review of the cumulative net balance and cash flow information for City of Carlsbad, dated July 9, 2010

³ San Diego County Water Authority Local Water Supply Development Program, draft independent review of the cumulative net balance and cash flow information for Fallbrook PUD, dated July 9, 2010

⁴ San Diego County Water Authority Local Water Supply Development Program, draft independent review of the cumulative net balance and cash flow information for Otay Water District, dated July 9, 2010

⁵ GWRS Annual Cost for Fiscal Year 09/10, OCWD Water Issues Committee agenda item number 10, September 8, 2010 meeting

⁶ OCWD 2008-2009 Engineer's Report, Table 7, Estimated 2010-11 Groundwater Production Costs

⁷ City of San Diego Water Reuse Study, Figure 7-15, Volume and Cost Summary for Strategy NC-1, unit cost for infill (with costs credits included from Table 7-12, page 7-37), \$440/AF (2005\$) escalated to 2010

⁸ City of Oceanside Recycled Water Master Plan, Table 7.2, Recycled Cost Analysis – Total Cost, Phase 3 unit cost, \$904/AF, Phase 4 unit cost, \$2,020/AF, all costs escalated to 2010, October 2005

⁹ City of San Diego Water Reuse Study, Figure 7-17, Volume and Cost Summary for Strategy NC-3, unit cost for SV IPR (costs credits included from Table 7-12, page 7-37), \$1630+\$560 = \$2,190/AF (2005\$), all costs escalated to 2010

¹⁰ Email communication from Tim Smith, Helix WD, September 14, 2010

¹¹ MWD Fiscal Year 2008/09 Reconciliation of Lower Sweetwater River Demineralization Project, (unit cost adjusted to include grants), February 17, 2010

¹² MWD Fiscal Year 2007/08 Reconciliation of the City of Oceanside Desalting Facility Expansion, (actual annualized capital cost adjusted for grants used), April 29, 2009

¹³ MWD Fiscal Year 2007/08 Reconciliation of Eastern MWD Menifee Basin Desalter

¹⁴ Telephone interview with Michael Garrod, Sweetwater Authority, September 8, 2010

¹⁵ Telephone interview with Greg Blakely, City of Oceanside, September 8, 2010

¹⁶ Otay River Brackish Groundwater Desalination Feasibility Study, June 2009

¹⁷ Water Desalination Report, Volume 46, Number 29, page 2, August 2, 2010

¹⁸ Email communication from Kent Turner, President, IDE Americas, Inc., September 12, 2010

¹⁹ Email communication from Neil Callahan, RW Beck, Tampa, FL, September 14, 2010

²⁰ Base Price from Carlsbad Desalination Project Term Sheet between the San Diego County Water Authority and Poseidon Resources, approved July 22, 2010

²¹ San Diego County Water Authority Camp Pendleton Seawater Desalination Project Feasibility Study Final Report, SRTTP site, capital costs amortized for 30 years at 5.5%, December 2009

²² West Basin MWD staff presentation to the MWD Special Committee on Desalination and Recycling, June 22, 2010

²³ Telephone interview with Richard Bell, Municipal Water District of Orange County, September 10, 2010

²⁴ 304 mgd Intake Cost Estimates, capital amortized at 6% for 30 years, escalated to 2010\$, Poseidon Resources, October 2007



September 15, 2010

Attention: Water Planning Committee

Water Resources Report

Purpose

This report includes the following exhibits for August 2010:

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

RAINFALL TOTALS (inches)						
Station	August 2010		2009-2010 WATER YEAR (October 2009 through September 2010)			
	Actual	Normal	Actual	Normal	Departure	% Normal
Lindbergh Field (N.O.A.A.)	0.00	0.09	10.57	10.56	0.01	100
Lake Cuyamaca (Helix W.D.)	0.00	0.93	38.77	34.79	3.98	111
Lake Henshaw (Vista I.D.)	0.00	0.65	32.41	27.24	5.17	119

Sources: National Weather Service, Helix Water District, Vista Irrigation District.

MONTHLY WATER RESOURCES REPORT

Water Deliveries to Member Agencies

(acre-feet)

AUGUST 2010

AGENCY	August		12 Months Ended August	
	2010	2009	2010	2009
Carlsbad M.W.D.	1,691.3	1,877.1	16,912.5	18,972.7
Del Mar, City of	141.2	135.5	1,125.3	1,259.1
Escondido, City of	1,545.4	2,532.2	18,509.9	22,214.1
Fallbrook P.U.D.	1,388.4	1,698.7	12,912.6	15,653.1
Helix W.D.	0.0	2,871.2	23,932.1	35,934.5
Lakeside W.D.	398.6	397.4	3,338.1	3,722.7
National City, City of	17.0	270.0	2,352.0	5,003.2
Oceanside, City of	2,520.3	2,792.1	23,972.2	29,247.3
Olivenhain M.W.D.	2,322.8	2,320.1	19,905.8	21,955.9
Otay W.D.	3,424.1	3,611.7	30,837.0	33,691.6
Padre Dam M.W.D.	1,443.7	1,505.9	12,309.1	14,165.5
Pendleton Military Reservation	6.9	5.8	66.6	74.9
Poway, City of	1,510.6	1,240.7	10,365.6	13,437.9
Rainbow M.W.D.	2,573.3	3,090.9	21,246.1	26,817.0
Ramona M.W.D.	605.9	915.4	6,595.1	8,000.2
Rincon Del Diablo M.W.D.	742.3	766.1	6,171.5	7,237.8
San Diego, City of ¹	20,958.2	20,116.6	189,814.4	205,155.8
San Dieguito W.D.	165.1	319.4	2,048.0	2,869.3
Santa Fe I.D.	605.0	888.1	5,418.1	6,913.1
South Bay I.D.	58.5	1,586.6	9,116.7	19,200.3
Vallecitos W.D.	1,933.9	1,987.3	16,363.6	18,309.5
Valley Center M.W.D.	3,860.2	4,234.1	28,646.8	34,717.9
Vista I.D.	751.4	1,178.7	14,281.1	15,808.9
Yuima M.W.D.	392.3	458.6	2,297.7	2,529.6
Deliveries To SDCWA Agencies ¹	49,056.4	56,800.2	478,537.9	562,891.9
Deliveries To SDCWA Storage ²	0.0	41.4	1,221.6	21,884.6
TOTAL MEMBER AGENCY DELIVERIES	49,056.4	56,758.8	477,316.3	541,007.3
Deliveries To Other Agencies	73.0	73.4	773.3	838.1
Deliveries From SDCWA Storage	0.0	0.0	0.0	0.0

¹ August 2009 deliveries include 41.4 AF to city of San Diego reservoirs.

² Deliveries to SDCWA storage accounts are deducted to calculate member agency deliveries.

PRIMA

Water Resources Department

MONTHLY WATER RESOURCES REPORT
Estimated Water Use by Member Agency
 (acre-feet)

AUGUST 2010

AGENCY	Imported Source S.D.C.W.A.		Local Sources						August Totals	
	2010	2009	Surface Water		Groundwater		Reclaimed Water		2010	2009
			2010	2009	2010	2009	2010	2009		
Carlsbad M.W.D.	1,691.3	1,896.1	0.0	0.0	0.0	0.0	500.0	483.0	2,191.3	2,379.1
Del Mar, City of	141.2	135.5	0.0	0.0	0.0	0.0	10.1	10.6	151.3	146.1
Escondido, City of	1,534.3	2,507.0	1,228.9	238.5	0.0	0.0	73.6	73.6	2,836.8	2,819.1
Fallbrook P.U.D. ¹	1,564.4	1,718.5	0.0	0.0	0.0	0.0	64.8	84.2	1,629.2	1,802.7
Helix W.D.	1,385.2	3,180.8	2,092.3	411.4	15.9	17.3	0.0	0.0	3,493.4	3,609.5
Lakeside W.D.	398.6	397.5	0.0	0.0	54.3	63.4	0.0	0.0	452.9	460.9
National City, City of ²	16.5	268.8	382.8	0.0	194.3	237.2	0.0	0.0	593.6	506.0
Oceanside, City of ²	2,518.7	2,792.1	0.0	0.0	532.1	409.0	0.0	0.0	3,050.8	3,201.1
Olivenhain M.W.D.	2,322.8	2,320.1	0.0	0.0	0.0	0.0	205.2	218.9	2,528.0	2,539.0
Otay W.D.	3,424.1	3,611.7	0.0	0.0	0.0	0.0	544.2	581.5	3,968.3	4,193.2
Padre Dam M.W.D.	1,433.9	1,504.6	0.0	0.0	0.0	0.0	86.9	90.3	1,520.8	1,594.9
Pendleton Military Reservation ³	79.9	79.2	0.0	0.0	620.5	881.0	0.0	136.0	700.4	1,096.2
Poway, City of	1,324.1	1,345.8	0.1	25.6	0.0	0.0	0.0	0.0	1,324.2	1,371.4
Rainbow M.W.D.	2,697.3	3,097.9	0.0	0.0	0.0	0.0	0.0	0.0	2,697.3	3,097.9
Ramona M.W.D.	758.4	796.1	0.0	0.0	0.0	0.0	127.9	103.2	886.3	899.3
Rincon Del Diablo M.W.D.	742.3	766.1	0.0	0.0	0.0	0.0	262.3	290.5	1,004.6	1,056.6
San Diego, City of	19,613.3	19,980.0	2.4	530.5	0.0	94.3	750.0	781.8	20,365.7	21,386.6
San Dieguito W.D.	165.1	319.4	527.5	371.7	0.0	0.0	72.0	84.9	764.6	776.0
Santa Fe I.D.	605.0	891.3	708.8	499.4	0.0	0.0	65.9	71.9	1,379.7	1,462.6
South Bay I.D. ²	56.8	1,418.5	1,319.9	0.0	206.4	210.6	0.0	0.0	1,583.1	1,629.1
Vallecitos W.D.	1,915.6	1,920.7	0.0	0.0	0.0	0.0	0.0	0.0	1,915.6	1,920.7
Valley Center M.W.D.	3,860.2	4,234.1	0.0	0.0	0.0	0.0	34.0	33.9	3,894.2	4,268.0
Vista I.D.	751.4	1,178.7	1,385.1	1,011.3	0.0	0.0	0.0	0.0	2,136.5	2,190.0
Yuima M.W.D.	392.3	458.6	0.0	0.0	85.1	88.3	0.0	0.0	477.4	546.9
TOTAL USE	49,392.7	56,819.1	7,647.8	3,088.4	1,708.6	2,001.1	2,796.9	3,044.3	61,546.0	64,952.9
PERCENT CHANGE	-13%		148%		-15%		-8%		-5%	

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.

PRIMA

Water Resources Department

MONTHLY WATER RESOURCES REPORT

Reservoir Storage

(acre-feet)

AUGUST 2010

MEMBER AGENCY	Reservoir	Capacity	% of		% of		Change During Month
			AUGUST 2010	Capacity	AUGUST 2009	Capacity	
Carlsbad M.W.D.	Maerkle	600	335	56%	386	64%	(101)
Escondido, City of ¹	Dixon	2,606	2,413	93%	2,427	93%	(110)
	Wohlford	6,506	2,054	32%	2,090	32%	(12)
Subtotal		9,112	4,467	49%	4,517	50%	(122)
Fallbrook P.U.D.	Red Mountain	1,335	823	62%	942	71%	(320)
Helix W.D.	Cuyamaca	8,195	696	8%	646	8%	(83)
	Jennings	9,790	7,074	72%	9,047	92%	(1,185)
Subtotal		17,985	7,770	43%	9,693	54%	(1,268)
Poway, City of	Poway	3,330	2,455	74%	3,090	93%	176
Rainbow M.W.D.	Beck	625	130	21%	200	32%	14
	Morro Hill	465	114	25%	114	25%	50
Subtotal		1,090	244	22%	314	29%	64
Ramona M.W.D.	Ramona	12,000	3,056	25%	3,283	27%	(293)
San Diego, City of ²	Barrett	37,947	32,898	87%	24,880	66%	(152)
	El Capitan	112,807	60,024	53%	48,567	43%	(3,642)
	Hodges	30,251	14,399	48%	14,399	48%	(1,734)
	Lower Otay	49,510	30,230	61%	27,144	55%	(239)
	Miramar	7,184	5,452	76%	5,424	76%	309
	Morena	50,206	8,009	16%	5,711	11%	(359)
	Murray	4,818	4,027	84%	3,928	82%	(102)
	San Vicente	89,312	23,398	26%	20,554	23%	516
Subtotal		411,719	187,533	46%	154,126	37%	(5,601)
San Dieguito W.D./Santa Fe I.D.	San Dieguito	883	851	96%	788	89%	(13)
Sweetwater Authority	Loveland	25,400	14,420	57%	11,212	44%	(182)
	Sweetwater	28,079	9,212	33%	5,329	19%	(1,780)
Subtotal		53,479	23,632	44%	16,541	31%	(1,962)
Valley Center M.W.D.	Turner	1,612	1,475	92%	1,433	89%	-
Vista I.D. ³	Henshaw	51,774	6,601	13%	2,653	5%	(3,364)
MEMBER AGENCY TOTAL WATER IN STORAGE		564,919	239,242	42%	197,766	35%	(12,803)
SDCWA Accounts (Source: CWA Monthly Storage Reports)	El Capitan		13,657		14,934		(134)
	Lower Otay		6,066		6,862		(105)
	San Vicente		13,058		13,338		(191)
	Sweetwater		6,234		7,554		(137)
Subtotal			39,014		42,688		(568)
TOTAL WATER IN STORAGE		564,919	278,256	49%	240,453	43%	(13,371)
OTHER AGENCIES							
Metropolitan Water District	Skinner	44,264	39,389	89%	38,306	87%	11
	Diamond Valley	800,000	510,848	64%	351,352	44%	49,225
State Water Project	Oroville	3,537,600	2,040,149	58%	1,383,116	39%	(367,949)
TOTAL OTHER WATER IN STORAGE		4,381,864	2,590,386	59%	1,772,774	40%	(318,713)

¹ City of Escondido storage does not include water allocated to Escondido Mutual Water Company or its rights to a portion of the unallocated water in Lake Henshaw.

² Includes reserves subject to City's outstanding commitments to the San Dieguito W.D., and the California American Mutual Water Company. SDCWA has storage contracts in City of San Diego reservoirs in the amount of 40,000 a.f. if capacity is available.

³ Vista I.D. storage includes both allocated and unallocated water in Lake Henshaw.

PRIMA

Water Resources Department

MONTHLY WATER RESOURCES REPORT
Estimated Tier 1 Deliveries to Member Agencies
 (acre-feet)

Through August 2010

AGENCY	CY2010 Tier 1 Threshold ¹	CYTD Firm Deliveries ²	% of Tier 1 Threshold
Carlsbad M.W.D.	18,228.5	11,313.6	62.1%
Del Mar, City of	1,408.3	752.5	53.4%
Escondido, City of	23,496.9	9,510.9	40.5%
Fallbrook P.U.D.	11,716.9	7,204.3	61.5%
Helix W.D.	38,421.4	16,592.7	43.2%
Lakeside M.W.D.	4,718.2	2,167.4	45.9%
Oceanside, City of	28,848.1	15,260.6	52.9%
Olivenhain M.W.D.	18,876.4	12,841.9	68.0%
Otay W.D.	32,173.0	19,923.7	61.9%
Padre Dam M.W.D.	14,310.8	7,682.7	53.7%
Pendleton M.R./South Coast	1,141.3	596.4	52.3%
Poway, City of	13,563.8	6,390.3	47.1%
Rainbow M.W.D.	23,470.5	10,970.0	46.7%
Ramona M.W.D.	8,067.0	3,495.9	43.3%
Rincon Del Diablo M.W.D.	7,307.0	3,870.0	53.0%
San Diego, City of	215,438.4	123,307.0	57.2%
San Dieguito W.D.	4,692.0	1,019.8	21.7%
Santa Fe I.D.	7,882.8	3,169.7	40.2%
Sweetwater Authority	13,094.7	6,976.5	53.3%
Vallecitos W.D.	14,476.9	10,369.7	71.6%
Valley Center M.W.D.	24,801.0	13,817.0	55.7%
Vista I.D.	17,550.5	7,822.7	44.6%
Yuima M.W.D.	94.0	65.3	69.5%
MEMBER AGENCY TOTAL	543,778.4	295,120.6	54.3%
Less: QSA deliveries calendar year to date		(98,466.7)	
Plus: CWA purchases for own account ³		1,091.1	
Estimated Tier 1 deliveries calendar year to date		197,745.0	36.4%

¹Tier 1 threshold is equal to all firm deliveries up to 90% of a member agency's historic maximum year firm demand. (Does not yet include Calendar Year 2010 IAWP opt-out demands.)

²Firm deliveries are net of IAWP certifications received.

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

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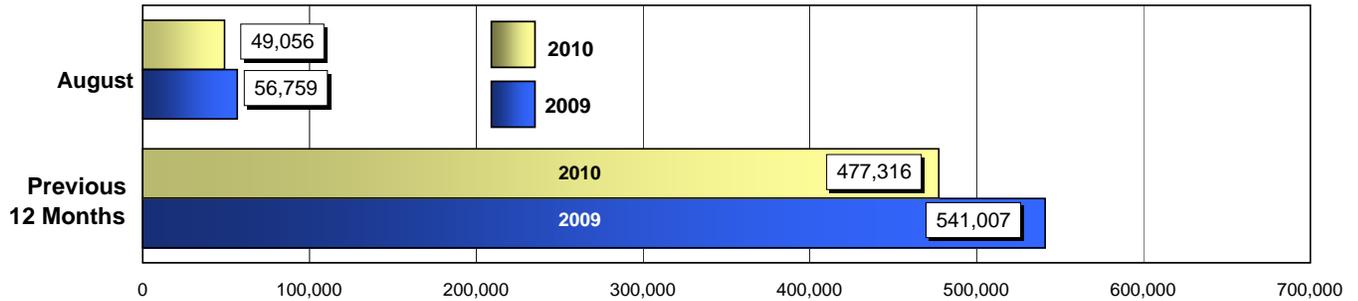
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MONTHLY WATER RESOURCES REPORT

Summary of Water Authority Member Agency Operations

AUGUST 2010

Member Agency Deliveries (AF)



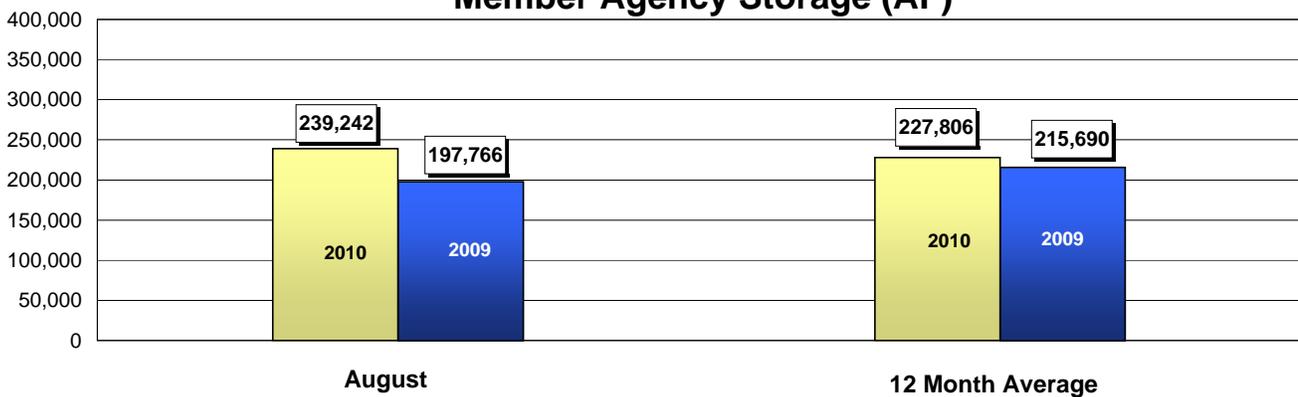
Member Agency Water Use



AUGUST 2010

Previous 12 Months

Member Agency Storage (AF)



August

12 Month Average