



Revised

# Poseidon Resources Huntington Beach Seawater Desalination Project

May 14, 2015



# Term Sheet



# Purpose of a Term Sheet

- There are different ways OCWD could partner with Poseidon
- Term Sheet defines the overall structure of the partnership
- Used as the basis to negotiate a final water purchase agreement
- If approved staff would develop an actual project for the Board to consider



## Term Sheet Details

- Poseidon owns, permits, designs, finances, constructs and operates the desalination treatment plant
- OCWD would purchase the plant water
- OCWD owns, permits, designs, finances, constructs and operates the necessary distribution facilities to transmit the water to the end users
- OCWD would find end users for water and/or use water to recharge the groundwater basin



## Term Sheet Details

- OCWD would pay Poseidon the MWD treated full service rate (\*) plus an additional premium (to be negotiated).
- Premium initially starts at up to 20% of the MWD rate
  - Up to 20% - First ten year period
  - Up to 15% - Second ten year period
  - Up to 10% - Third ten year period
  - Up to 5% - Fourth ten year period
  - 0% - Fifth ten year period

(\*) including an allowance for the MWD readiness to serve and capacity charges



## Term Sheet Details

- Starting with the fifteenth (15) year of operation and every five years thereafter, the premium amount will be reviewed and adjusted down if Poseidon is receiving an economic return above an agreed upon amount
- Poseidon guaranteed approximately 3% (to be negotiated) minimum MWD annual rate increases



## Term Sheet Year 1 Cost Figures

• Current MWD Volumetric Rate	\$923/af
• Additional RTS & CC (approximation)	<u>\$80/af</u>
• Sub Total	\$1,003/af
• Maximum possible 20% premium	\$201/af
• MWD LRP (for 15 years)	<u>\$475/af</u>
• <b>Sub Total - Paid to Poseidon</b>	<b>\$1,679/af</b>
• Distribution Cost Estimate (\$100/af – \$250/af)	<u>\$175/af</u>
• Total cost of water	\$1,854/af
• 2014 CEC Cost Estimate	1,931/af



## Term Sheet Details

- MWD LRP subsidy must be obtained
- OCWD can take possession of the treatment plant at the end of the contract for \$1
- Poseidon would provide water at an agreed to quality
- The Term Sheet is not definitive
- Does not legally commit either party to any future actions.
- Practically commits the District to fully consider the project and work towards developing a Water Purchase Contract





## Major Recent Changes to the Term Sheet

1. Demonstrate 90 days of successful operation with Carlsbad plant
2. Take advantage and share technological advances
3. OCWD can purchase plant after 30 years
4. Premiums (above the MWD rate) are negotiated
5. Ceiling for OCWD purchase price
6. Floor for minimum MWD rate increases



## Term Sheet Structure Advantages

- Pushes more risk on to Poseidon
- Keeps relationship simple and easy to understand
- Avoid complicated Public Private Partnership deal
- Poseidon continues handling Coastal Commission and State Water Quality Control Board issues
- Should be easier for OCWD to work through distribution institutional issues
- OCWD can apply for grant money



# Poseidon Risk

- New regulations once plant is operational
- Increase to energy rates
- Increase to interest rates / plant financing
- Construction change orders
- Permitting the plant



## Risk OCWD Would Need To Manage

- Have to construct distribution system improvements on time to match completion of the treatment plant
- Take or Pay arrangement
- Avoid a pipeline to no where scenario



# Ocean Desalination Citizen Advisory Committee



# Ocean Desalination Citizens Advisory Committee

- Facilitator Paul Brown
- Four meetings
- Documents
  - Paul Brown report
  - Summary of each Committee members key input to the Board
  - Question and Answer document
  - Meeting summaries



## Committee Key Findings

- Concerns with tying what OCWD pays to the MWD rate
  - Unrelated to Poseidon's actual cost
  - Don't want excessive profit if MWD rates increase dramatically
  - Future technology could lower Poseidon's cost
  - Would low MWD increases jeopardize the project's financial integrity
  - Approach could work but need safeguards



## Committee Key Findings

- Questioned a 50 year contract life - too long
  - Need periodic reviews and adjustments
    - Technology
    - Excessive MWD rate increases
- Could OCWD meet the deadline to construct the distribution facilities and avoid liquidated damages?
- Will OCWD be able to find customers for the water?
- What are alternatives to the project
- Expand/Continue the role of the Committee





# Moving Forward If the Board Approves the Term Sheet



# Determine How Water Will Be Distributed and the Cost

- How much water can OCWD take to recharge the Groundwater Basin?
- Which cities and retail water districts will sign-up to receive water?
  - Meet with cities and retail water districts
  - Need firm commitments - Develop and process some type of MOU
  - Develop a pricing structure – what will OCWD sell the water for?
- Work with MWDOC
- Work with City of Huntington Beach
- Institutional Issues
- CEQA
- Outside consulting assistance up to \$60,000



# Potential Water Quality Integration Issues

Poseidon water will meet all state and federal drinking water requirements - However the water will have a different chemistry as compared with imported or groundwater

- Blending a third source of water in a Producers distribution system
- Injection of RO water – ensure we don't mobilize elements naturally occurring in the aquifer formations
- GWRS Pipeline type issues
- Potential corrosion issues
- Disinfectant By-products formation
- Water will travel in different pipe materials in different directions
- MWD requirements to use EOCFD#2
- Watereuse Research Foundation - \$200k Carlsbad Study
- Outside consulting assistance up to \$40,000



# Reliability Analysis

- Assess reliability of MWD imported water system
- Review of assumptions behind the MWD Integrated Resources Plan
- What other projects/programs are available?
- Estimated cost of not having sufficient water supplies
- Review of SDCWA reliability analysis
- Utilize recent MWDOC OC Reliability Study
- Outside consulting assistance up to \$70,000



# Financial Analysis

- Review Poseidon's plan of finance and debt/equity percentage
- Can Poseidon finance the project under the revenues provided in the Term Sheet
- Ensure Poseidon is not making an excessive return on investment
- Provide an Opinion/Assessment of MWD rate projections – past and future
- Outside consulting assistance up to \$60,000

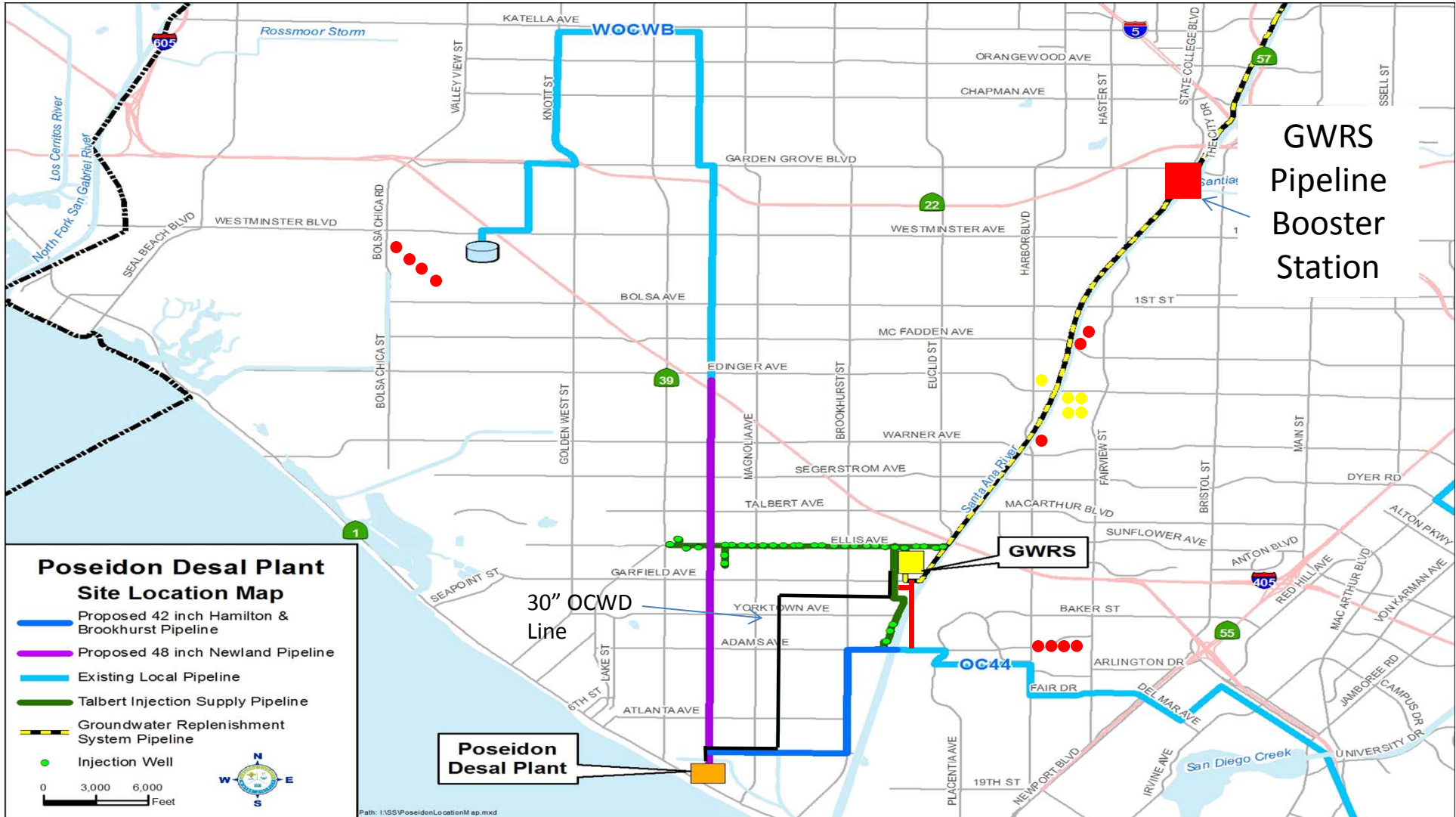


# Recommendation

- Approve the Term Sheet
- Establish a project budget of \$230,000
- Authorize staff to hire consultants for project issues relating to distributing the project water, water quality, considering alternative supplies and financial assistance and execute the necessary contracts



End of Presentation



**Poseidon Desal Plant Site Location Map**

- Proposed 42 inch Hamilton & Brookhurst Pipeline
- Proposed 48 inch Newland Pipeline
- Existing Local Pipeline
- Talbert Injection Supply Pipeline
- Groundwater Replenishment System Pipeline

● Injection Well

0 3,000 6,000 Feet

**GWRS Pipeline Booster Station**

**Poseidon Desal Plant**

**30" OCWD Line**

**GWRS**

**OG44**

Path: I:\SSV\PoseidonLocationMap.mxd





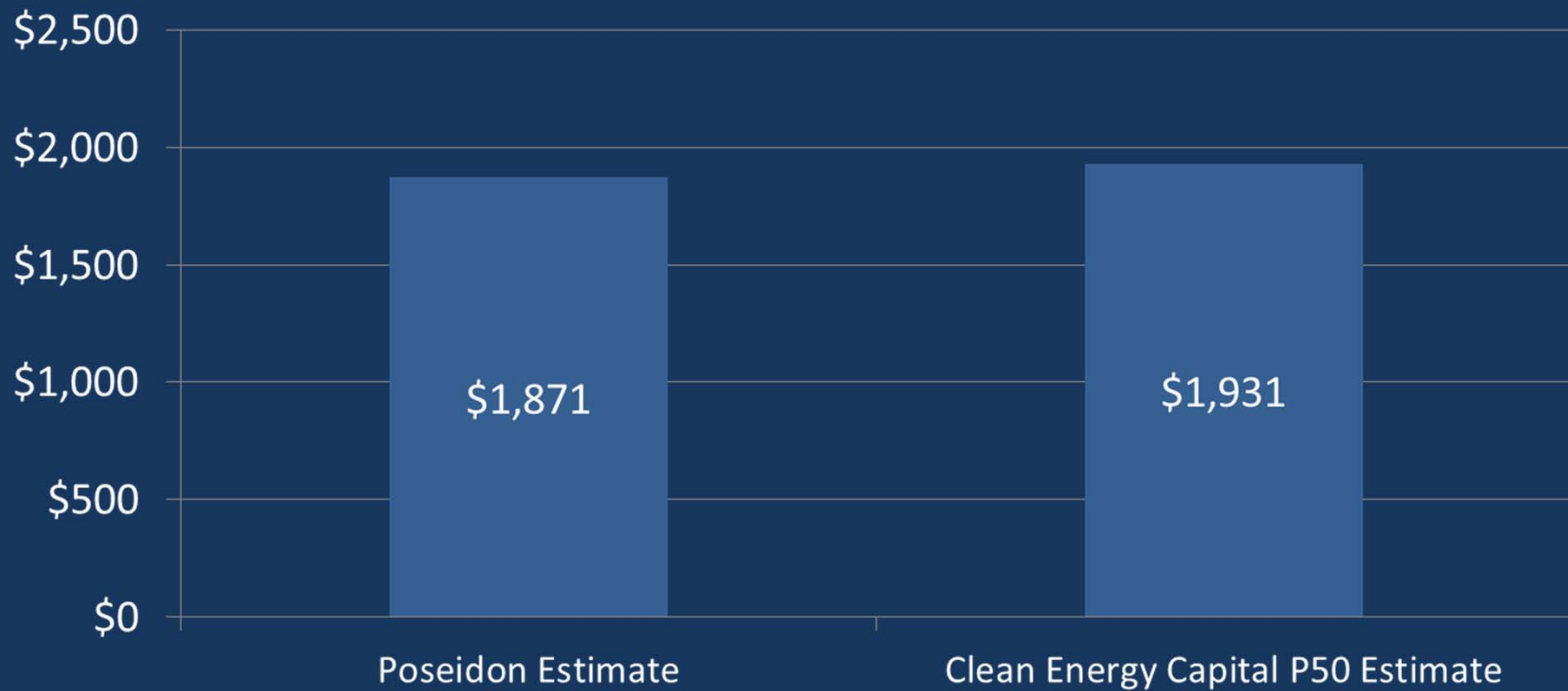
# Issues Prior to Considering a Water Purchase Contract

- How to distribute the water
- OCWD financial analysis
- MWD reliability analysis
- Alternative projects
- Develop retail pricing structure
- Retail purchase commitments
- Any water quality issues
- CEQA
- Carlsbad project review
- Review of Poseidon Finances
- Review of Poseidon's design, cost estimates and operation and maintenance plans.

Issues that would be studied within the context of the provided Term Sheet



# 2014 Project Unit Cost Estimate





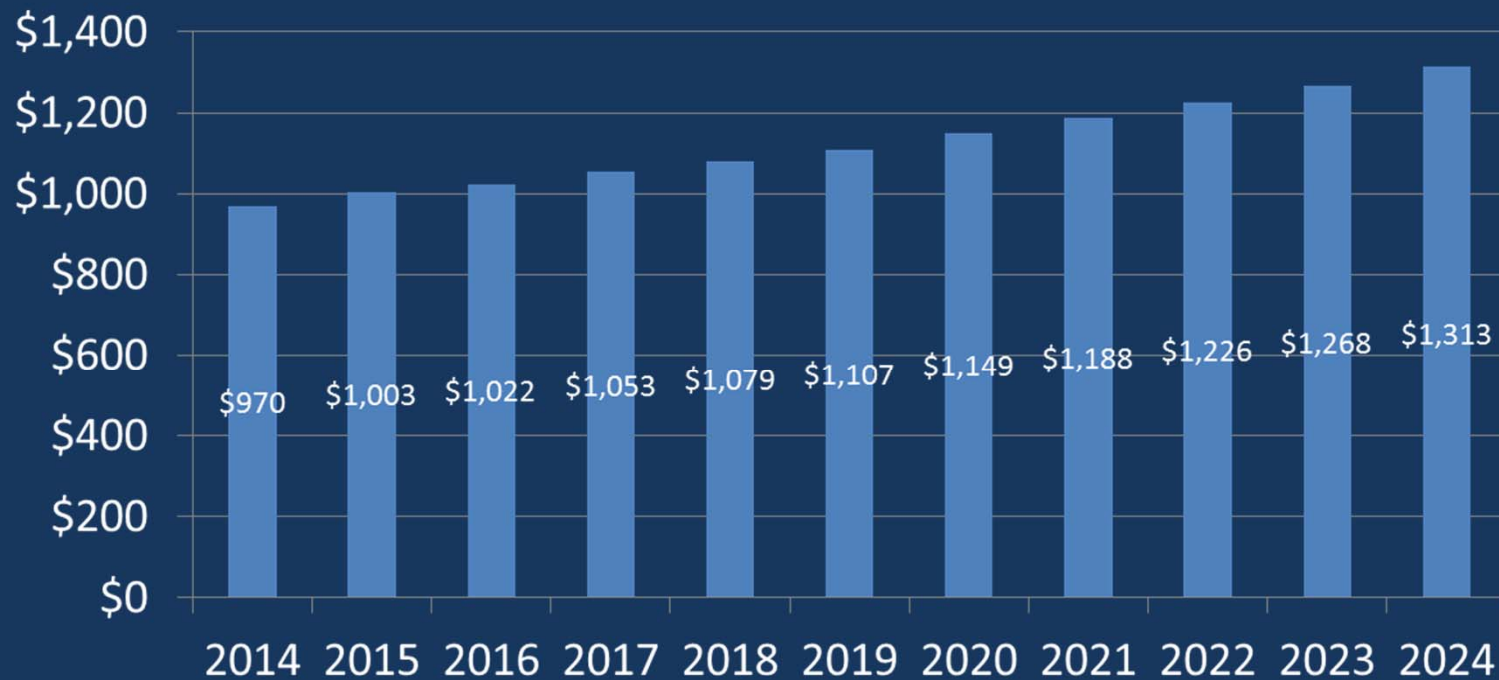
## MWD Rates

- Historically increased at over 6% annually
  - Built out MWD import system
  - Ozone retrofit of treatment plants
  - Greatly increased storage capability
- 2014 - 3% average annual increase projected for next 10 years
- MWD future could be more of a maintenance mode?



# April 2014 MWD Ten Year Rate Forecast

3% Average Annual Rate Increase over 10 years



Rates Include additional \$80/af for the Readiness To Serve and Capacity Charges



## MWD Readiness To Serve Charge

- MWD is collecting \$155.5 million in RTS charges from its member agencies
- Based upon average MWD deliveries to its member agencies
- MWDOC Share - ~\$21 million in FY15-16
- After Property Tax Standby charge - \$12.9 million
- Total RTS Charges collected by MWDOC from its member agencies in FY15-16 - \$12,939,246
- MWDOC Average Water Sales – 240,000 acre-feet
- Average cost = \$54/acre-feet



## MWD Capacity Charge

- MWD is collecting \$11,100/cfs x summer time peak delivery amount.
- MWDOC is for a delivery amount of 401.1 cfs
- MWDOC paying \$4,452,210 in CY 2015
- MWDOC Average Water Sales over past 10 years – 240,000 acre-feet
- Average cost = \$19/acre-feet

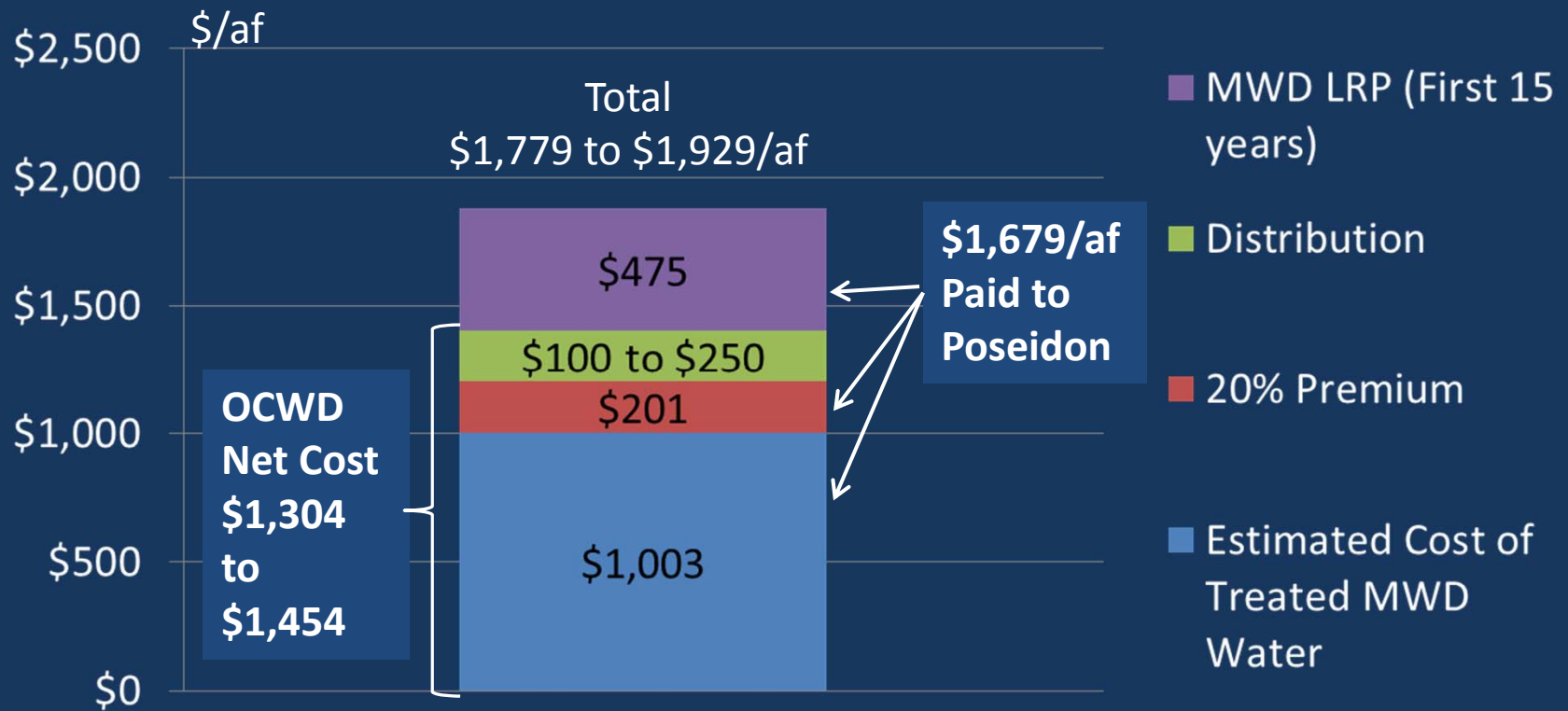


# 2014 Estimated Financial Impacts

	No MWD Subsidy or Savings	With MWD \$475/af Subsidy
Estimated 2014 Unit Cost of Water	\$1,931/af	<b>\$1,456/af</b>
2014 MWD Treated Full Service Rate (Includes \$80/af for RTS and CC)	<u>\$970/af</u>	<u><b>\$970/af</b></u>
Difference	\$961/af	<b>\$486/af</b>
Total Additional Area Water Supply Cost (Currently \$242 M/yr)	\$54 M	<b>\$27 M</b>
Approximate Replenishment Assessment Increase (320,000 afy of groundwater pumping)	\$169/af	<b>\$84/af</b>
Approximate necessary one-time increase to retail monthly water rates	11%	<b>5.6%</b>
Approximate increase to a typical \$50/month residential water bill	\$5.50	<b>\$2.80</b>



# Year 1 Cost of Water

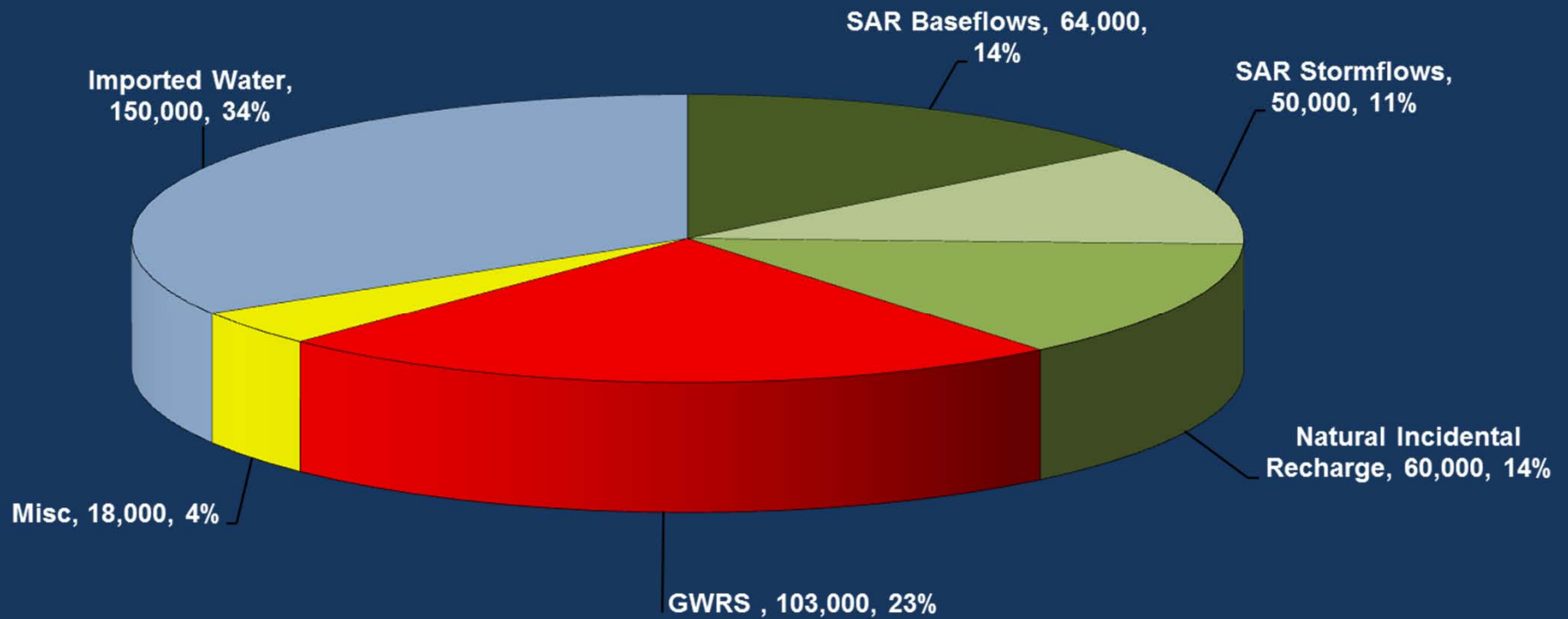






# Current OCWD Service Territory Water Supply Sources

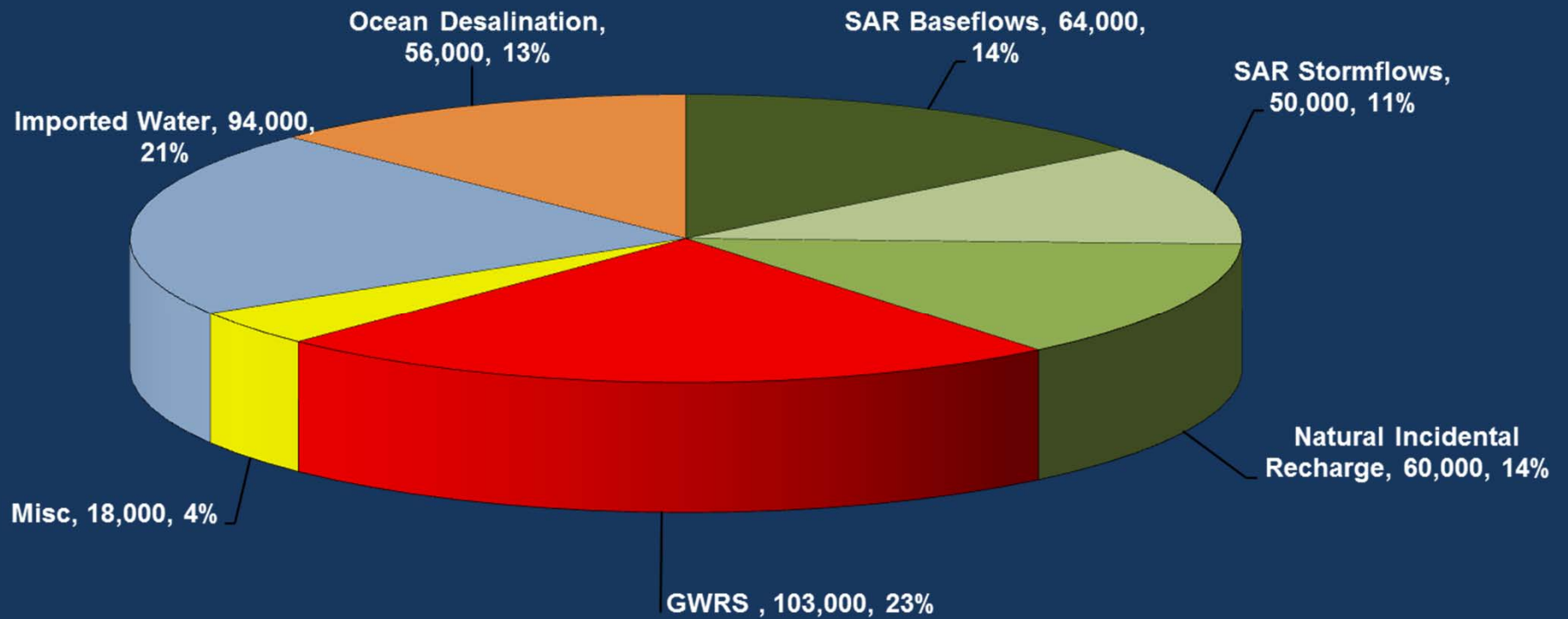
Total Water Demands 445,000 afy





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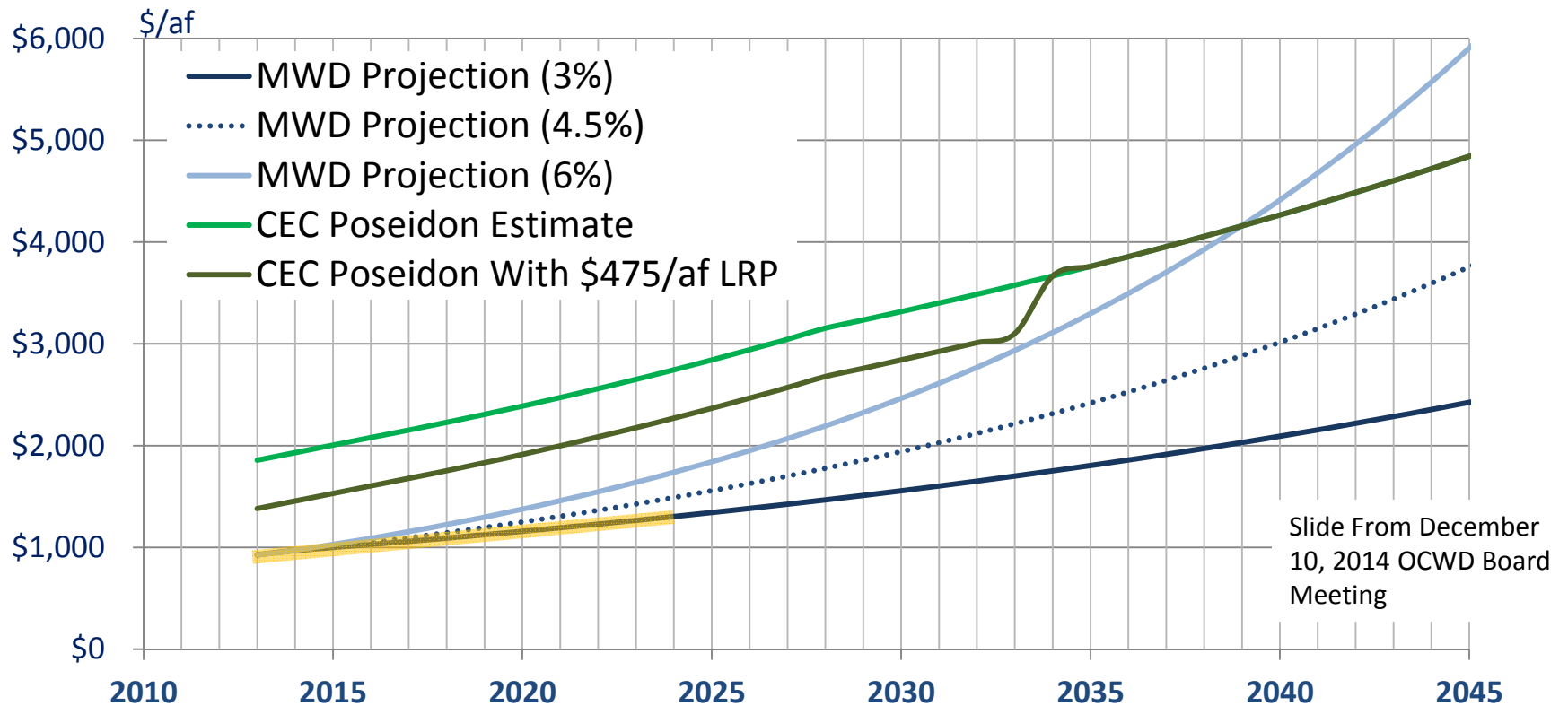
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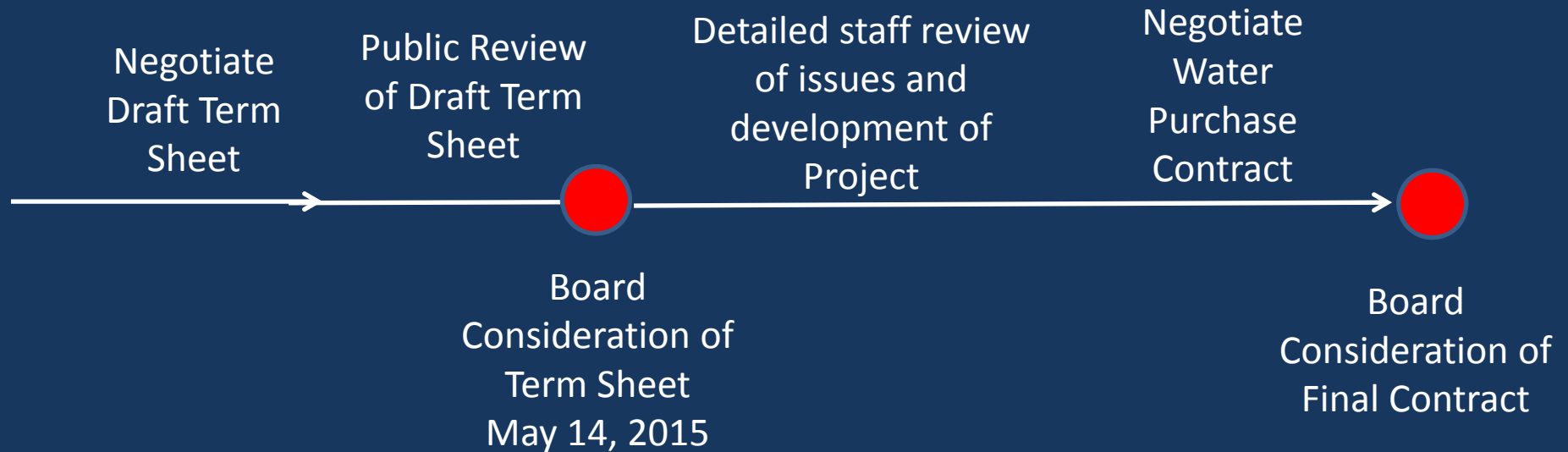
# Proposed Project Water Supply Unit Cost vs MWD

## CEC Estimate minus MWD LRP Subsidies





# Term Sheet Water Purchase Contract Overall Process





## March 18, 2015 Board Action

- Term Sheet was provided to the local community for review
- Board approved meeting with the Ocean Desalination Citizens Advisory Committee
  - Four meetings occurred
  - Focused on the Term Sheet
- Staff has continued meeting/negotiating with Poseidon - some changes in Term Sheet



# Director Appointments to Ocean Desalination Citizens Advisory Committee

	Member	Member	Alternate
Anthony	Garry Brown	Diana Carey	Debbie Cook
Bilodeau	Steve Aceti	Roger Butow	Richard Bannister
Dewane	Allen Bernstein	Patrick Brenden	Dallas Weaver
Flory	Jerry King	Joe Geever	Kelly Rowe
Green	Shirley Detloff	George Mason	Frank LoGrasso
Nguyen	Steve Sullivan	Duy Nguyen	Brenda Fizer
Reyna	John O'Neill	Carl Benninger	Keith Bohr
Sheldon	Edwin Laird	Michael Rudinica	
Sidhu	Susan Fasell	Gail Eastman	Lon Cahill
Yoh	Stacey Berry	Dan Mole	Dr. Wayne Miller



End