OTAY WATER DISTRICT

SPECIAL MEETING OF THE BOARD OF DIRECTORS

BOARDROOM
2554 SWEETWATER SPRINGS BOULEVARD
SPRING VALLEY, CALIFORNIA

WEDNESDAY
November 28, 2012
3:30 P.M.

AGENDA

1. ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. APPROVAL OF AGENDA

4. PUBLIC PARTICIPATION – OPPORTUNITY FOR MEMBERS OF THE PUBLIC TO SPEAK TO THE BOARD ON ANY SUBJECT MATTER WITHIN THE BOARD'S JURISDICTION BUT NOT AN ITEM ON TODAY'S AGENDA

INFORMATIONAL ITEM

5. DISCUSSION OF SAN DIEGO COUNTY WATER AUTHORITY'S PROPOSED AGREEMENT WITH POSEIDON RESOURCE'S REGARDING THEIR CARLSBAD DESALINATION PROJECT (WATTON)

6. ADJOURNMENT

All items appearing on this agenda, whether or not expressly listed for action, may be deliberated and may be subject to action by the Board.

The Agenda, and any attachments containing written information, are available at the District's website at www.otaywater.gov. Written changes to any items to be considered at the open meeting, or to any attachments, will be posted on the District's website. Copies of the Agenda and all attachments are also available through the District Secretary by contacting her at (619) 670-2280.

If you have any disability which would require accommodation in order to enable you to participate in this meeting, please call the District Secretary at (619) 670-2280 at least 24 hours prior to the meeting.

Certification of Posting

I certify that on November 26, 2012, I posted a copy of the foregoing agenda near the regular meeting place of the Board of Directors of Otay Water District, said time being at least 24 hours in advance of the special meeting of the Board of Directors (Government Code Section §54954.2).

Executed at Spring Valley, California on November 26, 2012.

/s/ Susan Cruz, District Secretary

STAFF REPORT

TYPE MEETING:	Special Board Meeting	MEETING DATE:	November 28, 2012
SUBMITTED BY:	Bob Kennedy Senior Civil Engineer Ron Ripperger Engineering Manager	PROJECT: N/A	DIV. NO. All
APPROVED BY: (Chief)	☒ Rod Posada, Chief, Engineering ☒ German Alvarez, Assistant General Manager ☒ Mark Watton, General Manager		
SUBJECT:	Informational Item - Discussion Regarding the San Diego County Water Authority Desalination Project		

GENERAL MANAGER'S RECOMMENDATION:

That the Otay Water District (District) Board of Directors (Board) receive as an informational item the San Diego County Water Authority (CWA) Desalination Project and a summary presentation.

Committee Action:

None.

PURPOSE:

The CWA has scheduled a regular board meeting for November 29, 2012 to consider approving the Water Purchase Agreement (WPA) for the CWA's Desalination Project with Poseidon Resources (Channelside) LP, a California Limited Partnership (Poseidon). The proposed WPA outlines the proposed commercial and financial terms for the production and delivery of desalinated ocean water from the planned desalination plant to the CWA's regional conveyance system. It also outlines the terms of the potential purchase of the plant by the CWA.

ANALYSIS:

Background

The Carlsbad Desalination Project is a 50 MGD seawater desalination plant and conveyance pipeline being developed by Poseidon, a private, investor-owned company that claims to develop water and wastewater infrastructure. In development since 1998, the project was incorporated into the CWA's 2003 Water Facilities Master Plan and into the 2005 and 2010 updates to the Urban Water Management Plan.

The project site is on industrially zoned land on the Encina Power Station in Carlsbad. The project has obtained all required environmental permits and environmental clearances necessary for the construction of the facilities. However, the various permits allow for, or may require changed conditions that could have a large impact on the cost of the desalination water, up to 30%, as discussed later in this report. Prior to commercial operations, Poseidon is required to obtain a permit from the California Department of Public Health (CDPH) to deliver drinking water to the CWA's aqueduct system.

The planned project includes a 10-mile, large-diameter pipeline to the CWA's Second Aqueduct in San Marcos. The CWA would make a number of improvements to its pipeline system and the Twin Oaks Valley Water Treatment Plant (Twin Oaks) to integrate desalinated water into the CWA's aqueduct system for a total distance from the plant to Twin Oaks of 15.5 miles. The CWA and Poseidon have completed planning and technical studies to determine exactly what improvements would be necessary and what those estimated costs would be.

The CWA estimates that, in 2020, water produced by the project would account for about one-third of all locally generated water in San Diego County.

Under the WPA, the CWA will buy 48,000 acre-feet of water from the project for 30 years with an option to purchase up to 56,000 acre-feet. The term can also be extended up to three years due to "force majeure" events (earthquake, other disasters, etc.).

The CWA also has options to purchase the project. The CWA has the option, but not an obligation, to buy the project beginning 10 years after the date of commercial operation. The price would be equal to the amount of outstanding bond debt, the remaining equity return, and any remaining contractor costs. If Poseidon defaults, the CWA has the option to purchase the project for outstanding bond debt only, with no payments to equity investors. At the end of the agreement's term, the CWA has the right, but not the obligation, to purchase the desalination plant for $1. This would provide for public ownership

of the plant, intake and discharge facilities, and rights to the long-term lease with 25 years remaining, with Cabrillo Power I LLC, a subsidiary of NRG Energy, Inc., and the owner of the plant site.

The WPA sets the purchase price at $1,876 - $2,097 per acre-foot in 2012 dollars, depending on how much is purchased annually. The first 48,000 acre-feet of water purchased each year will pay for the fixed costs of the project and the variable costs of water production. Up to 56,000 acre-feet of desalinated water may be purchased at the CWA's discretion at a lower rate that reflects only the variable costs of incremental water production.

Additional costs for improvements to the CWA's aqueduct system to integrate this new supply would bring the total cost to $2,042 - $2,290 per acre-foot, depending on how much water is purchased annually. Although CWA's staff contends that between $5 - $7 would be the impact on individual ratepayers, it will vary depending upon their local water agency, a typical Otay Water District household of four people can expect to pay approximately $8.66 - $16.09 per month more for desalinated water by 2017 if the WPA is approved and the plant produces desalinated seawater as planned. This same household will pay $15.98 for primarily CWA/MET's increases for a total increase of $24.64 - $32.07, which is equivalent to 34.3% - 45.1% increase.

Because of these costs, staff has prepared an analysis of CWA's proposed project and the potential rate impacts. This analysis has been divided in five main points:

1. Power Costs
2. Water Requirements for Drought Proofing
3. CWA's Risks Associated with the WPA
4. Financing True Costs
5. Projected Rate Impacts on Otay's Rate Payers.

Costs associated with future changes in law or regulations will be passed on to the CWA. Poseidon would be allowed to increase its price to accommodate changes in law or regulations that generally apply industry-wide to water treatment facilities or wastewater dischargers. These cumulative increases are capped at 30 percent over the 30 year term, 10% per year (as an example, 10% per year over 3 years could yield a 30% increase in 3 years). The WPA also allows for annual price increases for inflation, the rising cost of electricity and to cap the amount the CWA must pay for a change to the intake system.

1. Power Costs

Poseidon bears electricity consumption risk, meaning that Poseidon will not receive additional compensation if actual energy consumption exceeds the projections in the WPA. This is a very low risk since the equipment power requirements are well known and the power required for the membranes is well known. The CWA bears the risk for the price of electricity. This is a direct pass through to the CWA. It is not linked to a published index, such as CPI, but instead is based on the specific electricity tariff. The CWA can only mitigate its exposure to future SDG&E electricity prices through its right to designate the electricity supplier.

The cost of electricity is expected to account for 25% of the cost of the water produced from this project. Clean Energy Capital, LLC has prepared three scenarios for the future price for electricity for this project, a low 1.2% growth rate, a middle growth rate of 2%, and a high growth rate of 2.4%. CWA staff has used the 2% growth rate for their cost projections; however, this has been challenged by several member agencies at the CWA meetings. Recently, Clean Energy Capital, LLC revised their projection to 3.4%. The growth rate over the last seven (7) years has been 8.3% and the California Public Utilities Commission has estimated a growth rate of 4.1% for the next eight (8) years.

2. Water Requirements for Drought Proofing

On November 11, 2012, the Fallbrook Public Utility District (Fallbrook) prepared a presentation entitled "The Cost of Improving Regional Reliability through Desalination" (see Attachment J). In the presentation, Fallbrook outlined three scenarios of CWA's regional water demand - one with no shortages, the second with 20% MWD shortage, and the third with 20% MWD shortage plus penalties. The purpose of these analyses was to demonstrate that the cost of desalinated water is substantially higher than the cost of imported water. In the third scenario the cost of importing 56,000 acre-feet is $53.6 million against the cost of desalinated water which is in excess of $114.4 million. The presentation concludes that the increase in reliability is equivalent to a 4,480 acre-feet and the cost of this water using the desalinated plant could be the equivalent of $13,582/acre-foot.

Otay's staff also prepared an analysis of the regional supply mix adding the potential of all local and imported water sources and found that CWA is overestimating water demand in an amount close to 100,000 acre-feet per year. CWA's future demands estimates are based on the 2010 UWMP. This 2010 UWMP does not take into account the sharp decline in water consumption between 2009-2011 which,

within CWA's area of service, the consumption declined by 20% - 30%. Otay's and other District's recent experiences shows that the upward cost of water will produce an increase in conservation by rate payers.

3. CWA's Risks Associated with the WPA

Staff prepared a thorough analysis of the WPA. This analysis demonstrated that CWA is taking risks that are going to impact rates upwardly. Risks such as changes in law, bond financing interest rates, electricity rates, unusual seawater parameters, uninsurable force majeure events, uncontrollable circumstances, etc. Staff compiled a total of twenty pages of comments.

According to David Zetland, Senior Water Economist, in an October 16, 2012 paper titled, "The SDCWA-Poseidon Water Purchase Agreement Does Not Serve the People of San Diego," (see Attachment I), concludes that "SDCWA customers risk paying higher than promised costs if something goes wrong; Poseidon Resources has not successfully constructed and operated a desalination facility"... "SDCWA needs to work harder for its customers instead of spending $3.3 billion on an "easy" solution that does nothing to reduce long-term scarcity in the region."

Another potential risk not included in CWA's proposed rates is the change to the intake system when the power plant is decommissioned. The impact of intake system modification on water unit price has been estimated by CWA staff and has modeled the impacts on the Intake System Modifications assuming it is initiated in 2019 and placed in service in 2021. The increase in Capital charge will be $47 per acre-foot. The increase in the Operating and Electricity Charges are due to the increase in pumping cost. Seawater used as intake by the desalination project will be cooler post-decommissioning, and will potentially require more energy consumption for the RO membrane process.

Estimated Increase in Cost for Intake System Modification

Component	2022 Dollars for 48,000 Acre-Feet/Year	Cost $/Acre-Feet
Increase in Capital Charge	$2,270,000	$47
Increase in Operating and Electricity Charges	$3,280,000	$68
Impact of Cooler Raw Seawater	$160,000	$3
Total Increase in Water Unit Price	$5,710,000	$119

Staff raised concerns about the agreement between the District and CWA on the East County Regional Treated Water Improvement Program (ECRTWIP). The purpose of this agreement was to expand utilization of Helix Water District's Levy Water Treatment Plant so as to offload other regional water treatment plants. The District is obligated to purchase 10,000 acre-feet per year. Depending on the rates and charges adopted by CWA, the City of San Diego preferred the option of adding $192 per acre-foot could be added on the melded rate. If that is the case, the District will have a resultant impact up to $1.9 million for this water supply.

4. Financing True Costs

   The CWA has proposed a WPA that masks the true costs of financing by back-loading the bonds. CWA incorporates an upward-sloping Capital Charge, meaning that the sum of the Debt Service Charge, Equity Return Charge, and Pipeline Installment Payments grow at an annual escalation rate of 2.5%. This proposal is intended to phase in the cost of the desalination project over time. The rate of 2.5% was picked to match the expected inflation over that time and is the rate the CWA has used for other projects.

   Staff considers that a more appropriate method of calculating debt financing should be a flat rate with a bond principal amount that doesn't change over the life of the bond. This is estimated to cost $352 per acre-foot more per year at the beginning of the 30 year agreement and a flat rate is expected to cost $908 less per acre-foot by the end of the agreement. A flat rate bond principal repayment saves over $300 million in interest costs.

5. Projected Rate Impacts on Otay's Rate Payers

   To fully understand the above mentioned potential increases in the cost of desalinated water due to power increases, risks taken by CWA in the WPA and true financing costs, staff developed three scenarios of the potential rate impact on Otay's rate payers.

   Each scenario has two alternatives that are CWA's apparent preferred alternative (2B), and the City of San Diego preferred option, that were used in each of the three cost scenarios. The first scenario only considers CWA's provided costs where they assume a 2% electrical inflator and they minimize the financing cost in the early years back-loading the cost into later years. Staff's next two scenarios increase power cost to 4.1% which is what the CPUC determined to be a more accurate power increase and levels the debt payments which staff recognizes as a more appropriate method; and, the final scenario takes the second

scenario and adds the additional intake cost that CWA left out in their calculations.

These versions of higher water cost to Otay were then added to the rate model to determine the impact on Otay's rate payers. Under CWA's scenario the cost increase will be between 12.6% - 18.7% for desalinated water cost only and between 34.3% - 40.4% for including planned rate increases which are primarily due to CWA pass-through costs. Under the higher energy cost and level debt payment scenario the impact increases to between 15.3% up to 22% for desalinated water cost only, and between 37% - 43.7% with all CWA pass-through costs included. Finally, in the third scenario when the additional intake costs are added, these rate increases grow to 16.1% - 23.4% for desalinated water only with the total rate impact with the planned pass-through cost increases between 37.8% and 45.1%.

To make CWA aware of Otay's concerns, staff has written several letters to CWA requesting a Cost of Service Study, inquiring on the rate structure and demand estimates presented by CWA staff and also questioning why CWA is hurrying through this process (see Attachments B and C). The CWA provided a response to the District (Attachment D) which staff considered a very inadequate response. In spite of the several requests to allow for more time to fully evaluate the WPA and CWA's taken risks, staff has been unsuccessful. CWA staff claims that if the WPA is not approved by November 29, 2012, the land lease between Poseidon and its landowner would expire. To verify that statement, Otay requested a copy of the lease in the above noted letter and was informed that the lease is not a public document. Subsequently, Otay filed a California Public Records Act Request for the lease. The lease was made public on November 19th. A reading of the lease reveals no mention of a November 30, 2012 termination.

Several other letters from the Independent Rate Oversight Committee and many non-governmental organizations have been sent to CWA questioning many aspects of this project. Copies of their correspondence and a response from the CWA are included with Attachments E, F, G, H, and I.

FISCAL IMPACT: ☒ Joseph R. Beachem, Chief Financial Officer

The estimated cost to customers, as a result of approving the WPA, is expected to be significant. By Fiscal Year 2017, the average customer's bill will increase approximately $8.66 – $16.09 for the cost of desalinated water only. These increases are in addition to the already anticipated CWA increases of $15.98 for a total range of $24.64 - $32.07.

STRATEGIC GOAL:

This report supports the District's Mission Statement, "To provide high value water and wastewater services to the customers of the Otay Water District in a professional, effective, and efficient manner" and the General Manager's Vision, "A District that is at the forefront in innovations to provide water services at affordable rates, with a reputation for outstanding customer service."

LEGAL IMPACT:

None.

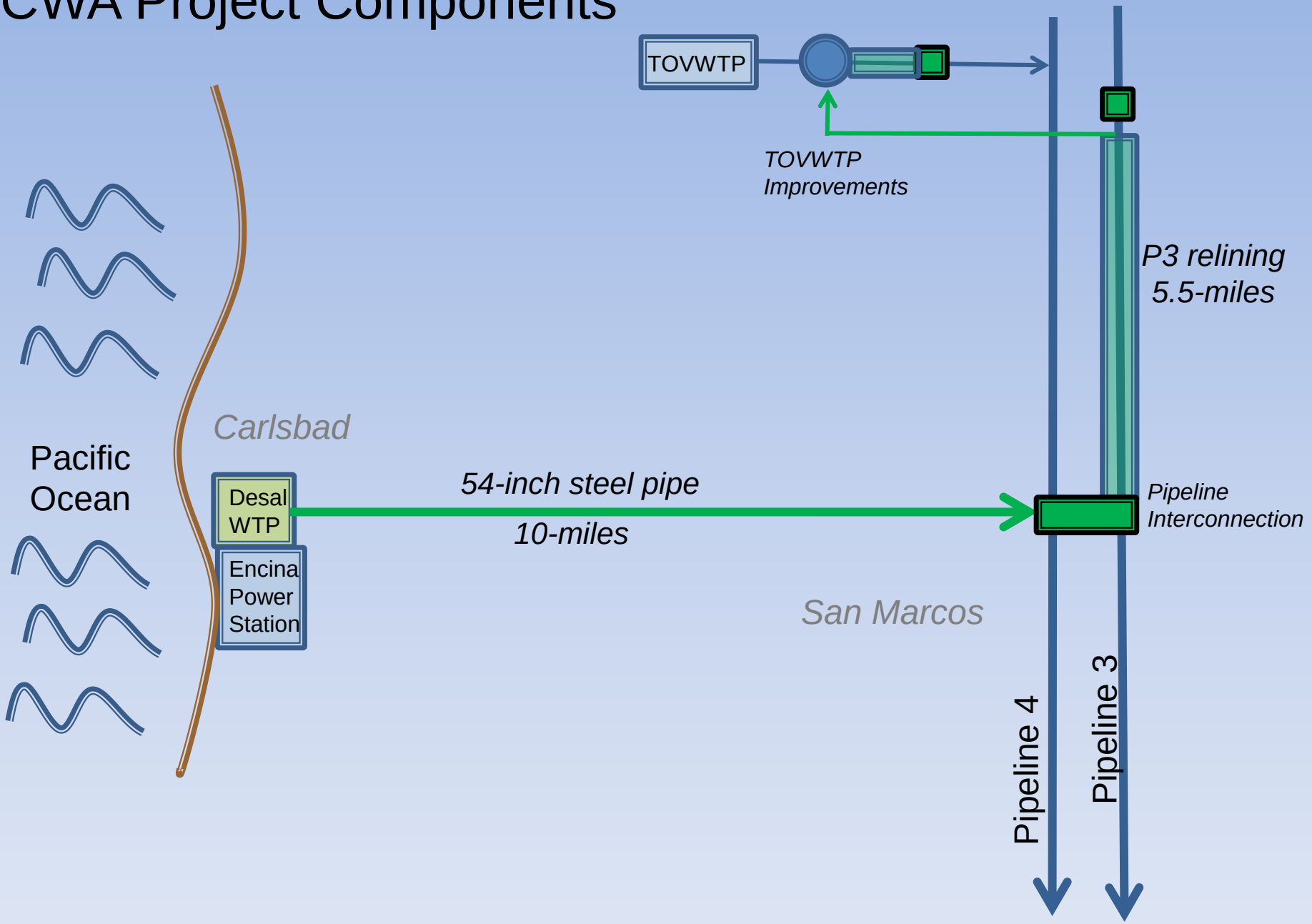
BK/RR/RP:jf
P:\Bob Kennedy\Staff Report\BD 11-28-12, Carlsbad Desal\BD 11-28-12, Staff Report, Carlsbad Desal (BK-RR).docx
Attachments: Attachment A – Presentation
Attachment B – OWD Letter to CWA Dated 9-20-2012
Attachment C – OWD Letter to CWA Dated 10-25-2012
Attachment D – CWA Response Dated 11-15-2012
Attachment E – IROC Letter to Mayor Sanders Dated 10-18-2012
Attachment F – CWA Response to IROC Dated 10-23-2012
Attachment G – NGO Joint Position Paper
Attachment H – CoastKeeper Position Paper Dated 10-4-2012
Attachment I – David Zetland Abstract Dated 10-16-2012
Attachment J – Fallbrook Presentation Dated 11-11-12

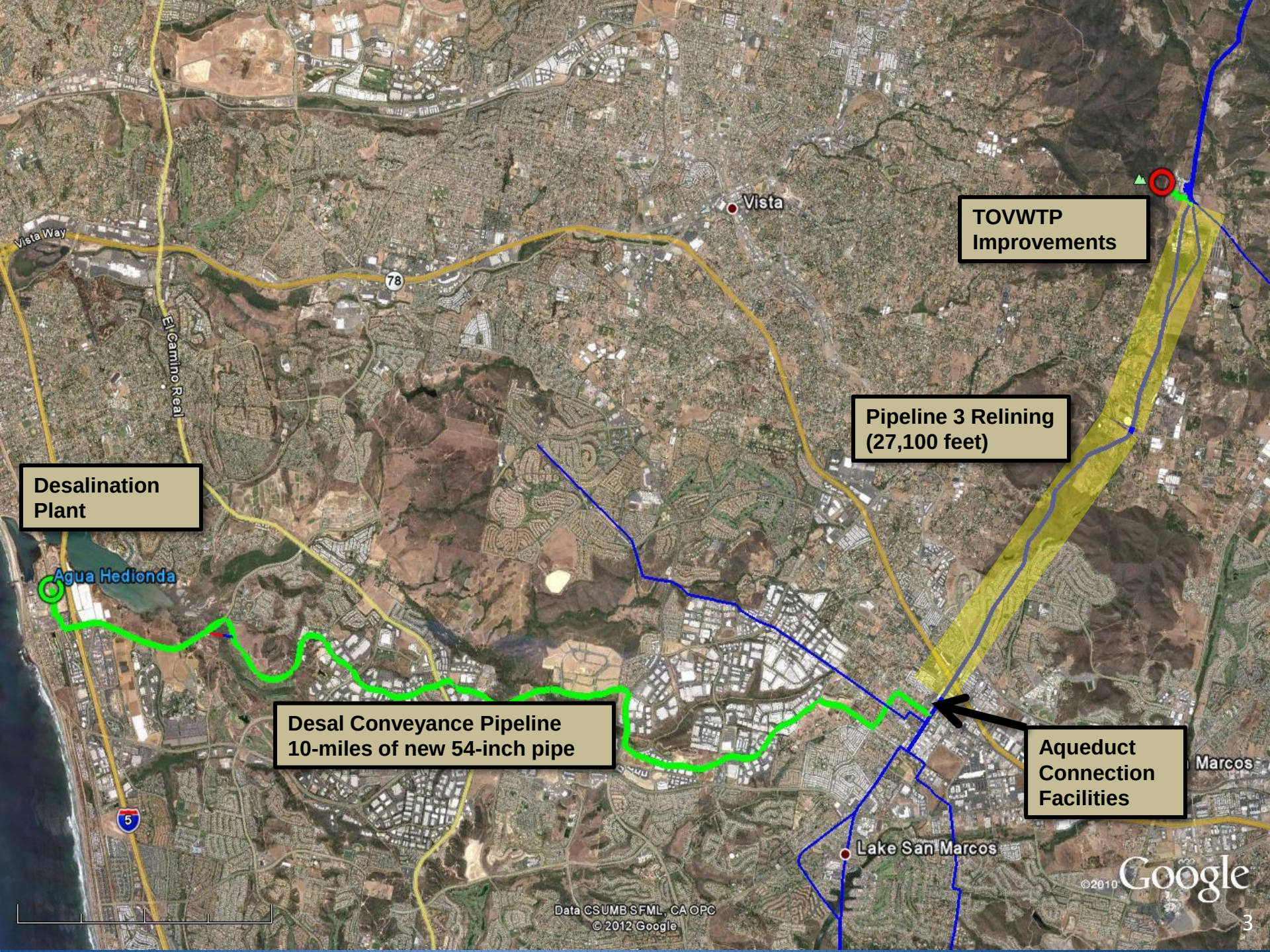
Attachment A

San Diego County Water Authority
November 29, 2012 Board Meeting
CWA Desalination Project

November 28, 2012

CWA Project Components




TOVWTP Improvements
Pipeline 3 Relining (27,100 feet)
Desalination Plant
Desal Conveyance Pipeline 10-miles of new 54-inch pipe
Aqueduct Connection Facilities
Vista
Vista Way
El Camino Real
78
Agua Hedionda
5
Lake San Marcos
Marcos
Data CSUMB SFML, CA OPC
© 2012 Google
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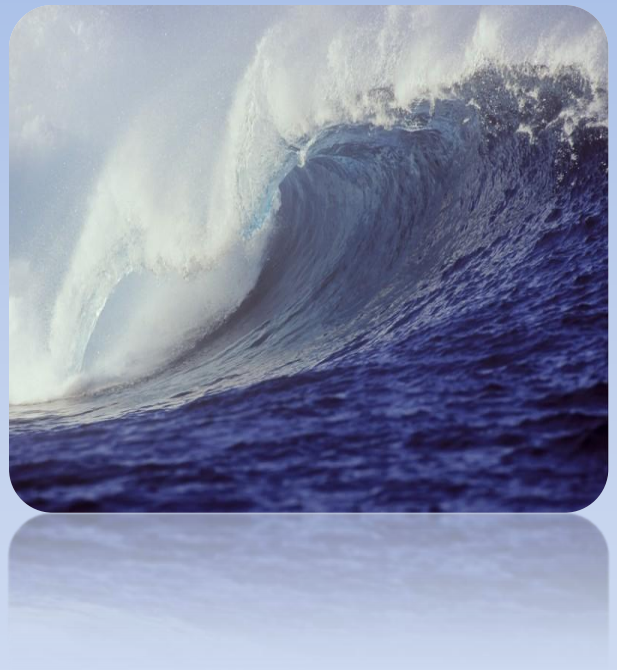
Proposed CWA Desalination Project as Resource Strategy

- New local Drought-proof water supply
- Improved water quality
- 48,000 Acre-Feet per Year Take or Pay with 30 year agreement
- Option to take up to 56,000 Acre-Feet per Year.
- 10 Mile 54-inch Conveyance Pipeline
- Relining 5.5 Miles of Pipeline 3
- Improvements at TOVWTP
- Early buy-out provisions



Parties

- San Diego County Water Authority (CWA)
- Project Company: Poseidon Resources (Channelside) LP, a California Limited Partnership
- Plant EPC Contractor: Kiewit-Shea Joint Venture
- Process Engineering and Equipment: Israel Desalination Enterprises (IDE) Technologies Ltd.
- Operating Services Provider: IDE Technologies Ltd.

South Bay Water Reclamation Plant, California

Advanced Water Treatment Plant, Fountain Valley, CA

Ashkelon (83 mgd)

Total Cost of the Proposed CWA Desalination Project

Total Capital Cost

Plant and pipeline cost	$691 million
Financing costs	$213 million
CWA improvements and oversight	$80 million
Total Capital Costs	**$984 million**

Total Unit Cost [1]

48,000 acre feet per year	56,000 acre feet per year
$2,290/AF	$2,041/AF

[1] Includes debt service, operations, CWA construction oversight and administrative costs

San Diego County Water Authority

Escalation Rates and Assumptions

	Unit Price Component	WPA Contractual Provision	Staff Modeling Assumption
	Fixed Charges:		
1.	Debt Service Charge	A fixed annual "slope" of 2.5% has been used to establish this charge	2.5% Fixed Slope
2.	Equity Return Charge	A fixed annual "slope" of 2.5% has been used to establish this charge	2.5% Fixed Slope
3.	Pipeline Installment Payments	A fixed annual "slope" of 2.5% has been used to establish this charge	2.5% Fixed Slope
4.	Fixed Operating Charge	Indexed to San Diego CPI	Assumed to escalate at 2.5%
5.	Fixed Electricity Charge	Linked to SDG&E Rates	Assumed to escalate at 2.0%
	Variable Charges:		
6.	Variable Operating Charge	Indexed to San Diego CPI	Assumed to escalate at 2.5%
7.	Variable Electricity Charge	Linked to SDG&E Rates	Assumed to escalate at 2.0%
8.	Poseidon Management Fee	Indexed to San Diego CPI	Assumed to escalate at 2.5%

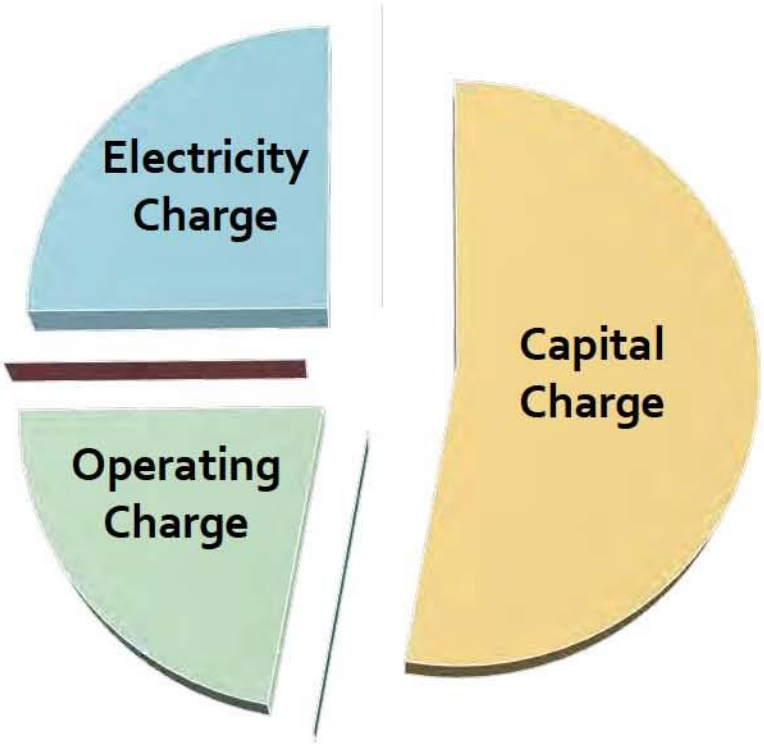
Cost Drivers

1. **The Electricity Charge is driven by:**
   - Terms of Poseidon's O&M Agreement with IDE
   - SDG&E Rates
   - Water Authority's option to select supplier

   The Electricity Charge will vary with electricity prices

2. **The Operating Charge is driven by:**
   - Terms of Poseidon's O&M Agreement with IDE
   - Other operating expenses

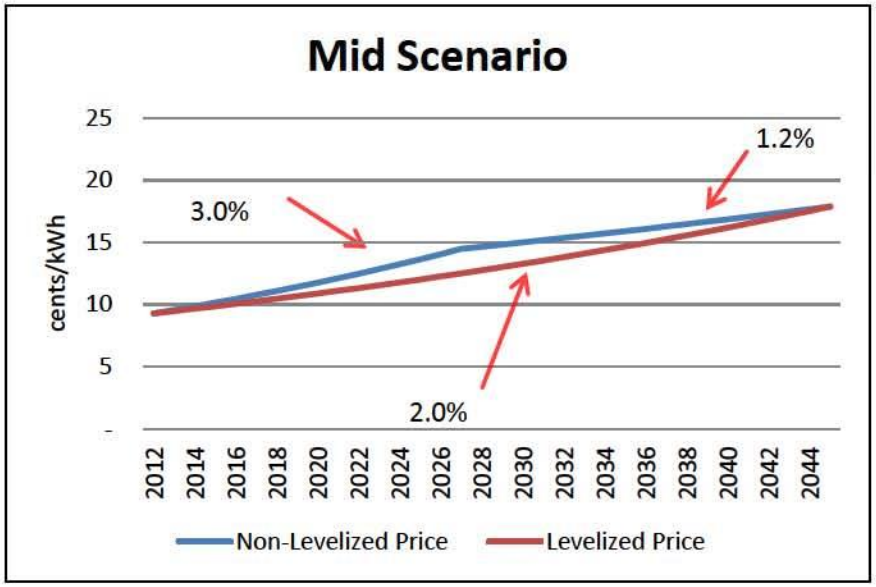
   The Operating Charge is indexed to CPI

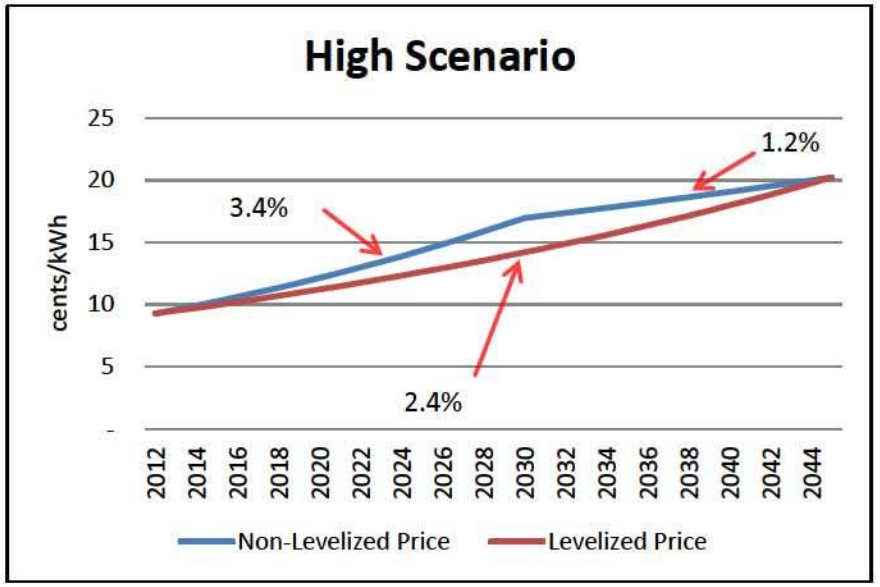


3. **The <u>Capital Charge</u> is driven by:**
   - Poseidon's Capital Budget
   - Bond Issuance
   - Negotiated Equity Return/Developer Fee
   - Development period costs

   The Capital Charge is fixed at a pre-established escalation rate

Projected Electricity Price – Carlsbad Desal Project





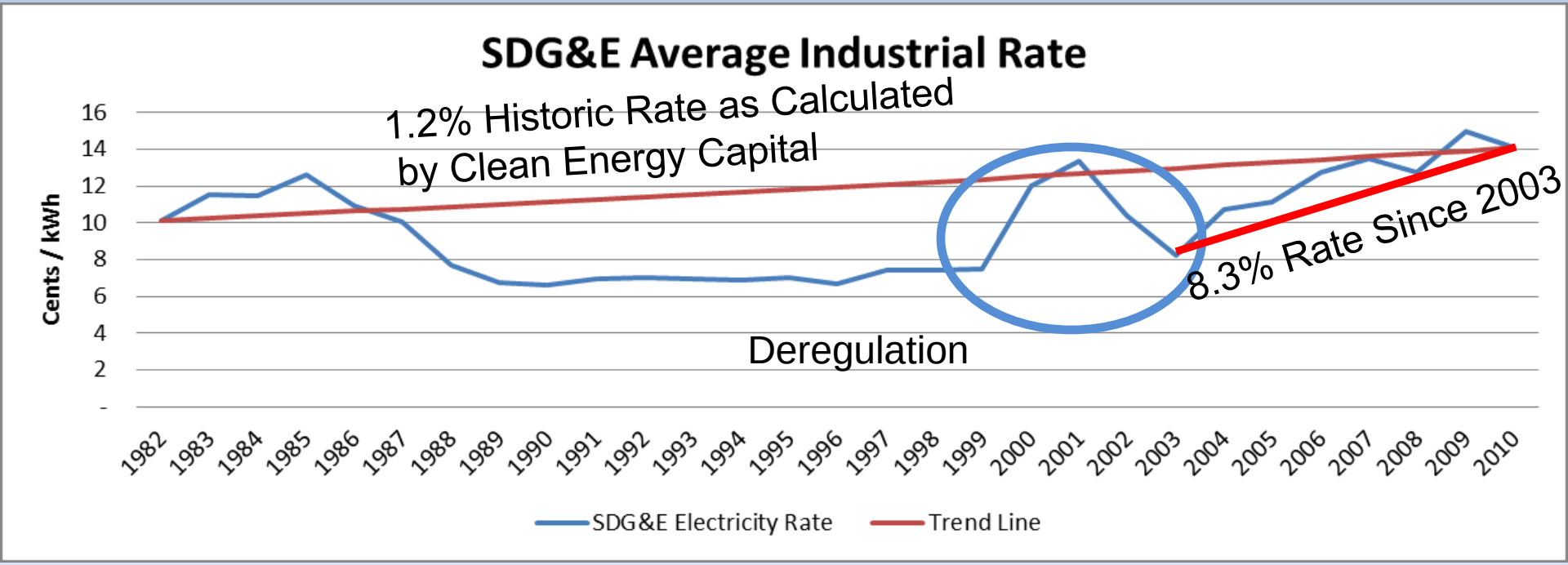
Future Electricity Price – Key Drivers	
Factors driving higher growth rate	**Factors driving lower growth rate**
• Renewable Portfolio Standard (RPS) • AB 32 • Fleet replacement	• ~~Natural Gas Prices~~ • Demand-Side Response • ~~Rate-Setting Process~~

SDG&E Current Rate Increase

- CPUC: Rate Increase of 4.1% next 8 Years

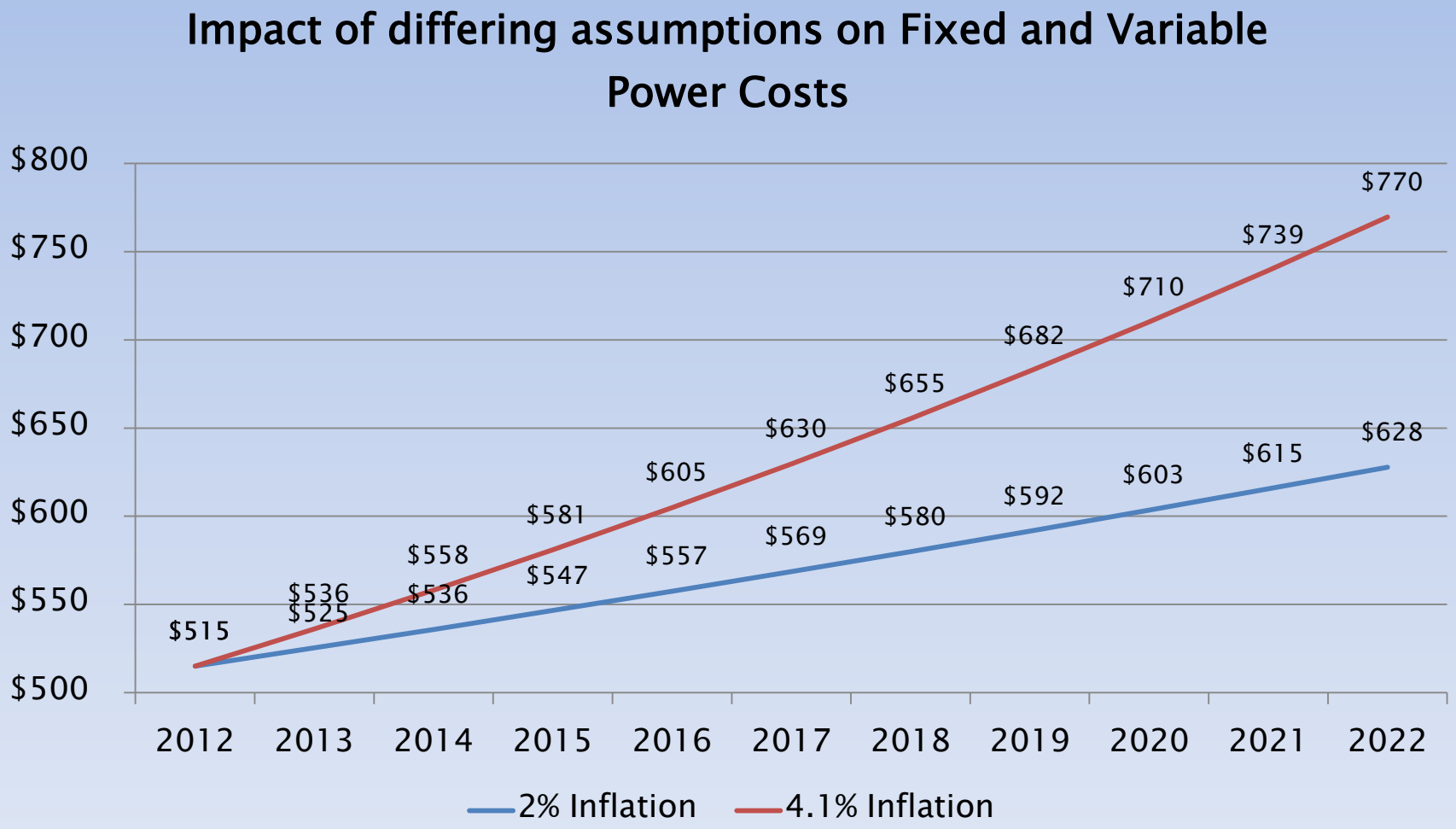
CleanEnergyCapital
INVESTMENT BANKING

Projected Electricity Price



Source: Clean Energy Capital Securities LLC

CWA vs CPUC Power Cost Assumptions

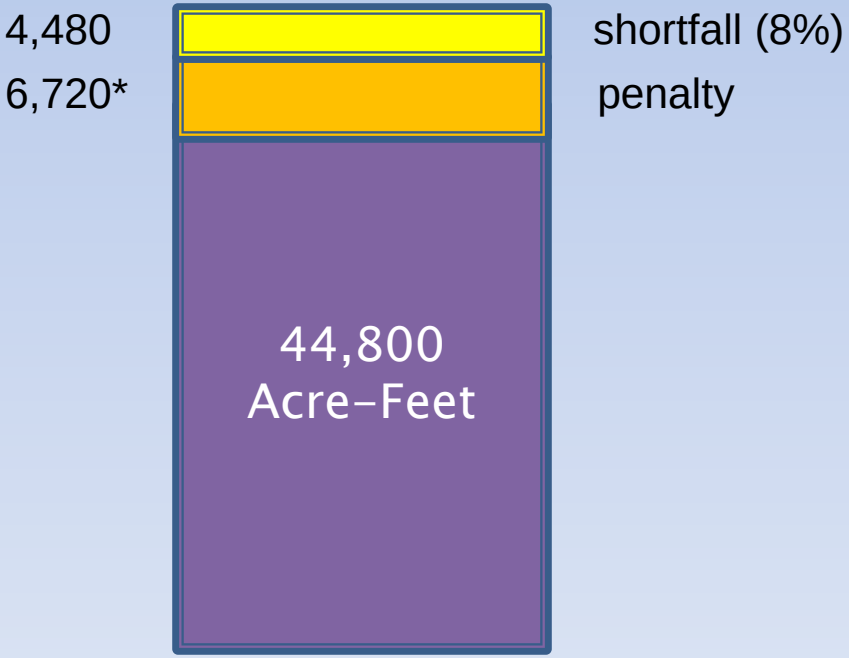


SDCWA Regional Demand : Scenario Three

Stage 4 MWD Shortage (20%)/pay penalty rates

Imported Water
$53,580,800

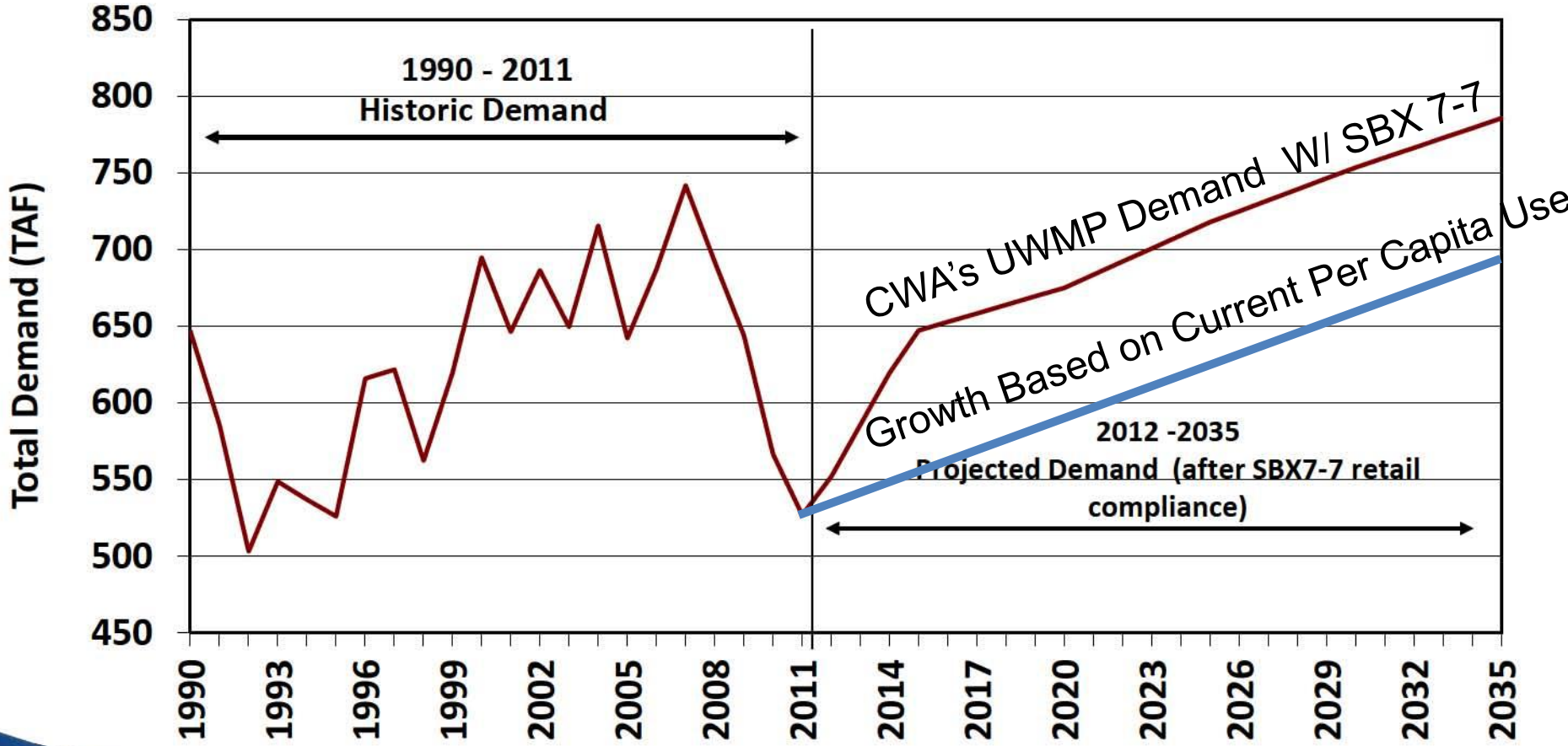
Desalinated Water
$114,428,000



* 15% of 44,800

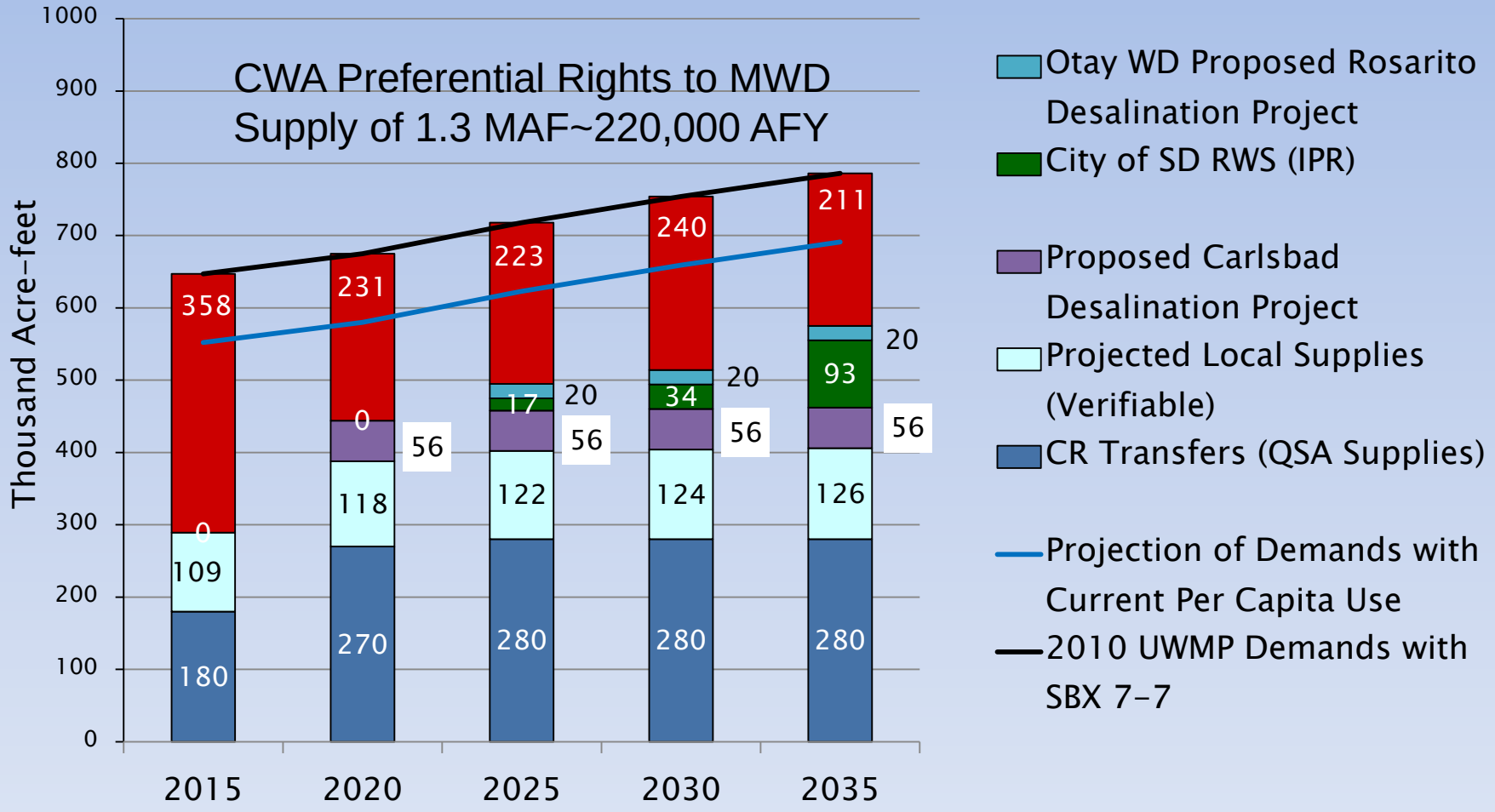
DRAFT 11/10/12

Total Historic and Projected Normal-Year Demands (Water Authority Service Area)



San Diego County Water Authority

Regional Supply Mix with IPR and Otay Desal (Normal Year)



Is It Really a Public – Private Partnership?

Risk Transferred to Poseidon	Risk Retained by San Diego County Water Authority
Construction cost overruns	Change in law (CDPH/Environmental)
Contractor disputes	Bond financing interest rates
Intake costs over SDCWA limits	Up to $20 M for intake changes capital expenditures
Operating cost overruns	Up to $2.5 M for intake changes operation expenditures
Electricity Consumption	Electricity rates
Labor supply and relations	Unusual seawater parameters
Insurable force majeure events	Uninsurable force majeure events
Permitting	Uncontrollable circumstances
Project schedule delays	General price inflation
Regulated-differing site conditions	

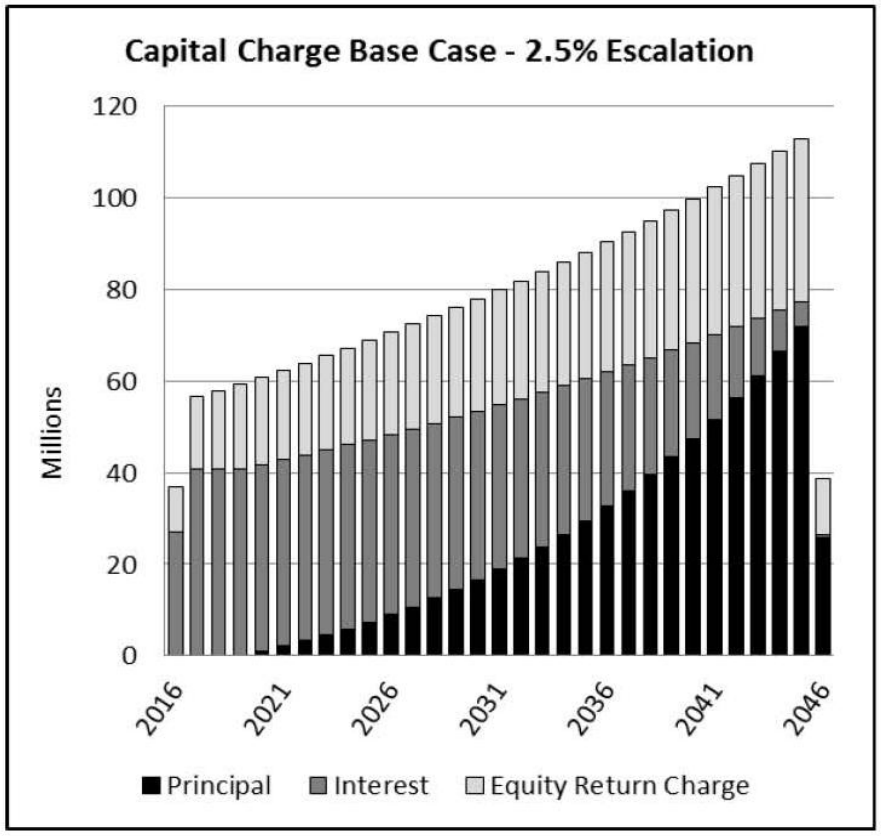
Missing Intake System Modification Cost

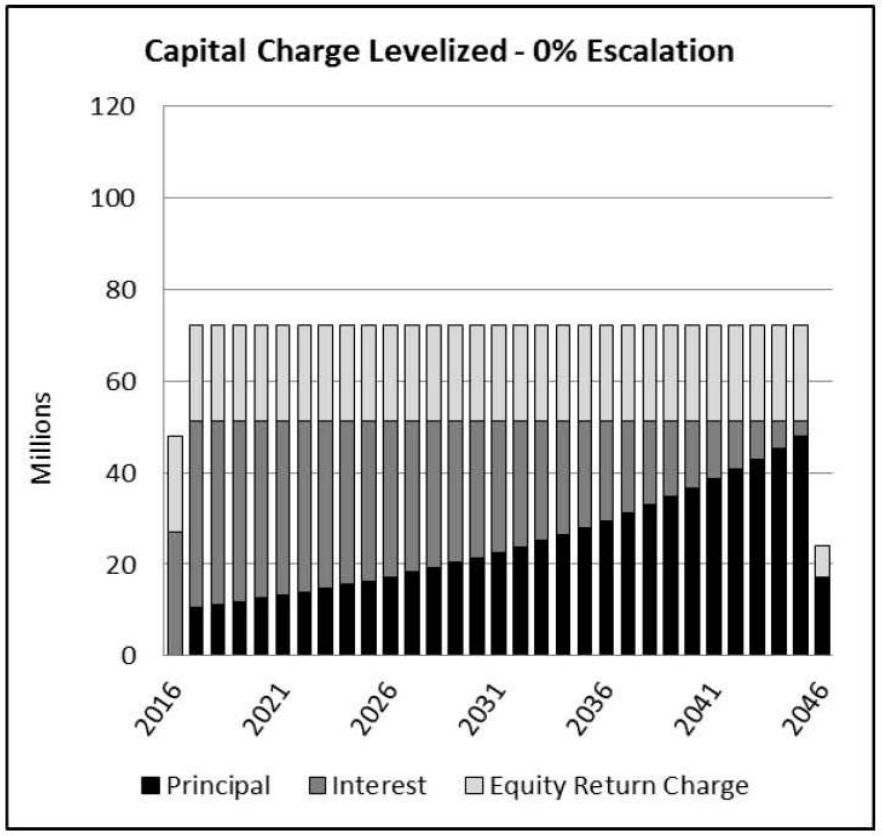
- CWA does not include this additional $119/AF in 2022 dollars because they do not know the exact timing of cost.
- Impact of $5.7Mil in today's dollars is $4.5Mil or 6.2% of additional annual revenue needed on top of the $72Mil for Desal
- The impact on Otay's rate payers is between 0.8% and 1.4% for the water intake system modification

Deferral of Debt Payments

- Initial deferral is $352 per AF in 2016
- By 2046 the additional debt cost due to the deferral is $908 per AF
- A flat rate Bond principal payment saves over $300 Million in principal and interest costs

UPWARD SLOPING VS. LEVELIZED CAPITAL CHARGE

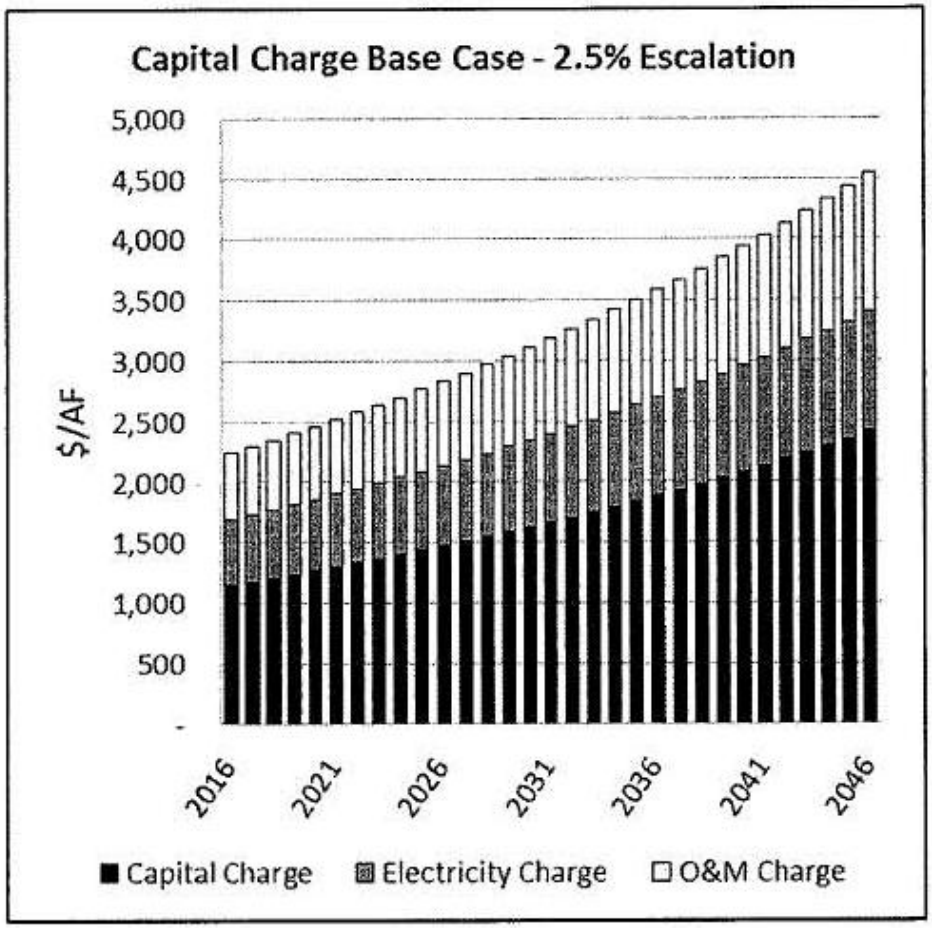


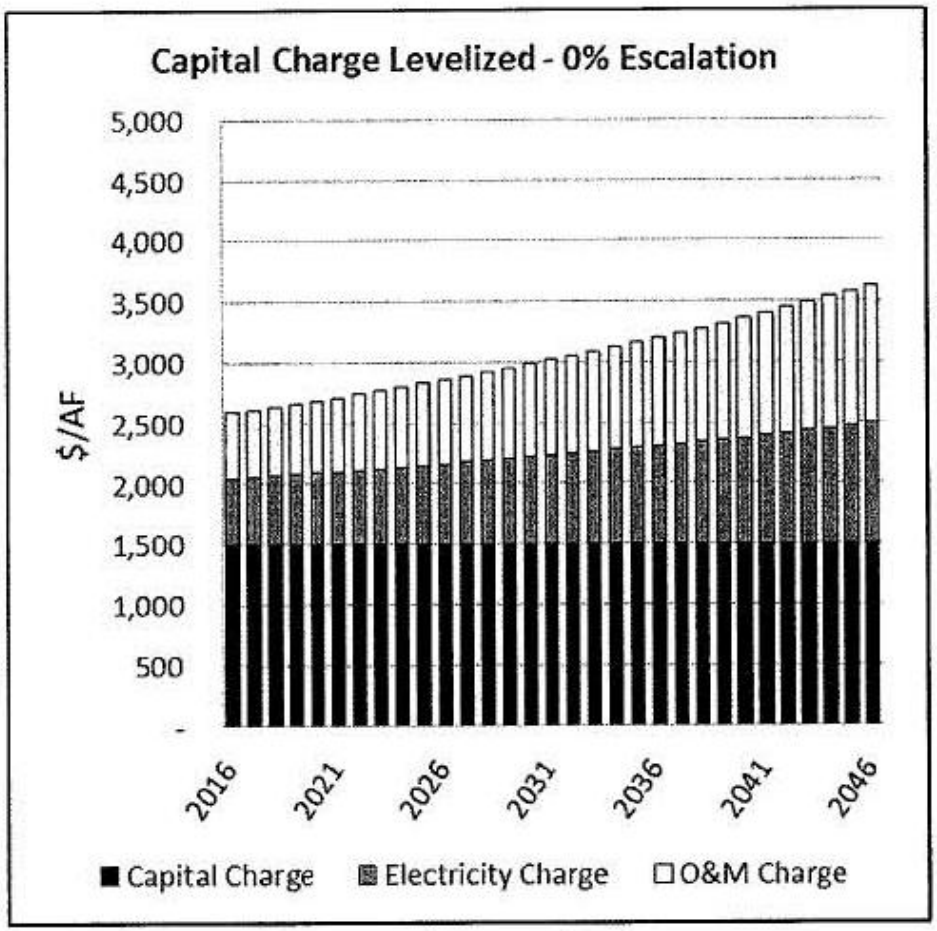


Principal	**$739 million**
Interest	**$937 million**
Equity Return	**$764 million**
Capital Payments	**$2,440 million**

Principal	**$739 million**
Interest	**$794 million**
Equity Return	**$628 million**
Capital Payments	**$2,161 million**

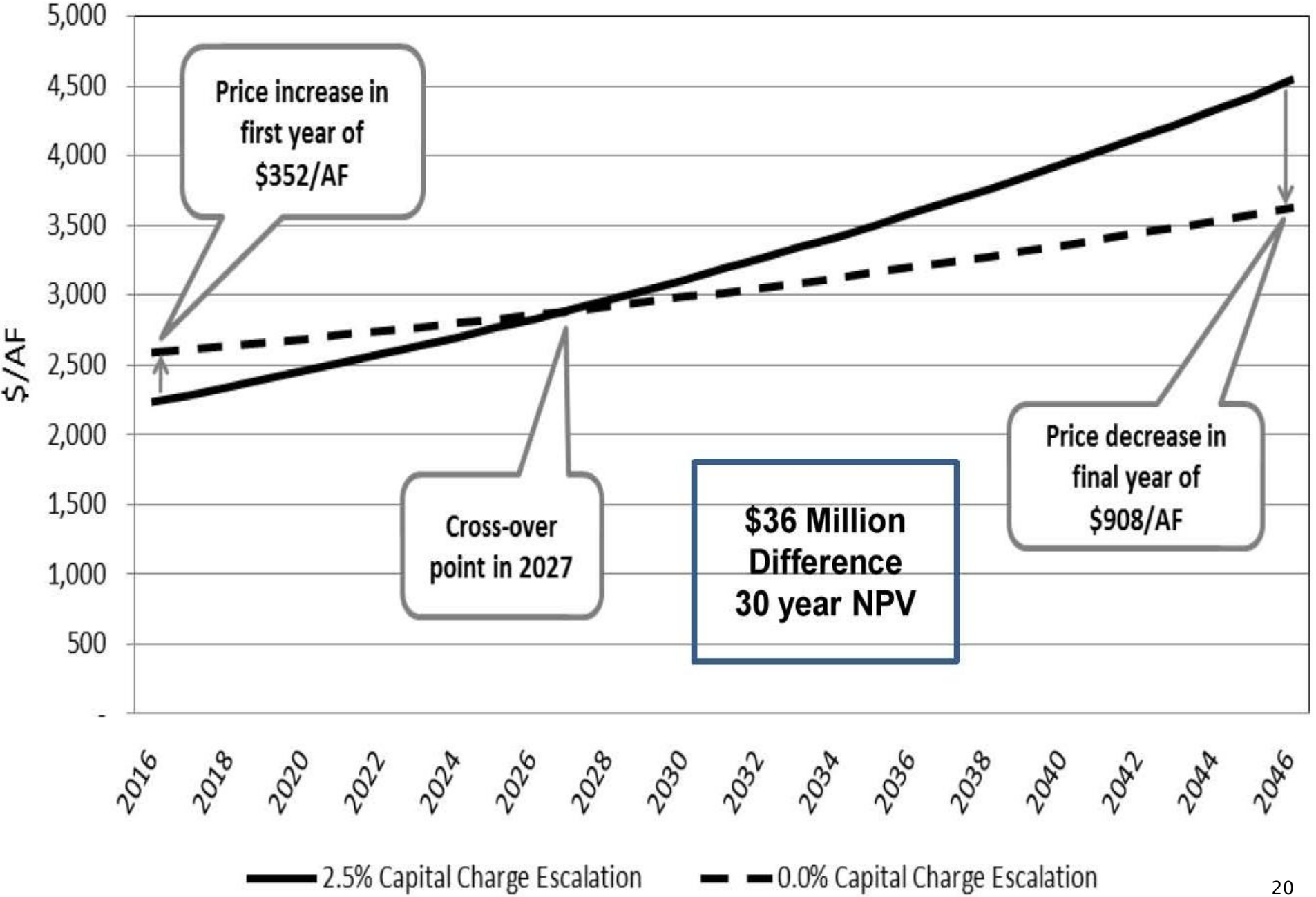
Impact of Capital Charge Shape on Water Unit Price





San Diego County Water Authority

Impact of Levelized Capital Charge



Potential Impact on CWA Rates & Charges

	2% Electrical Inflator Debt is Deferred (1)		4.1% Electrical Inflator With Level Debt Payments (2)		Additional Intake Cost With 4.1% Electrical Inflator Level Debt Payments (3)	
Rates & Charges	2B Alternative	San Diego Alternative	2B Alternative	San Diego Alternative	2B Alternative	San Diego Alternative
IAC $/Meter/Month	$2.20	$0.86	$2.59	$1.01	$2.72	$1.06
Treatment $/AF	$34	$192	$40	$226	$42	$237
Transportation $/AF	$30	$45	$35	$53	$37	$56
Melded Supply $/AF	$34	$13	$40	$15	$41	$16
Standby Charge $/AF	$18	$0	$21	$0	$22	$0

Note: At one point the 2B Alternative appeared to be CWA's preferred alternative, collecting an additional $72Million annually in rates by member agencies.

(1) Based on CWA's Rate Structure Alternatives
(2) Based on power cost at 4.1% (CPUC's assumption) vs 2% (CWA's assumption) and adding back $352/AF for debt deferral
(3) Based on (2) above plus additional $4.5 Mil in 2013$ ($5.7 Mil in 2022$) for cost of Intake System Modification

Potential Rate Impact to Otay's Customers

CWA Desal Project	Planned Increases (Primarily CWA)	2% Electrical Inflator Debt is Deferred (1)		4.1% Electrical Inflator With Level Debt Payments (2)		Additional Intake Cost With 4.1% Electrical Inflator Level Debt Payments (3)	
		2B Alternative	San Diego Alternative	2B Alternative	San Diego Alternative	2B Alternative	San Diego Alternative
Monthly Dollar Impact	$15.98	$8.66	$12.84	$10.49	$15.13	$11.05	$16.09
% Change	21.7%	12.6%	18.7%	15.3%	22.0%	16.1%	23.4%
Cumulative Dollar Increase		$24.64	$28.82	$26.47	$31.11	$27.03	$32.07
Cumulative Percentage Increase		34.3%	40.4%	37.0%	43.7%	37.8%	45.1%

These values are as of 2017, when the full impact of the CWA desal contract will be realized by Otay customers. The amounts are inflated from 2013 using CWA's anticipated overall rate increases.


Questions ?
ESTABLISHED 1956
OTAY
WATER DISTRICT
November 28, 2012

...Dedicated to Community Service
2554 SWEETWATER SPRINGS BOULEVARD, SPRING VALLEY, CALIFORNIA 91978-2004
TELEPHONE: 670-2222, AREA CODE 619 www.otaywater.gov

September 20, 2012

Mr. Michael Hogan
Chairman
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123

Dear Mike:

We have watched with interest the cost-of-service process prepared by the County Water Authority (CWA) staff over the last several months in conjunction with the potential acquisition of desalinated water from the Carlsbad Desalination Project (the "Project"). While we appreciate the hard work of CWA's staff, we do not believe the process being used for cost allocation is fitting in light of the changes to the CWA water portfolio and the high costs associated with the Project. We have made note of our concern for "seemingly" conducting a Cost-of-Service Study in the boardroom and, most recently, at the September 18th Agency General Managers meeting. The project changes the dynamics of the CWA water portfolio to a significant enough extent that using existing cost allocations, with some custom modifications and add-ons for the desalinated water, is not an appropriate way to proceed.

As you are aware, cost allocations are generally followed by a rate structure study in order to enhance the benefits of the allocation and mitigate negative impacts. The customary process used by public agencies is to first prepare a full cost-of-service review and then distribute the costs to the appropriate portions of the rate structure based on cost-causative allocations. This is a delicate act that should be performed by skilled rate professionals, not staff, general managers, or the Board of Directors of the CWA. Such outside professional rate consultants will provide different perspectives on "equity," on cost allocations, and, in this case, on the effect on the member agencies of CWA. The consultants should work with and report to the Water Planning Committee or Finance Committee. Several scenarios, with detailed back-up, should be prepared by the consultant and then presented to the committee(s).

Currently, many public agencies are initiating such a process, including the Otay Water District. Cost allocation methodologies that might have been appropriate five years ago are most likely outdated due to changes in the economy and the usage patterns of their customers. Otay is currently going through the Request for Proposal process to hire a qualified rate consultant to update the cost allocations for our water, recycled water, and sewer user rates. The cost allocation process may require modifying parts of our current rate structures to keep them in line with current industry standards and the usage patterns of our customers. Other large water agencies such as Sacramento Suburban are in the process of hiring experienced rate consultants to "prepare a water revenue, rate structure, long-term financial plan, and capacity fee study".

CWA needs a fresh look at its rate structures based on changes in circumstances. CWA should initiate this process and hire a qualified rate consultant to look at total current and future costs collectively, not on a piece-meal basis as appears is the case now. This study should not look at just one aspect of the CWA cost allocation or rate structure, as has been the practice in the past, instead, it should look at all

cost allocations and their interaction with each other to determine if the consultant believes that these allocations should continue or be modified. Modifications would be based on the changed conditions since CWA's last cost-of-service study and specifically due to the addition of 48,000 acre feet per year of very expensive base load local water supply.

It is envisioned that the most appropriate of the cost allocations could be merged together to form the basis for a new cost allocation methodology for rate setting at the CWA that is based on current facts and circumstances, has detailed back-up to support the cost allocations, and is fair and equitable to all member agencies. In light of the complexity, expense and new dynamics brought by the Project, we believe this sound process is warranted and essential. Any decisions made by the CWA Board without going through this validation process are premature at best.

In addition, the current process that staff is pursuing, adding in bits and pieces to a rate structure without performing a full cost-of-service analysis, may not comply with the requirements of Proposition 26. To be exempt from the requirements of Proposition 26, services charged by a government agency cannot exceed the cost of providing the service. The current staff process does not seem to comply with the intent of this law because the rate structure is being crafted first and then costs are being backfilled into the ad-hoc rate structure.

In summary, we do not believe it is appropriate for a political body such as the CWA Board of Directors to make a decision on a rate structure in a vacuum and prior to truly understanding the financial implications of updated cost allocations nor their impacts on individual CWA member agencies, and potentially without complying with California law. The Board should follow the normal cost-of-service process and retain professional guidance so that it may make appropriate decisions based on updated cost allocations that reflect today's circumstances.

We request that this letter be entered in the administrative record for the rate setting and approval of the Desalination Water Purchase Agreement related to the Project.

Thank you in advance for your consideration of our comments and concerns.

Sincerely,

Gary Croucher,
Director

Mark Watton,
General Manager

...Dedicated to Community Service
2554 SWEETWATER SPRINGS BOULEVARD, SPRING VALLEY, CALIFORNIA 91978-2004
TELEPHONE: 670-2222, AREA CODE 619 www.otaywater.gov

October 25, 2012

Mr. Thomas Wornham
Chairman
and Members of the Board of Directors
San Diego County Water Authority
4677 Overland Avenue
San Diego, CA 92123-1233

SUBJECT: Poseidon Carlsbad Desalination Project

Dear Tom:

We have reviewed the many abbreviated PowerPoint presentations to the Board on the Carlsbad Desal Project ("Project"), but we still have many unanswered questions and are concerned that the Project has not been fully vetted to be considered for approval. Because the WPA omitted documents that were expected to be included with the recent release, we cannot fully assess the impacts of the agreement and understand the cost impact to the District ratepayers. Below are some of the comments, questions, and additional document requests that we would like addressed before the Project is presented for approval.

- Please provide the lease, all amendments, easement documents, existing encumbrances of all lease areas, and any contracts, or pending contracts being negotiated with SDG&E or other power providers.

- Please provide a list of Poseidon's investors, equity partners, or any other entity having an interest in this Project. Include all contractors, professionals, and consultants who have had or will have a contract for this Project.

- What are Navigant Consulting Inc.'s projections for the cost of electricity over the term of the agreement being negotiated with SDG&E for the Lake Hodges agreement? How does this compare against the projections in the WPA? Has Navigant performed any AB32 rate analysis for other clients that we may obtain?

- The presentation before the Water Authority's Water Planning Committee on October 11, 2012 provided an overview of Australia's projects. Essentially, the take away message from that presentation was that, those plants that serve areas with very limited water supply alternatives are currently operating and producing water, up to 45% of the supply. For those plants that serve areas analogous to our situation here in San Diego, all the plants are in "hot standby," not producing water to mitigate cost increases on rates. Wouldn't it be prudent to examine such an alternative here as Australia has? Did staff investigate that option? If so, what were the financial findings?

- Based on the staff discussion at the October 11, 2012 meeting it appears staff has performed the cost of service study, if that is the case, please provide the calculations, methodology, rationale, and detailed back-up to support the cost allocations that shows this is fair and equitable to all member agencies.

- The presentations and written materials represented that the Project will have an average of $5 to $7 cost increase per month per household. Traditional Water Authority blanket average costs have not been representative of the cost to Otay ratepayers. Provide the methodology used, rationale, and details for this determination.

- The Water Authority has identified Twin Oaks Valley WTP as a stranded asset. However, staff at the October 17, 2012 Metro TAC presentation stated the Twin Oaks Valley WTP will be fully utilized in the future. Please identify how this facility will be fully utilized and the timing of same.

- The Independent Rates and Oversight Committee's letter dated October 18, 2012 to Mayor Jerry Sanders asks many pertinent questions about this Project. The Water Authority has been negotiating and reviewing this Project for a long time now, living and breathing the details of this Project, however, everyone else has been waiting to see the details and need more assurance this is the right Project needed at the right time. It would be helpful to have a current Master Plan that is looking at all of the changed conditions and the potential for IPR. Currently, we are reviewing the Water Purchase Agreement, related rate issues, and water supply needs. We agree with the IROC comment of allowing more time for review of a very lengthy and complicated Water Purchase Agreement.

- Slide 8 of the August 23, 2012 presentation to the Water Planning Committee shows that without the Desal Project, a 111,000 AFY shortfall will occur in the year 2030 (Potential Multi-Dry Water Year with MWD Supplies Further Limited). However, this is exactly the water supply estimated to be produced by the Metro Wastewater IPR project. This appears to indicate that if you have both IPR and

desal, you will have stranded the desal asset. The Water Authority needs to consider how the IPR project will be integrated as a future supply. The IPR project may be imposed on the region in response to an extension request or an outright loss of the waiver at Point Loma. The substantial cost for this Desal Project potentially puts the IPR project, and any other local water supply project, at risk.

- The proposed pricing structure would place a disproportionate share of the cost on the customers buying treated water provided by the Water Authority. Since there is already an oversupply of local treatment capacity and the Water Authority's response to IROC has confirmed "water currently being purchased by the Water Authority from the Metropolitan Water District, which desalinated seawater, a local supply, would replace," further points out this source is a raw water supply and the Water Authority should price it accordingly. Every presentation made, as well as the Water Authority web page, has compared desal to new water supply projects, not the existing water supplies it will replace. This also supports that the desal cost should be placed on the raw water supply.

In addition to the above, we also have many questions on the WPA and why the Water Authority is taking on so much risk, but we will comment on those later in a separate review of the WPA. Due to the complexity of the Project, all of the concerns that we have, and the concerns IROC has expressed, it would be advisable to fully vet all these concerns before making a decision.

Sincerely,

OTAY WATER DISTRICT

Gary Croucher,
Director

Mark Watton,
General Manager

San Diego County Water Authority
4677 Overland Avenue • San Diego, California 92123-1233
(858) 522-6600 FAX (858) 522-6568 www.sdcwa.org

November 15, 2012

Mr. Mark Watton
Board of Directors
San Diego County Water Authority
General Manager, Otay Water District
2554 Sweetwater Springs Blvd.
Spring Valley, CA 91978

Mr. Gary Croucher
Board of Directors
San Diego County Water Authority
10566 Villa Bonita
Spring Valley, CA 91978

Subject: Poseidon Carlsbad Desalination Project

Dear Directors Croucher and Watton:

Thank you for your letter of October 25, 2012. We appreciate the attention and diligence you have provided in reviewing the Water Purchase Agreement (WPA). Chair Wornham requested that staff address the questions and concerns raised in your above referenced letter.

As part of the deliberative process, the Board has held over 30 meetings since approval of the Term Sheet with Poseidon in July 2010. In the course of those meetings, almost all of the topics you raise in your letter were discussed, questions answered and information provided to the Board, much of it in written Memorandums from Staff and consultants and in detailed PowerPoint Presentations. The Board's Carlsbad Desalination Project Advisory Group, appointed by Chair Hogan, provided policy direction, reviewed information and analyses and advised the staff negotiating team throughout the development of the WPA. The Board's Desalination Advisory Group frequently directed staff to bring key information to the full Board for discussion and to seek direction from the Board of Directors at important milestones.

Below, we have addressed each of your questions or comments separately.

Question: Please provide the lease, all amendments, easement documents, existing encumbrances of all lease areas, and any contracts, or pending contracts being negotiated with SDG&E or other power providers.

Response: Both Water Authority staff and outside special counsel have reviewed the lease and amendments in their entirety, and the key terms have been discussed with the Board in both open and closed sessions. Staff has concluded that the lease allows for the construction, operation of the Desalination Plant as contemplated in the WPA, and provides for the transfer of ownership of the Projects assets, including property rights, at the Water Authority's option. It also has a lease payment that reflects fair market value,

and its provisions protect the interests of the Water Authority at the plant site. Because of its size, we will send both of you electronic copies of the publically available and recorded lease. Certain business terms in the lease have been reviewed by Water Authority staff and special counsel and were provided in confidence by Poseidon with the understanding that it would not be publicly disclosed per the Water Authority's Waiver and Release Agreement with Poseidon.

There are no contracts or agreement with SDG&E or any other power provider for purposes of purchasing electricity. There is a construction agreement between Poseidon and SDG&E for a new electrical substation to serve the desalination plant.

Question: Please provide a list of Poseidon's investors, equity partners, or any other entity having an interest in this Project. Include all contractors, professionals, and consultants who have had or will have a contract for this Project.

Response: The ownership structure of Poseidon was presented to the Board at the August 9, 2012 Special meeting. The information was presented by Carlos Riva, President and CEO of Poseidon. That information and additional information on the ownership of the Project Company is attached to this letter. As to the individuals that have an interest in the project, the federal PATRIOT Act requires the bond underwriters to (i) identify the ultimate beneficial owners of Poseidon Water LLC, (ii) collect specific identifying information such as taxpayer ID numbers, and (iii) confirm that the ultimate beneficial owners aren't known or suspected of being engaged in money laundering, terrorist funding etc. The PATRIOT Act further requires that the personal information so obtained be treated as highly confidential. The Water Authority has additionally requested that Clean Energy Capital, in its capacity as the Water Authority's financial advisor, undertake a PATRIOT Act-compliant investigation of Poseidon's ownership. Clean Energy Capital has identified the ultimate beneficial owners of Poseidon through thorough due diligence involving review of documentation and interviews, and has concluded that Poseidon is ultimately owned by individuals who are U.S. citizens that don't appear on any of the federal "watch lists."

As part of staff's due diligence efforts, we reviewed and are aware of the contractors Poseidon has retained or with whom Poseidon is in the process of finalizing agreements. Because it is a lengthy list, we have requested that Poseidon compile it and provide us such a list early next week, prior to November 21, 2012. We will then forward it to all Board members.

Question: What are Navigant Consulting Inc.'s projections for the cost of electricity over the term of the agreement being negotiated with SDG&E for the Lake Hodges agreement? How does this compare against the projections in the WPA? Has Navigant performed any AB32 rate analysis for other clients that we may obtain?

Response: For the Hodges project, as with any project Navigant is working on, they were retained to provide a case-specific analysis. In respect to Hodges, their analysis narrowly pertained to wholesale rates (our PPA provides that we pay the wholesale rate for energy) which are much different than a retail rate. The 20-year forecast they provided the Water Authority had a 3.5% annual growth rate in 2012 dollars. This compares to the annual growth rate of 3.4% in Clean Energy Capital's high case that was discussed at the Water Planning Committee's July 26, 2012 meeting and again at the November 8, 2012 Special Meeting of the Board of Directors. The Draft study being prepared by Navigant for the California Municipal Utilities Association was discussed at previous Board meetings. From our understanding, it had both a different, shorter forecast period and a different planning perspective than the Clean Energy Capital study. However, the sensitivity analysis presented to the Board by Clean Energy Capital provided increases in power costs consistent with the types of price spikes discussed in the Draft Navigant report. The high electricity price scenario accounted for 83% increase in electricity prices over an 18 year period. We believe that is consistent with the magnitude of increases we understand is in the Draft Navigant study over a shorter period of time. The High Electricity Price case presented to the Board at the November 8, 2012 Special Meeting showed a moderate impact on the water unit price during that period with only a slight increase in the percentage of electricity cost as a proportion of the total unit price of water.

Question: The presentation before the Water Authority's Water Planning Committee on October 11, 2012 provided an overview of Australia's projects. Essentially, the take away message from that presentation was that, those plants that serve areas with very limited water supply alternatives are currently operating and producing water, up to 45% of the supply. For those plants that serve areas analogous to our situation here in San Diego, all the plants are in "hot standby," not producing water to mitigate cost increases on rates. Wouldn't it be prudent to examine such an alternative here as Australia has? Did staff investigate that option? If so, what were the financial findings?

Response: Staff believes the conclusion that should be drawn from the Australian presentation is that supply-challenged areas similar to the San Diego region and southern California, like Perth, run their desalination plants as base load supplies as contemplated in the Carlsbad project. It is in areas like Sydney, where rainfall is in excess of 40 inches and surface storage capacity is more than 2 million acre feet, that plants are operated based on surface water storage levels. Similar rainfall conditions exist in Melbourne and the Gold Coast which has led those plants to operate in a stand-by mode. Because we would have to pay fixed costs no matter what operating mode was selected, it would not be economic to run the Carlsbad Desalination Plant as a supplemental supply. Once fixed costs are paid, reducing the amount of production at the Carlsbad Plant would result in spreading those fixed costs over a much smaller amount of water, thus driving the unit cost higher. In Sydney, Melbourne and the Gold Coast, the amount of rainfall and the sunk investment in surface storage provides for a much cheaper alternative than base loaded operation of the desalination plants. That is not the case in San Diego.

Question: Based on the staff discussion at the October 11, 2012 meeting it appears staff has performed the cost of service study, if that is the case, please provide the calculations, methodology, rationale, and detailed back-up to support the cost allocations that shows this is fair and equitable to all member agencies.

Response: Staff has **not** conducted a cost of service study. At the November 8, 2012 Special Meeting of the Board of Directors, staff noted that the cost of service study would be conducted beginning early 2013 and would address both 2014 rates and charges and determination of the appropriate allocation of Carlsbad desalination cost to the various service categories. As noted at that same meeting and at prior meetings, Staff has been engaged with the Board and the member agencies in a rate design analysis which provided multiple alternatives for allocating costs of the desal project to the relevant service category and charge. We have attached the basis for the calculations provided at the Board meetings and the basis of the financial data provided to each member agency for them to assess the potential impacts to their rates and charges. We have used the high cost estimates for Carlsbad Desalination provided at the June 14, 2012 Special Board Meeting and also attached. Proposals by staff for allocating desalination costs to relevant service categories and charges were developed under existing Board rate setting policies and principles and current practice. For illustrative purposes 2013 rates, charges and projected member agency purchases were utilized to estimate financial impacts to individual member agencies as if Desalination costs were added to the 2013 rates and charges. For purposes of any future rate setting, including the addition of Carlsbad Desalination costs, the calculations, methodology, cost of service rationale and supporting information noted in your request will be provided in the course of the upcoming cost of service study.

Question: The presentations and written materials represented that the Project will have an average of $5 to $7 cost increase per month per household. Traditional Water Authority blanket average costs have not been representative of the cost to Otay ratepayers. Provide the methodology used, rationale, and details for this determination.

Response: We certainly recognize that the Water Authority cannot precisely estimate how member agencies pass rate increases on to their customers. We have strived to provide an indication to the Board of what those impacts would be to an average residential retail customer. The following answer was provided to the San Diego Taxpayers Association in response to a similar question. It is provided below:

"For some time, the Water Authority Board has asked its staff to provide a perspective of how Water Authority wholesale rates and charges impact the end retail consumer. Staff developed an approach consistent with how member agencies display the effects of their rate increases to the average residential customer. This is an average approximation of rate impacts since member retail agencies assign costs to their inclining block rates and to their fixed charges in their own way and some agencies have their own local supplies and Water Authority rates have less impact on their retail customers. The Water

Authority is only providing an indication of the impact, but it has proven to be generally accurate. We developed a composite residential customer that is 100% dependent on the Water Authority for water and uses 15 units of water monthly. The composite is based on the weighted average water use for 5 Water Authority member agencies; the City of Carlsbad, Helix Water District, the City of San Diego, Sweetwater Authority, and Otay Water District.

Using this approach, we then take the estimated per acre foot rate increase, convert it to retail units (Hundred Cubic Feet or HCF) and then multiply by the average weighted monthly residential use of 15 HCF. We also add any increase to fixed charges to the monthly total.

> *Example: One of the alternatives discussed at the October 11 Special Board meeting had two components of an increase to rates and charges: $122/AF for treated customers and $88/AF for untreated customers on their volumetric purchases of water, and a $2.20 per month increase on their Infrastructure Access Charge (IAC) which is calculated on an agencies retail meters. In this example the calculation is as follows:*
>
> ***Treated: $122/AF = $0.28/HCF times 15 HCF per month = $4.20 plus $2.20 IAC = $6.40 per month***
>
> ***Untreated: $88/AF = $0.20/HCF times 15 HCF per month = $3.03 plus $2.20 IAC = $5.23 per month"***

Question: The Water Authority has identified Twin Oaks Valley WTP as a stranded asset. However, staff at the October 17, 2012 Metro TAC presentation stated the Twin Oaks Valley WTP will be fully utilized in the future. Please identify how this facility will be fully utilized and the timing of same.

Response: Staff has identified that production of treated water at the Twin Oaks Valley WTP will be reduced by the amount of wintertime desalinated water production. Both Carlsbad and Twin Oaks would be at full production capacity during the peak season. Additional treated water demand during the peak is provided by MWD's Skinner Filtration Plant. It was projected that without Carlsbad Desalination, Twin Oaks would treat approximately **90,000 to 100,000** acre feet annually. With Carlsbad Desalination, annual Twin Oaks production in 2016 is estimated at **70,000** acre feet, assuming implementation of improvements contemplated in the current CIP Budget and Facilities Master Plan. With increased demand over time as forecasted in the Urban Water Management Plan, estimated production at Twin Oaks will ramp up to about **87,000** acre feet annually by 2030. It could achieve the pre desalination levels of production noted above prior to that date if and when the MWD meter minimum on Pipeline 4 is reduced to a level related to actual demand that cannot be served by Twin Oaks Valley WTP. As with any treatment plant actual annual production will always be dependent on weather and demand patterns.

Question: The Independent Rates and Oversight Committee's letter dated October 18, 2012 to Mayor Jerry Sanders asks many pertinent questions about this Project. The Water Authority has been negotiating and reviewing this Project for a long time now, living and breathing the details of this Project, however, everyone else has been waiting to see the details and need more assurance this is the right Project needed at the right time. It would be helpful to have a current Master Plan that is looking at all of the changed conditions and the potential for IPR. Currently, we are reviewing the Water Purchase Agreement, related rate issues, and water supply needs. We agree with the IROC comment of allowing more time for review of a very lengthy and complicated Water Purchase Agreement.

Response: Carlsbad Desalination was analyzed and included in the 2004 Regional Water Facilities Master Plan and its associated Program Environmental Impact Report (PEIR). It was also included in the 2005 and 2010 Board approved Urban Water Management Plans. At the June 14, 2012 Special Meeting of the Water Planning Committee staff provided an analysis of demand for treated water and more specifically demand for treated water from the Carlsbad Desalination plant. That analysis provided in June 2012 represented the latest thinking of in the current update to the Facilities Master Plan.

There have been five Board meetings since August 2012, where detailed information was presented to the Board on the specific provisions of the proposed WPA. Since the release of the WPA itself the Board has held three of those meetings to specifically discuss Board member questions and comments.

Question: Slide 8 of the August 23, 2012 presentation to the Water Planning Committee shows that without the Desal Project, a 111,000 AFY shortfall will occur in the year 2030 (Potential Multi-Dry Water Year with MWD Supplies Further Limited). However, this is exactly the water supply estimated to be produced by the Metro Wastewater IPR project. This appears to indicate that if you have both IPR and desal, you will have stranded the desal asset. The Water Authority needs to consider how the IPR project will be integrated as a future supply. The IPR project may be imposed on the region in response to an extension request or an outright loss of the waiver at Point Loma. The substantial cost for this Desal Project potentially puts the IPR project, and any other local water supply project, at risk.

Response: Staff addressed this question at the September 25, 2012 Water Planning Committee meeting. Using projections from the Water Authority and City of San Diego's 2010 Urban Water Management Plans, if both projects were to move forward there is still a significant demand for water from MWD in 2030 and beyond, 200-300,000 acre feet, depending on the weather year. In that analysis presented to the Water Planning Committee, we also included the Rosarito Beach Desalination Plant as a source of supply for Otay consistent with your planning assumptions. (See attached analysis.) For comparisons, the Water Authority purchased approximately 270,000 acre-feet from

MWD in fiscal year 2012. Given the uncertainty in future imported supplies, additional local supplies on the order contemplated by all three projects would serve to lessen dependence on imported water and provide a more reliable resource mix for the San Diego region. Currently, Urban Water Management Plans are depending on an additional 35,000 acre feet in new recycled water and brackish groundwater supplies by 2035. It is assumed that IPR could make up for some of that local supply that does not seem to be progressing at this time. It should be noted, that in preparation of Water Supply Assessments, Verifications and development project EIRs, the recent California court ruling related to the development of the Fanita Ranch property in Santee emphasized the need for substantial evidence identifying actual water available to serve future development.

Question: The proposed pricing structure would place a disproportionate share of the cost on the customers buying treated water provided by the Water Authority. Since there is already an oversupply of local treatment capacity and the Water Authority's response to IROC has confirmed "water currently being purchased by the Water Authority from the Metropolitan Water District, which desalinated seawater, a local supply, would replace," further points out this source is a raw water supply and the Water Authority should price it accordingly. Every presentation made, as well as the Water Authority web page, has compared desal to new water supply projects, not the existing water supplies it will replace. This also supports that the desal cost should be placed on the raw water supply.

Response: Staff has proposed that there is a value for the treatment service provided to treated water customers by the desalination project. Although several alternatives have been developed to value that treatment benefit, staff has not recommended one in particular. Valuation of treatment as well as assignment of other desalination costs to rate service categories will be determined through the upcoming cost of service study.

I hope this helps answers the questions raised in your October 25, 2012 letter. If you would like to discuss any of these items further, please call me at (858) 522-6741. Again, thank you for your diligence and effort in reviewing the WPA.

Sincerely,

Ken Weinberg
Director of Water Resources

cc: Thomas Wornham, Chair, San Diego County Water Authority Board of Directors
Members of the San Diego County Water Authority Board of Directors

Independent Rates Oversight Committee

Independent Rates Oversight Committee

October 18, 2012

Mayor Jerry Sanders
Council President Tony Young
City Council Members
202 C Street
San Diego, California 92101

RE: Proposed Water Purchase Agreement between the County Water Authority and Poseidon Resources

Dear City of San Diego Officials:

At its October 15, 2012 meeting, the Independent Rates Oversight Committee (IROC) received a presentation by a staff member of the County Water Authority (CWA) on the proposed 30-year water purchase agreement (WPA) with Poseidon Resources. Many of the details of the proposed agreement were not yet available. Because of that, the Public Utilities Department (PUD) did not have enough information on the proposed agreement to be able to provide IROC with more than a vague estimate of the impact on San Diego water ratepayers.

Based on this information IROC voted unanimously to express to the Mayor and Council our concerns about the City's representatives on the CWA making such an important decision without adequate information about the impacts on the PUD and the ratepayers.

As you know, CWA has announced that it intends to vote on the WPA as soon as next month, **before it announces how it will allocate the very substantial and recurring costs of this project to member agencies and their ratepayers**.

With all due respect to CWA, this places the cart before the horse. Accepted standards of corporate governance make clear that no board member, including members of our own City 10, should make decisions that would have such a material impact on ratepayers, and likely also limit water policy options available to current and future elected council members, without first conducting the most thorough due diligence. Those standards also require that board members act independently, inquire actively, and have an adequate factual basis for any such decisions.

Unfortunately, the CWA is pushing this vote in a way that flies in the face of good governance practices, and exposes San Diego ratepayers to unknown financial impacts for decades to come.

The stakes are high. Investors are demanding a very high rate of return to finance this project (which cost will be borne by the ratepayers), and it can not move forward unless the CWA commits to purchase water at a high cost for the next thirty years. The CWA estimates that the plant and related infrastructure will cost approximately $980 million to stand up, and proposes to commit ratepayers to absorb an additional $100 million and up, every year for thirty years beginning as soon as 2016.

This project will require significant rate increases, puts at risk alternative supply options such as IPR, and places further pressure on member agencies to defer essential maintenance and replacement of existing critical infrastructure.

With this letter, IROC urges you to call on CWA to adjust the timeline for its vote on the WPA, to a future date that permits full public vetting of the risks of the proposal, and provides time for CWA to develop and approve a plan to allocate the costs of the project in a way that provides transparency to member agencies and the public, and time to permit the City of San Diego to estimate the financial impact on its ratepayers and on the future of its water system. Only then can City 10 members have an adequate basis to make a decision on the merits of this proposal.

Specifically, IROC urges that the Mayor and City Council strongly suggest to the City's ten representatives on the CWA that no vote to adopt a purchase agreement be scheduled until:

- the full proposed agreement has been made public for at least 120 days and public hearings are held to answer the questions of the public and participating agencies, and

- the PUD staff and or consultants have had time to fully assess the impacts of the agreement on the City of San Diego ratepayers, the water system, access to other sources of water, and the implications for future financing.

IROC feels that it would be imprudent for the City to be locked into such an agreement without the benefit of such due diligence.

We stand ready to discuss this with you at your earliest convenience.

Sincerely,

Gail Welch

Gail Welch, Chair
IROC

cc: San Diego City 10, Water Authority Board
Jay Goldstone, Chief Operating Officer
Andrea Tevlin, Independent Budget Analyst
Jan Goldsmith, City Attorney
Roger Bailey, Director of Public Utilities

San Diego County Water Authority
4677 Overland Avenue • San Diego, California 92123-1233
(858) 522-6600 FAX (858) 522-6568 www.sdcwa.org

October 23, 2012

The Honorable Jerry Sanders
Mayor, City of San Diego and
Honorable Members of the City Council
202 C Street
San Diego, CA 92101

Dear Mayor Sanders and Council Members:

The Water Authority was invited to make a presentation to the City of San Diego's Independent Rate Oversight Committee at its Oct. 15, 2012 meeting regarding the proposed Water Purchase Agreement with Poseidon Resources for the Carlsbad Seawater Desalination Project.

On Friday, October 18, the Water Authority received a copy of a letter addressed to you from the chair of IROC. That letter covers a wide range of issues, many of which were not discussed by IROC Committee Members during the October 15 meeting and upon which Water Authority staff was neither questioned nor afforded the opportunity to address. Accordingly, we hope the following information is helpful to you as you review the IROC letter. Below are a number of excerpts from the IROC letter and our response.

"Many of the details of the proposed agreement were not yet available."

All terms of the proposed Carlsbad Desalination Project Public-Private Partnership are delineated in exacting detail in the Water Purchase Agreement (WPA), which was released to the public on Sept. 27, 2012. That 200-page agreement, and its 18 Technical Appendices amounting to an additional 300 pages, have been widely distributed, and are prominently posted on the Water Authority's website at www.sdcwa.org\issue-desal. The agreement was provided upon its release to member agency staff, all members of the Water Authority Board of Directors, the news media and the public. The terms of the Water Purchase Agreement are a result of, and consistent with a Term Sheet approved by the Water Authority Board on July 22, 2010. The Project, including contract terms and cost has been discussed in public meetings more than 30 times since then.

"…the Public Utilities Department (PUD) did not have enough information on the proposed agreement to be able to provide IROC with more than a vague estimate of the impact on San Diego water ratepayers."

In addition to the detailed information contained in the WPA and its Technical Appendices, the Water Authority has provided to the City's staff, and staff of its other 23 member agencies, information sufficient for each agency to develop a range of potential impacts to their respective ratepayers based upon the estimated total unit price of the water and the cost allocation alternatives reviewed to date. The Water Authority first provided its Board and member agencies, including City of San Diego representatives, rate impact estimates as early as October 2011, which resulted in an average of $5-$7 per month on the typical residential water bill. Estimates were again provided at meetings in June, July, August and October 2012. The highest potential cost estimate of $2,350 A/F has consistently been used since that time and the estimated average residential rate impact has remained at $5-$7 per month. On August 30, 2012, all member agency general managers received a detailed financial analysis of the potential impacts of the desalination project with a comparison of all four alternatives discussed. In response to suggestions from member agencies, including the City of San Diego, Water Authority staff analyzed those additional cost allocation alternatives and presented those to our Board of Directors at a special meeting held on October 11, 2012. These additional alternatives continue to result in estimated rate impacts in the $5-$7 month range for the typical residential customer. We will soon distribute the detailed cost information for these additional alternatives to each member agency for them to analyze the range of rate impacts for their respective customers.

It is also critical to note that the Water Authority Board of Directors is expected to approve at its November meeting the selection of a firm to prepare a Cost of Service Study as part of its 2014 rate-setting process. Therefore, if the Board approves the WPA, it will also provide direction for incorporating the cost of desalination into the rate structure, which will be evaluated during the Cost of Service Study. This will provide even greater certainty as to the nominal variation of cost impact to the member agencies that would be implemented when the cost of desalination is incorporated into the rates. The Cost of Service Study for the 2014 rates will be completed by May 31, 2013, and the study will also determine the allocation of costs for the desalination project, which will be incorporated into the rate structure and added to rates and charges in fiscal year 2015-2016.

While a specific cost allocation method has not yet been selected, such a final determination is not necessary for member agencies to produce rate impact analyses that provide an accurate and narrow range of retail rate impacts. The reason for this is simple: as detailed in Article 17 of the WPA and Appendix 10, the exact cost is contractually set and detailed for each charge. The cost of the desalinated water will be between $2,041/acre-foot (for 56,000 AF) and $2,290/AF (for 48,000 acre-feet), which is lower than the $2,350 A/F used in the analysis above. It is true that how those costs

are allocated among rate components will affect the retail rate impact for a specific member agency (given the mix of fixed and variable charges, among other factors). Additionally, the Water Authority has held numerous meetings with Member Agency General Managers, Member Agency Finance Officers and other agency staff during which information was provided and questions were addressed; these meetings are continuing, as needed. We respect that each member agency follows its own process and timeline for producing their respective rate impact analyses, and the Water Authority has been fully responsive to requests by member agency staffs for any additional information and analyses that they need to perform their work. We stand ready to respond to any additional requests for information from our Board and our member agencies that may be forthcoming.

"As you know, CWA has announced that it intends to vote on the WPA as soon as next month...."

The question of when the Water Authority will vote on the WPA is the sole prerogative of the Water Authority's Board of Directors. What the Water Authority announced weeks ago is that the *earliest* the board would consider voting on the matter would be no sooner than 60 days following the release of the WPA.

"...without conducting the most thorough due diligence."

As you know, the WPA was the product of more than a year of negotiation and comprehensive due diligence by the Water Authority and a team of engineering, finance and legal expert consultants with broad and deep experience in development of projects of this nature, size and scope. Due diligence activities covered every facet of the project, including the physical facilities and technology being used, the competitive procurement process used by Poseidon to select its contractors and the costs of construction and operations. The Water Authority also negotiated a pricing structure that is completely transparent and reflects the actual costs that are incurred, extensively analyzing Poseidon's financial information and opportunities for profit. As noted above the WPA is also consistent with the terms of the July 2010 Term Sheet. While recognizing that opinions may differ on what constitutes "thorough" due diligence, Water Authority management believes the due diligence on this project and the WPA has been thorough and extensive. The project, under development since 1998, underwent extensive environmental review between 2005-2008. In July 2010, the Water Authority and Poseidon approved a Term Sheet that provided the essential terms and framework for the Water Purchase Agreement that was released September 27. Since the Term Sheet was approved and released, the Water Authority has held more than 30 public meetings and workshops related to the project. In 2012 alone, the Water Authority has conducted 17 public meetings. These included evening public meetings in San Diego and Carlsbad on

October 2 and 10, respectively. More than 260 members of the public attended these meetings, and many provided testimony.

"Investors are demanding a very high rate of return to finance this project...."

No questions were asked of Water Authority staff about rate of return during the October 15 IROC meeting. As you know, this project is a public-private partnership in which the private sector bears the risk and costs of project development, a risk that is recognized in the rate of return the private entity receives from a successful project. This is an increasingly common method of project delivery for major public works projects. In fact, many municipalities are turning to the private sector for city projects and services where public-private partnerships can provide efficiencies, cost savings and risk avoidance for the public enterprise. For the Carlsbad desalination project, the Water Authority has targeted a 9.45 percent internal rate of return for the Equity Return Charge component of the water unit price. It is important to note that 82% of the project's capital cost will be financed through tax exempt Private Activity Bonds and Municipal Purpose Bonds as a direct pass through to the Water Authority at currently historic low interest rates to the benefit of all ratepayers. No profit is earned on this portion of the project's financing. Poseidon's return on investment may be higher or lower depending upon their performance and efficiency. If the project is completed on time and budget, if it consistently meets the Water Authority's demand for desalinated water, and if it is operated efficiently, we estimate Poseidon could achieve an actual return between 10 percent and 13 percent. This range is on the low end of a market range for comparable infrastructure equity investment. If, however, these construction and operating conditions are not met, the equity return could be substantially lower.

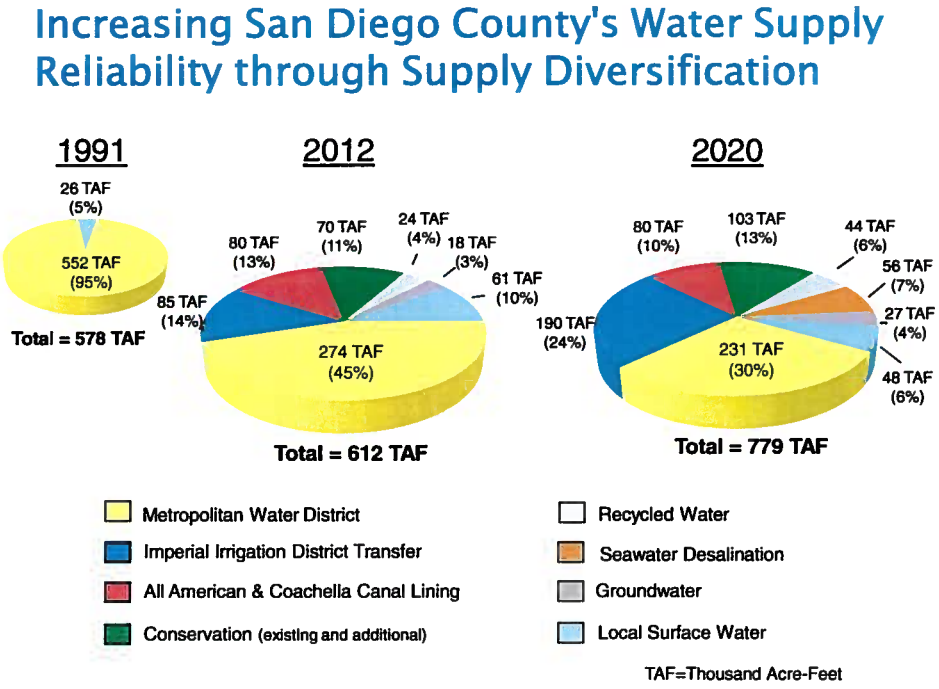
"The CWA estimates that the plant and related infrastructure will cost approximately $980 million to stand up, and proposes to commit ratepayers to absorb an additional $100 million and up, every year for thirty years beginning as soon as 2016."

The estimated total project cost, including financing costs, is $980 million. That is the capital cost. The $100 million cited in the passage above already incorporates debt service costs (along with operation and energy costs) on the capital investment, so those costs are not additional; nor do they reflect the current or future cost of imported water currently being purchased by the Water Authority from the Metropolitan Water District, which desalinated seawater, a local supply, would replace.

"This project will require significant rate increases, puts at risk alternative supply options such as IPR, and places further pressure on member agencies to defer essential maintenance and replacement of existing critical infrastructure."

All water supply project investments come at a cost – a cost that is borne by water ratepayers. Rates would be expected to rise if this or any other comparable project is approved, built and operated. As noted above, the City's PUD staff is able to provide estimates of the retail rate impact to city ratepayers. The central question that the policy makers considering any such investment must answer is whether the cost to ratepayers is worth the water supply reliability benefit the project will provide. I do not agree with the statement that approval of the WPA would put other water supply options, including Indirect Potable Reuse, at risk. That proposed project is a joint approach to both wastewater treatment and local water supply development. The rate impact information that the Water Authority has provided for the Carlsbad Desalination Project would constitute a very small percentage of the joint water-wastewater bill in the Metropolitan Wastewater System and would be a cost shared by all ratepayers in the County.

The very core of the Water Authority's water resource strategy for the past two decades has been water supply reliability through diversification, through both Water Authority investments and local supply investments of its member agencies. The pie charts below embody the success of this strategy, which has already protected our region's economy and quality of life by reducing the impact of nearly two years of water shortages from the Metropolitan Water District of Southern California (2009-2011).



The Water Authority respects the views of each of its member agencies and the advisory bodies they appoint to advise them, and appreciates this opportunity to clarify issues raised in IROC's October 18 letter. If you have any questions, please call.

Sincerely,

Maureen A. Stapleton
General Manager

Attachment: Oct. 18, 2012 IROC letter

Cc: Water Authority Board of Directors
Gail Welch, Chair, City of San Diego IROC, and IROC Members
Roger Bailey, Director of Public Utilities
Jay Goldstone, Chief Operating Officer
Andrea Tevlin, Independent Budget Analyst
Jan Goldsmith, City Attorney

Independent Rates
IROC
Oversight Committee

Independent Rates Oversight Committee

October 18, 2012

Mayor Jerry Sanders
Council President Tony Young
City Council Members
202 C Street
San Diego, California 92101

RE: Proposed Water Purchase Agreement between the County Water Authority and Poseidon Resources

Dear City of San Diego Officials:

At its October 15, 2012 meeting, the Independent Rates Oversight Committee (IROC) received a presentation by a staff member of the County Water Authority (CWA) on the proposed 30-year water purchase agreement (WPA) with Poseidon Resources. Many of the details of the proposed agreement were not yet available. Because of that, the Public Utilities Department (PUD) did not have enough information on the proposed agreement to be able to provide IROC with more than a vague estimate of the impact on San Diego water ratepayers.

Based on this information IROC voted unanimously to express to the Mayor and Council our concerns about the City's representatives on the CWA making such an important decision without adequate information about the impacts on the PUD and the ratepayers.

As you know, CWA has announced that it intends to vote on the WPA as soon as next month, **before it announces how it will allocate the very substantial and recurring costs of this project to member agencies and their ratepayers**.

With all due respect to CWA, this places the cart before the horse. Accepted standards of corporate governance make clear that no board member, including members of our own City 10, should make decisions that would have such a material impact on ratepayers, and likely also limit water policy options available to current and future elected council members, without first conducting the most thorough due diligence. Those standards also require that board members act independently, inquire actively, and have an adequate factual basis for any such decisions.

Unfortunately, the CWA is pushing this vote in a way that flies in the face of good governance practices, and exposes San Diego ratepayers to unknown financial impacts for decades to come.

The stakes are high. Investors are demanding a very high rate of return to finance this project (which cost will be borne by the ratepayers), and it can not move forward unless the CWA commits to purchase water at a high cost for the next thirty years. The CWA estimates that the plant and related infrastructure will cost approximately $980 million to stand up, and proposes to commit ratepayers to absorb an additional $100 million and up, every year for thirty years beginning as soon as 2016.

This project will require significant rate increases, puts at risk alternative supply options such as IPR, and places further pressure on member agencies to defer essential maintenance and replacement of existing critical infrastructure.

With this letter, IROC urges you to call on CWA to adjust the timeline for its vote on the WPA, to a future date that permits full public vetting of the risks of the proposal, and provides time for CWA to develop and approve a plan to allocate the costs of the project in a way that provides transparency to member agencies and the public, and time to permit the City of San Diego to estimate the financial impact on its ratepayers and on the future of its water system. Only then can City 10 members have an adequate basis to make a decision on the merits of this proposal.

Specifically, IROC urges that the Mayor and City Council strongly suggest to the City's ten representatives on the CWA that no vote to adopt a purchase agreement be scheduled until:

- the full proposed agreement has been made public for at least 120 days and public hearings are held to answer the questions of the public and participating agencies, and

- the PUD staff and or consultants have had time to fully assess the impacts of the agreement on the City of San Diego ratepayers, the water system, access to other sources of water, and the implications for future financing.

IROC feels that it would be imprudent for the City to be locked into such an agreement without the benefit of such due diligence.

We stand ready to discuss this with you at your earliest convenience.

Sincerely,

Gail Welch

Gail Welch, Chair
IROC

cc: San Diego City 10, Water Authority Board
Jay Goldstone, Chief Operating Officer
Andrea Tevlin, Independent Budget Analyst
Jan Goldsmith, City Attorney
Roger Bailey, Director of Public Utilities

Poseidon Water Purchase Agreement: *Private Profit, Public Risk*

1. Poseidon initially promised that the cost of desalinated water from its proposed Carlsbad Desalination Plant would not exceed the cost of imported water.[i] However, the latest estimates released by Poseidon and the San Diego County Water Authority (SDCWA) reveal that the true cost of this desalinated water has nearly tripled from roughly $900[ii] per acre-foot to roughly $2400 per acre-foot with no cost cap.[iii] Some analysts[iv] believe the $2400 per acre-foot estimate is still low.[v]

The San Diego County Water Authority (SDCWA) is signing a 30-year "take or pay" contract with Poseidon for at least 48,000 (and up to 56,000) acre-feet of water per year. This amounts to **$115 million per year**, or **$3.5 billion** for the initial 30-year term of the contract. **Though this $3.5 billion has yet to be accurately translated as a rate increase to end users, ratepayers can expect their water bills to increase by a minimum of 8-11 percent. With no firm cap either in the cost to purchase the water or the price the consumer is required to pay, water bills will likely go up well beyond this estimate.[vi]**

To put this commitment in context, at the same time the SDCWA is considering this 30-year contract to pay $115 million annually for Poseidon's desalinated water (even during times the water is not needed), it is vigorously pursuing litigation against the Metropolitan Water District over alleged overcharges of $28 to $77 million per year.[vii] The County Water Authority also saw an 18 percent reduction in water use in 2010. In 2011, the agency reported an additional 17 percent reduction in usage.[viii] Because of this "new normal" where water sales volumes and revenues to the SDCWA are below the levels on which the previous budgets were based, the SDCWA has decided to save dollars by deferring major capital improvement projects ($150 million in planned expenditures).[ix] These deferred projects will eventually be added back into the budget in the coming years (and therefore **additionally** increase future rates).

Ratepayers and SDCWA member agencies should question both the substantial increase in the cost of water per acre foot as well as the commitment of at least $3.5 billion for the Poseidon project when the SDCWA is reluctant to make other long-term expenditures because water sales and demand (i.e. revenues) have been lower than expected.

2. The cost of desalinated water is expensive due to the high energy usage involved in production. Compounding this, the cost of electricity in the San Diego area is increasingly volatile due to the shutdown of the San Onofre Nuclear Generating Station.[x] The liability for paying for the variable impact of the energy cost to produce the desalinated has been assigned to SDCWA ratepayers.[xi]

The independent think-tank Equinox Center has this to say about energy and desal:

> "Concerns about the availability and cost of energy, as well as greenhouse gas emissions, make energy intensity a key issue in assessing the different water options. Desalination is the most energy intense solution, with an estimated requirement of 4,100 to 5,100 (kilowatt hours) per acre foot."[xii]

Energy costs make up a larger percentage of the cost of desalinated water than any other water supply. For Poseidon's project, energy accounts for a quarter of the price of desalinated water. Thus, as energy prices go up they will disproportionately impact this water supply source.[xiii] At a recent SDCWA meeting, its consultant, Clean Energy Capital, attempted to forecast the stability of energy costs[xiv] for the next 30 years. Relying on lengthy disclaimers, the consultant made a huge and undocumented assumption that

For more information, contact: Marco Gonzalez: marco@cerf.org, or Julia Chunn-Heer: julia@surfridersd.org

energy rates will not follow more recent trends, projecting energy rate increases would not exceed more than 1.18 or 2.28 percent annually. However, the consultants own figures demonstrate that rates have actually increased over 60 percent in the last seven years.[xv] SDGE's recent request to the Public Utilities Commission for $1.1 billion to cover the expenses of the San Diego wildfires, and the unanticipated shutdown of San Onofre are just a few examples of the unpredictable nature of energy price speculation.[xvi] This type of variability makes the cost of desalination equally volatile.

The SDCWA should not absorb the increasing, variable cost of the electricity to produce Poseidon's desalinated water.

3. Poseidon's Coastal Development Permit (CDP) contains numerous conditions that must be fulfilled in order for the plant to commence construction and operation, including a Green House Gas Reduction Plan (GHG Plan). After the CDP was approved, the Coastal Commission found that Poseidon intentionally misled the Commission by contending its desalinated water would replace an equivalent amount of imported water; thus the offsets it claimed as part of its GHG Plan were no longer valid. As a result, the new additional costs of implementing a revised GHG Plan will be shifted to the SDCWA. Poseidon has not shown that these costs have been accurately reflected in the price per acre-foot of desalinated water.[xvii]

Special Condition 10 of Poseidon's CDP requires it to account for all of its indirect greenhouse gas (GHG) emissions resulting from electricity use each year by implementing its approved Energy Minimization and Greenhouse Gas Reduction Plan (GHG Plan). When the CCC approved Poseidon's GHG Plan in August 2008, Poseidon asserted that each acre-foot of water produced by desalination would replace imported water from the State Water Project on a one-to-one basis. As a result, the vast majority of its GHG emissions (70 percent) were automatically "offset", and Poseidon projected it would only have to purchase carbon offsets for approximately 16,000 metric tons of carbon dioxide equivalent ($MtCO_2e$).[xviii] However, Poseidon has since acknowledged that the desalinated water it produces will *NOT* replace imported water on a one-to-one basis.[xix] This admission radically changes the amount of carbon offsets Poseidon will have to purchase by ***more than 500 percent*** from 16,000 $MtCO_2e$ to about 83,500 $MtCO_2e$**.**[xx]

The cost of carbon offsets fluctuates with the voluntary over-the-counter market. Current estimates range from $5 to $40 per $MtCO_2e$. In order for Poseidon to buy five times more carbon offsets than originally planned, it must further raise the cost of desalinated water. As an example, a carbon offset that costs $10 per $MtCO_2e$ will add an additional $12 to each acre-foot of water produced by Poseidon.[xxi] Importantly, this is *NOT* a one-time cost. Poseidon, per Special Condition 10, must account for its indirect GHGs *each year*, and thus must buy the necessary amount of carbon offsets each year as well. The average price for $MtCO_2e$ has only increased over time, and this trend is predicted for the future.[xxii] Regardless of the exact price of MtCO2e, this represents a new cost to the overall price per acre-foot.

SDCWA should protect itself, and its ratepayers, and ask Poseidon to demonstrate where the cost of fulfilling its GHG permit requirement is included in the current estimates being negotiated.

4. The SDCWA Water Purchase Agreement is the collateral that will be used to convince private investors to buy the bonds to finance the construction and operation of the project.[xxiii] The project was first described as a $250 million project, but soared to $530 million in 2010[xxiv], increased another 47% percent to $780 million in 2012, and is now rumored to be in the range of $970 million.[xxv]

For more information, contact: Marco Gonzalez: marco@cerf.org, or Julia Chunn-Heer: julia@surfridersd.org

In 2002, Poseidon indicated its project would cost only $250 million.[xxvi] Since written verification of water purchase agreements is required by bond raters, Poseidon has not yet been awarded a final bond rating or allocation. This delay, among others, has resulted in Poseidon repeatedly applying for California Pollution Control Financing Authority (CPCFA) bonds[xxvii]. Each new submittal lists a larger project cost. For example, the 2010 application listed the project cost as $530 million and a 2012 application listed it as $780 million. Current press reports based on the SDCWA's own cost estimates peg the project at between $870 million to $970 million with financing costs added in, just shy of a $1 billion cost estimate.[xxviii]

These estimates do not include indirect costs of relining one of the two requisite pipelines that will connect the desalinated water from its production site to its distribution site, as well as operations and maintenance or treatment plant inefficiencies at the distribution facility.[xxix] When these additional expenses are added together, the project easily tops the $1 billion mark.

The SDCWA and the ratepayers should question why the cost of Poseidon's Carlsbad Desalination Plant has soared over a relatively short period of time from a $250 million project to an almost $1 billion project with no clear end in sight.

5. A contract requiring the SDCWA to buy water at all times, even when it is not needed, as opposed to enabling water purchases only when necessary guarantees a strong profit to Poseidon and its investors, but places the ratepayers at substantial financial risk.

In other places, such as Tampa Bay[xxx] and Sydney[xxxi], water agencies have decided to let their expensive desalination plants sit idle instead of running them because of the high operational costs. Under the Water Purchase Agreement with Poseidon, the desalination plant will never be shut down, even when the water is not needed.

If Poseidon's Carlsbad Desalination Plant is truly a sound investment, ratepayers should be able to purchase Poseidon's desalinated water only when they need it.

6. The State Water Resources Control Board (SWRCB) is in the process of amending the California Ocean Plan to include provisions and restrictions for ocean desalination facilities, and it is possible that those changes will place additional obligations on Poseidon's Desalination Plant[xxxii] - changes that the SDCWA has not factored in to the true cost of the water.

Poseidon originally proposed "co-locating" the desalination facility with the Encina Power Station to utilize the cooling water discharge both as "source water" intake for the desalination facility, as well as "dilution water" for the brine discharge. Since then, the State Water Resources Control Board (SWRCB) has adopted a Policy on Cooling Water Intakes that undermines the pre-conceived benefits of co-location.[xxxiii]

Further, the SWRCB is currently developing an amendment to the Ocean Plan to set standards for seawater desalination intake technology and brine discharges that will have to be incorporated into the existing Regional Water Quality Control Board's NPDES permit.[xxxiv] Expert panels assembled to inform and guide the SWRCB have studied these issues and provided "findings and recommendations" for possible amendments to the Ocean Plan. The expert reports have been criticized by consultants hired by Poseidon. Nonetheless, should the recommendations submitted by the expert panels be adopted by the SWRCB, it will result in significant costs not currently under consideration or accounted for.

For more information, contact: Marco Gonzalez: marco@cerf.org, or Julia Chunn-Heer: julia@surfridersd.org

Poseidon Water Purchase Agreement: *Private Profit, Public Risk*

In the interest of full disclosure and transparency, the Water Purchase Agreement should include an analysis of the costs associated with meeting the yet-to-be adopted SWRCB Ocean Plan amendment. The analysis should include an assumption that the recommendations of the expert panels will be adopted. This will ensure that reasonably foreseeable costs associated with design changes or retrofitting of the desal facility required as a result of the Ocean Plan amendment are fully understood and considered by participating agencies and ratepayers..

7. Shifting responsibility for the ownership and construction of the pipeline to connect the Poseidon Desalination Plant increases the SDCWA's financial exposure and makes the SDCWA liable for fulfilling all of Poseidon's Coastal Commission permit obligations.[xxxv]

The conveyance pipeline which will connect the desal facility in Carlsbad with the SDCWA aqueduct will be owned by SDCWA.[xxxvi] If Poseidon defaults, the SDWCA may be left paying $150 million for this "pipeline to nowhere." In addition, SDCWA will have to rehabilitate one of its existing pipelines to get the desalinated water up to the Twin Oaks treatment facility in San Marcos. This relining and rehabilitation project, which would otherwise be unnecessary, will cost an additional $50-56 million and require $10-12 million in modifications to the Twin Oaks Valley Water Treatment Plant.[xxxvii] If Poseidon defaults, ratepayers will have unnecessarily spent an additional $60-$68 million on these improvements.

Further, because Poseidon's CDP was issued jointly for both the desalination facility and the "pipeline to nowhere,", once the SDCWA assumes ownership of this pipeline it becomes jointly liable for all the permit conditions. This includes the GHG Plan and a Marine Life Mitigation Plan that requires at least 66 acres of mitigation.

Thus, even if SDCWA never receives a drop of desalinated water, it may be required to fulfill (and finance) Poseidon's CDP mitigation requirements, in addition to expending hundreds of millions of dollars for pipeline construction and improvements.

8. Before the SDWCA commits ratepayers to paying at least $3.5 billion for desalinated water, we should compare this with the cost of other alternatives.

Approximately 61 percent of the County Water Authority's water goes to residential use. About 60 percent of that water is used outdoors, primarily for irrigation. This outdoor water use will account for about 311,000 acre-feet per year in 2030.[xxxviii] The County Water Authority's modeling predicts a shortage of 111,000 acre-feet in an "uncertainty scenario" which is used to justify the need for Poseidon's project.[xxxix] By simply reducing outdoor irrigation by one-third this gap can be filled. Instead, to obtain half that amount, or 56,000 acre feet ratepayers will pay over $115 million annually. In contrast, conservation comprised only $10 million of the SDCWA's 2010-2011 budget, but resulted in 67,000 acre-feet of conserved water. As a "take or pay" contract, Poseidon's Water Purchase Agreement actually disincentivizes conservation because ratepayers will pay for this water regardless of how much they use, or conserve.

The City of San Diego and other SDCWA member agencies are considering building their own local, reliable water supply by turning wastewater into drinking water. Environmentalists, businesses, ratepayer advocates, and various agencies support this water supply option because it is less energy-intensive, less expensive and environmentally superior.[xl] In the first phase alone the City of San Diego's Indirect Potable Reuse project could provide 100 million gallons per day[xli] (twice the output of the Carlsbad facility).

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Poseidon Water Purchase Agreement: *Private Profit, Public Risk*

The County Water Authority is also considering its own desalination plant at Camp Pendleton.[xlii] This facility would be a publicly owned and operated desal plant, which could be designed to avoid the marine life impacts and reduce greenhouse gas emissions associated with Poseidon's project. With the County Water Authority running the plant, it could be used as a supply of last resort and scaled appropriately to meet our water needs.

The SDCWA needs to carefully consider the cost and reliability of a range of water supply options before it commits its member agencies and its ratepayers to an expensive source of water that it is required to buy even when it is not needed.

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[i] *No guarantees for Carlsbad Desal plant,* David Rosenfeld, April 6th, 2011 http://www.dcbureau.org/20110406178/natural-resources-news-service/no-guarantees-for-carlsbad-desal-plant.html

[ii] Recommended Findings – Coastal Development Permit Application E-06-013 Poseidon Resources (Channelside) LLC *November 2, 2007 – Page 17 of 88*

[iii] Incorporating Carlsbad Seawater Desalination Project into SDCWA Rates and Charges, Administrative & Finance Committee Meeting, August 23, 2012 (http://sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_08_23.pdf)

[iv] *San Diego's Water Sources: Assessing the Options*, Equinox Center and Fermanian Business & Economic Institute, July 2010

[v] *An Investigation of the Marginal Cost of Seawater Desalination in California*, James Fryer, March 18, 2010

[vi] http://www.sdcwa.org/water-authority-takes-steps-advance-carlsbad-desalination-project

[vii] "The stakes in the litigation are estimated at between $1.3 billion and $3 billion over a 45-year period." http://www.sdcwa.org/mwdrate-challenge

[viii] General Manager's Budget Message, SDCWA Adopted Budget for Fiscal Years 2012 & 2013, p.1

[ix] General Manager's Budget Message, SDCWA Adopted Budget for Fiscal Years 2012 & 2013, p.1, Capital Improvement Program, pp. 106-07.

[x] *San Diego's Water Sources: Assessing the Options*, Equinox Center and Fermanian Business & Economic Institute, July 2010

[xi] http://www.sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_07_26.pdf

[xii] *San Diego's Water Sources: Assessing the Options*, Equinox Center and Fermanian Business & Economic Institute, July 2010, Executive Summary

[xiii] *San Diego's Water Sources: Assessing the Options*, Equinox Center and Fermanian Business & Economic Institute, July 2010

[xiv] http://www.utsandiego.com/news/2010/dec/18/puc-approves-sdge-rate-increase-plus-gives-it-a/

[xv] http://www.sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_07_26.pdf (Historic Energy Prices)

[xvi] http://www.nctimes.com/blogsnew/business/energy/energy-navy-opposes-sdg-e-rate-increase/article_1e850c8a-7b0d-56e4-bff3-d45a3b08585e.html and http://www.ocregister.com/articles/sdg-347338-costs-county.html

[xvii] Personal communication with Coastal Commission staff.

[xviii] California Coastal Commission, Carlsbad Seawater Desalination Project, Energy Minimization and Greenhouse Gas Reduction Plan. Final Adopted Plan, September 2009

[xix] Coastal Commission staff report, February 9, 2010, http://documents.coastal.ca.gov/reports/2010/2/W6a-2-2010.pdf

[xx] These figures come from the final approved GHG Plan and represent both Poseidon's and Coastal Commission staff's best estimate of the amount of energy the desalination plant will use in a given year, and the anticipated amount of associated GHG emissions. The actual amount of energy used, its associated emission factor and GHG

emissions generated will not be known for certain until after the first year of operation, at which time adjustments will be made as needed to the amount of carbon offsets required for the following year. This protocol of annual adjustments is further detailed in the final approved GHG plan.

[xxi] As stated in Poseidon's approved GHG Plan, the automatic credit for reduction in imports from the State Water Project is 67,506 MtCO2e. If Poseidon's desalinated water does not replace imported water, as recently acknowledged, Poseidon will now have to account for these 67,506 MtCO2e. At a price of $10 per MtCO2e, the cost per acre foot can be attained as follows:
67,506 tons per year X $10 per ton = $675,060 / 56,000 acre-feet per year = $12 per acre-foot

[xxii] Developing Dimension: State of the Voluntary Carbon Markets 2012. A Report by Ecosystem Marketplace & Bloomberg Energy Finance. May 31, 2012.
http://www.foresttrends.org/publication_details.php?publicationID=3164

[xxiii] *Poseidon asks to sell up to $780M in tax-exempt state bond*, North County Times, December 8, 2011
http://www.nctimes.com/business/73cc7198-61a1-5d18-ab6b-358556498de6.html

[xxiv] www.ibank.ca.gov/res/docs/pdfs/2010.../Minutes_04-27-10_Final.pdf

[xxv] UTILITIES: Desal project would raise average water bills 7 percent,
http://www.nctimes.com/business/utilities-desal-project-would-raise-average-water-bills-percent/article_70060da2-6c48-54d2-a0c6-2a1ab2594103.html

[xxvi] http://www.nctimes.com/business/poseidon-asks-to-sell-up-to-m-in-tax-exempt/article_73cc7198-61a1-5d18-ab6b-358556498de6.html

[xxvii] "The San Diego County Water Authority (SDCWA) is continuing to work on the project details with the project sponsor, Poseidon. Mr. Paparian stated that the project proponents are expecting to have two related bonds, a governmental purpose bond to be issued on behalf of the SDCWA and a private activity bond to be issued on behalf of Poseidon. Both bonds are expected to come through CPCFA in an amount close to $750 million." Minutes, California Pollution Control Financing Authority, April, 17, 2012
*www.treasurer.ca.gov/**cpcfa**/minutes/2012/20120417.pdf*

[xxviii] http://www.utsandiego.com/news/2012/jun/15/carlsbad-desal-plant-pipe-costs-near-1-billion/

[xxix] http://sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_06_14.pdf (pp. 11-12 of second presentation)

[xxx] http://www2.tbo.com/weather/weather/2010/dec/15/tampa-bay-water-idle-desal-plant-saves-money-ar-23284/

[xxxi] http://www.abc.net.au/news/2012-06-26/sydney-desalination-plant-to-switch-off/4092482?section=nsw

[xxxii] http://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/

[xxxiii] http://www.swrcb.ca.gov/water_issues/programs/ocean/cwa316/

[xxxiv] http://www.waterboards.ca.gov/water_issues/programs/ocean/desalination/

[xxxv] Personal communication with Coastal Commission staff.

[xxxvi] Special Desalination Board Workshop, June 14, 2012,
http://sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_06_14.pdf

[xxxvii] http://sdcwa.org/sites/default/files/files/board/2012_presentations/presentations_2012_06_14.pdf

[xxxviii] http://www.sdcwa.org/2010-urban-water-management-plan

[xxxix] http://www.sdcwa.org/sites/default/files/files/board/2012_agendas/2012_08_12_Board%20Packet.pdf

[xl] http://www.equinoxcenter.org/assets/files/pdf/AssessingtheOptionsfinal.pdf

[xli] http://www.sandiego.gov/water/waterreuse/pdf/news/2012/waterreusescheme120525.pdf;
http://www.sandiego.gov/water/waterreuse/pdf/recycledfinaldraft120510.pdf

[xlii] http://www.sdcwa.org/desalination

San Diego Coastkeeper Position Paper
October 4, 2012

San Diego Coastkeeper supports a diverse water supply portfolio. However, with the region's limited resources, San Diego County's immediate capital investment—and corresponding rate increases—should focus on potable reuse projects.

- **Potable reuse solves two problems for the price of one.** Potable reuse will add a high quality, reliable water source to the region's supply. It will also decrease pollution. The Point Loma Sewage Treatment Facility discharges approximately 140 million gallons of advanced primary treated wastewater into the ocean daily under a Clean Water Act waiver. The current cost estimate to upgrade Point Loma to secondary treatment and compliance with the Clean Water Act is $1.2 billion. Potable reuse projects offload wastewater from Point Loma, reducing—or potentially eliminating—the costs of upgrading Point Loma, while at the same time building water supply infrastructure.

- **Ratepayer fatigue means limited opportunity for significant capital projects.** Resources are limited, and asking ratepayers—particularly low- or fixed-income families—to pay multiple rate increases will be unpopular. The Poseidon Water Purchase Agreement anticipates water rate increase of $60-$84 annually per household of 4 by 2016. How much more of an increase could ratepayers stomach for potable reuse projects if the Carlsbad desalination goes forward? And how would ratepayers fare with the desalination rate increase along with a rate increase to upgrade Point Loma?

- **Capital investments requiring rate increases should be prioritized by greatest long-term benefit.** Decisions should be based on the best strategic opportunity, not which project gets shovel-ready first. Potable reuse packages pollution reduction and local water production into one project, making it the best capital investment for the region now. Ratepayers deserve fair rates and strategic capital improvements based on the greatest efficiencies.

- **Potable reuse water is cheaper than desalinated water.** The City of San Diego's Recycled Water study estimates that the net cost per acre foot of indirect potable reuse water will run between $700 and $1200. A large chunk of that cost comes from pipelines to transport ultra-clean water to reservoirs to mix with dirtier, imported water. Direct potable reuse water will likely be even cheaper than indirect potable reuse water. The proposed water purchase agreement for Poseidon desalination is $1,876 to $2,097 per acre-foot in 2012 dollars.

- **Potable reuse rates can be split between water and wastewater ratepayers.** While the cost of desalinated water would be carried by water rates, the cost of capital upgrades for potable reuse water could potentially be shared among water and wastewater ratepayers.

- **Potable reuse projects are better for the environment than desalination plants.** Potable reuse projects not only reduce the amount of pollution discharged into the ocean, but they also are less energy-intensive than desalination plants. Not only is lower energy use cheaper, but it is the preferred approach in light of global climate change.

THE SDCWA-POSEIDON WATER PURCHASE AGREEMENT DOES NOT SERVE THE PEOPLE OF SAN DIEGO

DAVID ZETLAND*

Abstract. The San Diego County Water Authority (SDCWA) should not sign the water purchase agreement (WPA) with Poseidon Resources, due to its economic, social and logistical flaws. The first flaw is cost: water costing $2,000+ per acre foot will either be sold at a lower price (due to average cost pricing), such that SDCWA "buys high and sells low" or it will be sold at its marginal cost. In this latter case of setting the price of all water to reflect the most-expensive source (marginal cost pricing), we can expect that quantity demanded will fall to a level at which the desalinated water would not be necessary. The second flaw is social: the desalinated water will only improve local reliability if it's sold at marginal prices (meaning it would not be necessary). If it's sold at lower prices and/or delivered to new housing in the region, then SDCWA is losing money on the deal and/or subsidizing new development at the expense of existing customers. Third, the WPA is too complicated to understand, which means that SDCWA customers risk paying higher-than-promised costs if something goes wrong; Poseidon Resources has not successfully constructed and operated a desalination facility. The bottom line is that SDCWA should find cheaper and more effective ways of improving regional water security. Higher prices that reduce demand are easier to implement and cost ratepayers nothing (assuming excess revenue from those using more water is rebated to all customers). Governance reform at the Metropolitan Water District of Southern California (MWD), the provider of most of SDCWA's imported water, would remove uncertainty from SDCWA's supply by allocating water to MWD member agencies willing to pay more for water, rather than allocating water using the current outdated, politicized and inefficient allocation mechanism. SDCWA needs to work harder for its customers instead of spending $3.3 billion on an "easy" solution that does nothing to reduce long-term scarcity in the region.

Observations outside the WPA

Let's begin with SDCWA's summary of the WPA:[1]

> Under the agreement, the total price for the water including costs to make improvements to the Water Authority's pipelines and treatment plant to accommodate the new supply is estimated at $2,042 to $2,290 per acre-foot in 2012 dollars, depending on how much water is purchased annually. (An acre-foot is approximately 325,900 gallons, or enough to supply two typical single-family households of four for a

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* Senior water economist, Wageningen University (dzetland@gmail.com; kysq.org/pubs/cv.pdf).

This political-economic analysis was prepared for the San Diego chapter of the Surfrider Foundation.

[1] http://sdcwa.org/water-authority-releases-proposed-carlsbad-desalination-water-purchase-agreement

> year [at a rate of 112gcd].) The impact of this new supply on an individual's water bill will vary depending upon their local water agency. The average household's water bill would increase approximately $5 to $7 a month by 2016 to pay for the new supply.
>
> In addition, the Water Authority's 24 local member agencies must declare within the next 60 days whether they intend to purchase a portion of the desalinated seawater supply directly from the Water Authority as a local supply at the full cost per acre-foot. Local supplies help improve water agencies' water supply reliability, especially during times of drought or shortages in imported water supplies.

Some thoughts:

If that cost per acre foot is averaged with other cheaper water sources to arrive at a postage stamp price of, say, $1,100 per acre foot,[2] then SDCWA is planning to lose money on each acre foot.

If SDCWA sold ALL its water at this marginal cost ($2,200 per af),[3] then what would consumption be? Assuming an average demand elasticity of -0.20,[4] then the reduction in quantity demanded resulting from doubling the price of water would be greater than the additional quantity supplied (assuming that the plant supplies 7 percent of total supply), i.e., doubling the price to pay for 7 percent more supplies would reduce demand by 20 percent. Put differently, customers facing a price that reflected the actual cost of desalinated water would reduce their demand by enough to eliminate the need for the plant!

Although customers in San Diego may not feel much pain from paying $5-7 per month ($60-84 per year), we have to ask them if they are interested in *wasting* that much money per year, for 30 years, in a total that works out to over $3.3 billion (48TAFY * $2,290 or 56TAFY * $2042 over 30 years sums to $3.3-3.4 billion).

This point above brings us to an important question. Is SDCWA looking for the cheapest way to improve reliability? A desalination plant is certainly easier to control than the Metropolitan Water District of Southern California (MWD) or the weather, but it's also possible to reduce demand. Using SDCWA's numbers from the quotation above (112gcd),[5] we can see that water consumption is already quite high. Urban demand in Australian cities with similar weather is usually less than 180 lcd (47 gcd), or less than half SDCWA's level. Demand in Monterey, California is 65 gcd.[6] It seems

[2]According to `http://www.sdcwa.org/rates-charges`, SDCWA charges $714+$256+$93=$1063 to deliver a treated acre foot to its member agencies, which then add their own charges.

[3]Economists advise that companies should sell their production at a price that reflects the marginal cost of the last unit produced. This is what happens in the for-profit world. Utilities that are not allowed to "make profits" assume that they should price their goods at the average cost, but it's more sensible to sell the goods at marginal cost and apply the excess revenue to (1) pay fixed costs and then (2) customer rebates.

[4]The price elasticity (a ratio reflecting the fall in quantity demand resulting from an increase in price) for indoor water use can be as low as -0.10, but the price elasticity of outdoor water use is much "stronger," i.e., -0.60 or lower.

[5]I tried to find consumption data for the City of San Diego, without luck.

[6]Per my experience on another consulting project but probably available from the CPUC.

that SDCWA and its member agencies have not done very much to reduce demand before looking for new supplies. Where is SDCWA's comprehensive assessment of options for closing the supply-demand gap? Is there, in fact, an actual threat of a damaging shortage, or are water managers taking an easier path that requires less work from them but increases costs to ratepayers?

This point brings up the interesting question of whether SDCWA wants this additional water as a means of serving current customers or as a supply that can be used to meet new demand from housing developments, industrial expansion, agricultural irrigation, etc. As a point for discussion, consider that agricultural water use in FY2011 was 44TAF, of which 34TAF came from SDCWA – a number that should be compared with the desalination plant's capacity of 56TAF.[7]

Just as a final note (before we get to other matters), consider a potential complication: SDCWA wants local agencies to sign 30-year purchase agreements in the next 60 days rather than allowing them to buy desalinated water on an as-needed basis over the life of the contract. Such deals will surely reduce SDCWA's exposure to the $3.3 billion liability, but it does nothing to encourage those agencies to limit their water demand. If they are committed to take the water, then they will find ways to use it.

Water scarcity in San Diego. The SDCWA was formed in 1946 to merge the interests of local water providers into one entity that could then join MWD, but SDCWA's relationship with MWD has been strained over the years – mostly due to a mismatch between SDCWA's (high) water purchases and (low) voting power at MWD. Governance reform at MWD has been blocked by members who prefer the status quo and a lack of intervention by the State Legislature. Alternative mechanisms for allocating water and money within MWD have, likewise, been blocked. The resulting dysfunction at MWD has raised costs to water customers in Southern California, decreased water supply reliability, and reduced regional cooperation.[8]

One result of this dysfunction has been SDCWA's quest for "independence" – a quest that has cost ratepayers millions of dollars as SDCWA has built duplicate facilities. This $900 million desalination plant is only the most recent addition to SDCWA's portfolio. Poseidon Resources has attempted to bring this "solution" into operation for over ten years.[9]

Who is Poseidon? Under "Our Experience" Poseidon Resources lists zero operating desalination projects, two perspective projects (Carlsbad and Huntington), and six water treatment projects – five of which are with PEMEX in Mexico (the other is in Rhode Island).[10]

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[7] http://www.sdcwa.org/sites/default/files/files/finance-investor/cafr2011.pdf

[8] See my dissertation ("Conflict and Cooperation within an Organization: A Case Study of the Metropolitan Water District of Southern California" at http://ssrn.com/abstract=1129046) for details.

[9] I interviewed Peter MacLaggan in 2005 or so.

[10] http://www.poseidonresources.com/our_experience.html

They therefore omit to mention their involvement with the 25MGD Tampa Bay desalination project, which ran over budget and overdue as three of Poseidon Resources' engineering partners went bankrupt (easy when a corporation is established for each project, to limit liability to the parent company). Tampa Bay Water ended up buying out Poseidon Resources and arranging for American Water/Pridesa to bring it online.

Poseidon Resources, as project manager, will neither finance, design, build nor operate this facility. What will Poseidon Resources do to earn its profits? Why isn't SDCWA, an agency with considerable financial resources and a much stronger stake in a successful project, doing business with Poseidon Resources? There are these potential reasons:

(1) Poseidon Resources is using its political power to collect money. This is feasible given earlier reports of Poseidon Resources support for San Diego politicians not directly related to SDCWA.[11]
(2) Poseidon Resources has some genius in managing projects. This is not obvious from Poseidon Resources' experiences.
(3) Poseidon Resources is taking on financial risk that SDCWA prefers to avoid. This is hard to support, given that project bonds will be issued by the CPCFA – California Pollution Control Financing Agency (page 5 et seq.).
(4) Poseidon Resources is assuming technical risks. This is also hard to support, as Poseidon Resources is subcontracting EPC (Engineering Procurement Construction) to Kiewit Infrastructure West-Shea Construction JV) and operations to IDE Technologies (WPA Appendix 14.3.2) These companies will post performance bonds (12.1.B).
(5) Poseidon Resources has worked on this project and cannot be easily replaced (path dependency).

I would not raise these questions if Poseidon Resources had won a bidding contest for an RFP posted by SDCWA (or its predecessors), especially if the bid had allowed for "unconventional sources" such as recycled water.

Inside the WPA

In an ideal contract, Poseidon Resources would finance, build and operate a project that would provide water to SDCWA at an agreed price for 30 years, but Poseidon Resources is neither financing, building or operating this plant. That is perhaps why the contract is so long and complex. I am quite overwhelmed by the text in the WPA and its appendices, e.g., 2.2.R[12]

[11]Poseidon Resources says it "has not directly or indirectly offered or given any gratuities (in the form of entertainment, gifts, or otherwise) to any Water Authority Indemnitee with a view toward securing this Water Purchase Agreement or securing favorable treatment with respect to any determinations concerning the performance of this Water Purchase Agreement" at 2.2.N.

[12]Or how about this?

> **Project Company Acknowledgment (9.1.A).** The Project Company acknowledges that the Project will constitute: (1) a primary source of treated drinking water for conveyance to the Member Agencies and their customers through the

> **Practicability of Performance.** The Design Requirements, the technology and the construction management practices to be employed in the Project are furnished exclusively by the Project Company and its Project Contractors and Subcontractors, and the Project Company assumes and shall have exclusive responsibility for their efficacy. The Project Company assumes the risk that the Raw Seawater pilot testing conducted by the Project Company for the Project may, to any extent, have been inadequate or of insufficient duration to provide a proper basis for the design, construction, operation or maintenance of the Project or for the establishment of the Performance Guarantees and the Monthly Water Purchase Payments. The Project Company further assumes the risk of the practicability and possibility of performance of the Project on the scale, within the time for completion, and in the manner required hereunder, and of treating Raw Seawater and producing and delivering Product Water through the design, construction, operation, maintenance and management of the Project in a manner which meets all of the requirements hereof, even though such obligations may involve technological or market breakthroughs or overcoming facts, events or circumstances (other than Uncontrollable Circumstances) which may be different from those assumed by the Project Company in entering into this Water Purchase Agreement. The Project Company agrees that sufficient consideration for the assumption of all such risks and duties is included in the Monthly Water Purchase Payments. No impracticability or impossibility of any of the foregoing shall be deemed to constitute an Uncontrollable Circumstance. Nothing in this paragraph, however, shall be construed to limit or deny the Project Company's right to be excused from performance where specifically provided elsewhere in this Water Purchase Agreement.

Now it's all well and good to be clear, but these 500+ pages of contracts indicate a certain lack of trust between the parties. From experience, we know that contracts can seem to say one thing but turn out to mean another. I can't really understand the implications of the many inter-related and cross-referenced clauses in this WPA –

> Water Authority Distribution System; and (2) a critical part of the Water Authority's emergency storage program, which consists of a system of reservoirs, interconnected pipelines and pumping stations designed to make water available to the San Diego region in the event of an interruption in imported water deliveries. The Project Company further acknowledges that the Water Authority, in meeting the water supply requirements of the Service Area, is providing an essential public service and, in complying with Applicable Law, will rely on the performance by the Project Company of the Contract Obligations. [**YES**] The parties acknowledge and agree that this subsection shall not be construed to expand or otherwise modify the Project Company's obligations under this Water Purchase Agreement [**NO**].

and I wonder if SDCWA's General Manager or customers can either. It's important – especially with Poseidon Resources' past failure in Tampa – to ensure that SDCWA doesn't get left with a white elephant, as the people of Melbourne, Australia just did with their A$3.5 billion project that is now mothballed due to recent rainfall.

I've noted that the contract is take or pay, i.e., SDCWA promises to buy 48TAFY for 30 years (5.1), but I'd like to see a few scenarios that clearly spelled out:

- What happens (who pays) if the project goes over cost (Poseidon Resources pays, per 6.1.A, but do water prices stay the same?) or if it's late?
- What happens if Poseidon Resources goes bankrupt ("default" is in Article 20 but then what?) or its subcontractors fail? This is relevant since Poseidon Resources is actually signing the contract as a special purpose LLC, i.e., Poseidon Carlsbad LLC.
- How much will SDCWA pay to buy the project in year 10?
- Poseidon Resources will make an unknown equity contribution (2.2.G), but it will receive equity return charges specified in Table 1.2 (WPA Appendix 10-5). Is Poseidon Resources getting paid $310-790/af for contributing proportionally to the equity:debt mix? Table 1.2 shows debt service payments of $650-1240/af. Does that imply that Poseidon Resources' equity contribution will cover 32 percent of costs? If the proportion is lower, then why is Poseidon Resources getting paid a premium, given that subcontractors are posting performance bonds and CPCFA is issuing the bonds?[13]
- What happens to Poseidon Resources' equity if they fail to deliver on time and at price?
- Why does San Diego pay for damage in excess of the insured amount in an earthquake?
- What happens if the Cabrillo lease is cancelled or the seawater intake is decertified in 2017 (4.7 and 20.1.8)?
- Electricity is important (25 percent of total costs?), but Appendix 9 is painfully exact with prices and formulas. Who bears the risk if prices change?

[13]These calculations may be confused by charges in tables 1.3 and 1.4, so please check.

Attachment J

DRAFT 11/10/12

The Cost of Improving Regional Reliability through Desalination

Fallbrook Public Utility District

Cost Assumptions (all 2012$)

Desalination costs:

- 48,000 acre-feet ($2288)= $109,824,000 (take-or-pay)
- 8,000 acre-feet ($553)= $4,424,000 (extra plant capacity)
- 56,000 acre-feet total: $114,248,000
- The 8,000 acre-feet could be extraordinary local supply

MWD Imported water costs:

- (Tier 2)= $920 per acre-foot
- 56,000 acre-feet ($920)= $51,520,000
- Penalty rate: (Tier 2 rate x 2)= $1840 per acre-foot

SDCWA Regional Demand: Scenario One

No MWD Shortages

Imported Water
$51,520,000

Desalinated Water
$114,428,000

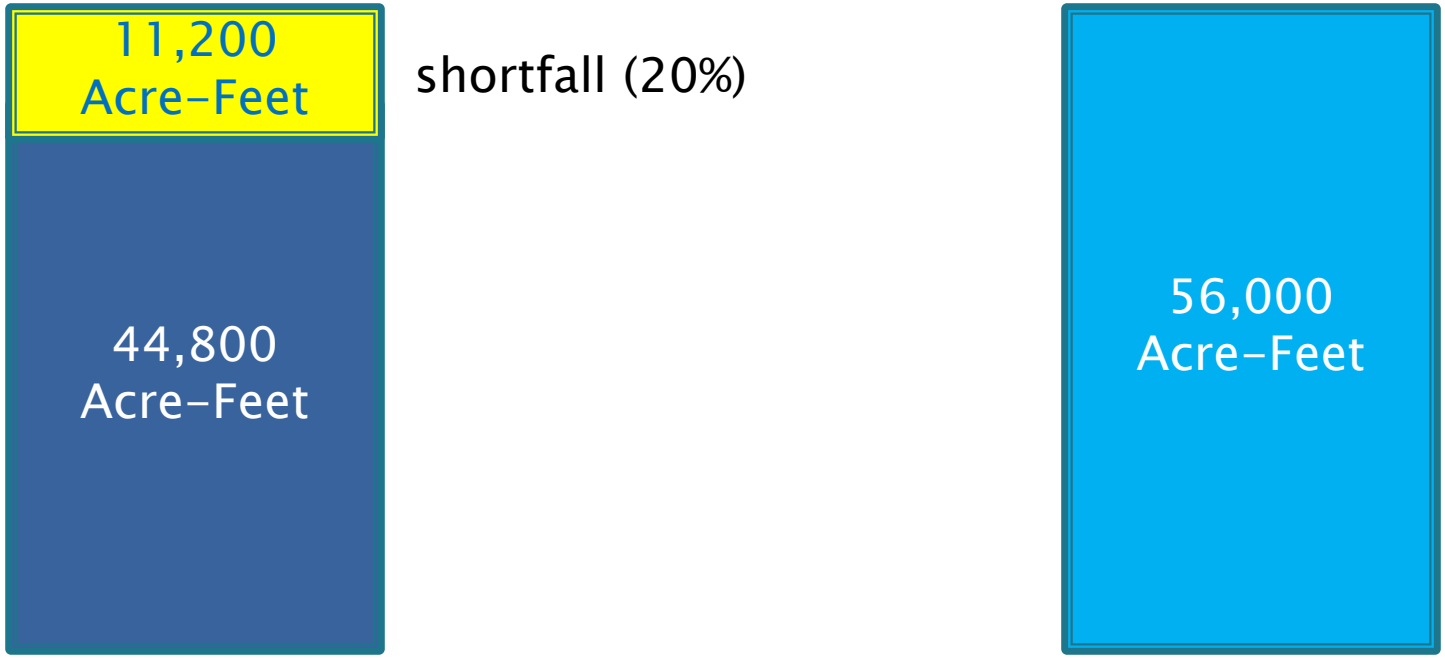
DRAFT 11/10/12

SDCWA Regional Demand : Scenario Two

Stage 4 MWD Shortage (20%)

Imported Water
$41,216,000

Desalinated Water
$114,428,000



DRAFT 11/10/12

SDCWA Regional Demand : Scenario Three

Stage 4 MWD Shortage (20%)/pay penalty rates

Imported Water
$53,580,800

4,480 shortfall (8%)

6,720* penalty

Desalinated Water
$114,428,000

* 15% of 44,800

DRAFT 11/10/12

Cost of Increased Reliability from Desalination (per acre-foot)

- Scenario One: no increase in reliability

  = $62,908,000 (insurance premium)

- Scenario Two: $\frac{\$114,428,000 - \$41,216,000}{11,200 \text{ acre-feet}}$

  = $6537 per acre-foot

- Scenario Three: $\frac{\$114,428,000 - \$53,580,800}{4,480 \text{ acre-feet}}$

  = $13,582 per acre-foot

DRAFT 11/10/12

San Diego Water Resource Comparisons

- **11,200 acre-feet is:**
  - Less than 2 % of regional demand
  - About 6 % of in-region emergency storage
  - Perhaps a quarter of the region's unaccounted water losses
  - Well within the region's short-term conservation capabilities (based upon past SDCWA campaigns)