

An aerial photograph showing the Carlsbad Seawater Desalination Plant. The plant features several large circular tanks, a central processing building, and various pipes and structures. To the left, a multi-lane highway runs parallel to the ocean, with waves crashing against a breakwater. The background shows a residential area with houses and trees. The text "Incorporating Carlsbad Seawater Desalination Project into SDCWA Rates and Charges" is overlaid in a white box in the upper left corner.

Incorporating Carlsbad Seawater Desalination Project into SDCWA Rates and Charges

**Special Meeting Water Planning Committee
April 19, 2012**

Incorporating Carlsbad Desalination Project into Rates & Charges

1. Overview of Cost of Service and Water Authority rates and charges
2. Identifying Functional Benefits of Carlsbad Desalination
3. Alternatives for allocating Carlsbad Desalination Costs to rates and charges
4. Committee Discussion
5. Next Steps

Incorporating Carlsbad Desalination Project into Water Authority Rates and Charges

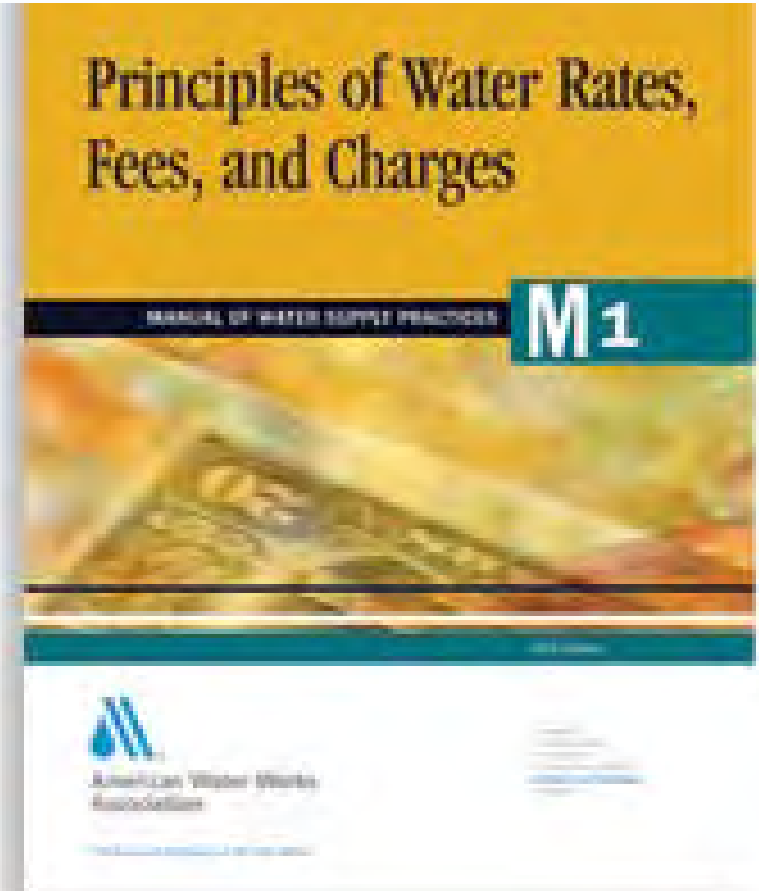
- Agreement represents long term financial commitment by Water Authority and its member agencies which results in a higher cost supply
 - Improves regional water supply reliability
 - 30 year term and >\$100 M annually
 - Water Authority required to “take and pay if delivered”
- All member agencies benefit from access to a more reliable supply
 - Base load users receiving regular deliveries
 - Intermittent users receiving standby benefit of a new supply being available if needed

Benefits of the Carlsbad Desalination Project and Allocation of Costs

- Key question- how to allocate cost of Carlsbad desalination to ensure long-term fiscal sustainability for Water Authority and ratepayer equity for member agencies
 - What are the benefits of this new supply?
 - Who benefits from the new supply and how do they benefit?
 - Prevent free-ridership
- What are the options to collect revenue from beneficiaries?
 - Volumetric charges
 - Fixed charges
 - Growth Charges
 - Other?

Cost of Service Definition

- Cost of service (COS) is a “methodical process by which revenue requirements are used to generate a system of fair and equitable costs in proportion to the service received for each user class”¹
- *“Costs are allocated in two steps: first to appropriate cost components and then to customers”*²
- Allocation of expenses to customers is based on a reasonable relationship to benefits the customers receive from each service function.

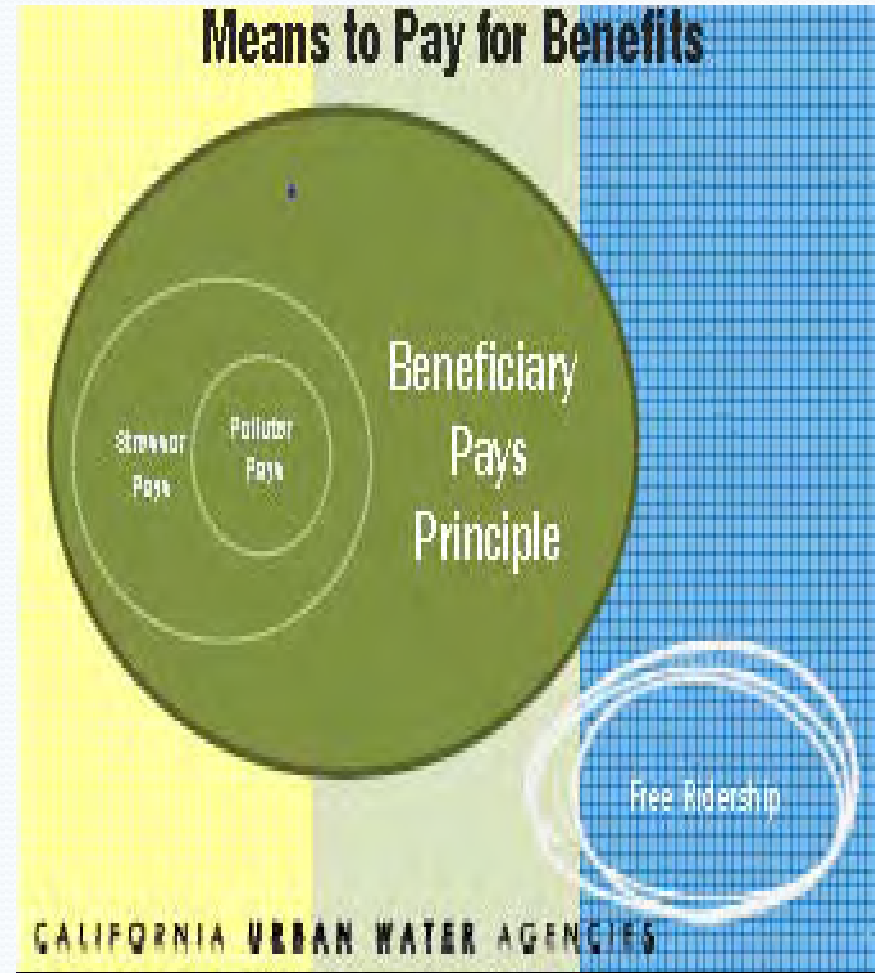


¹ City of San Diego Cost of Service Study

² AWWA M 1 Manual

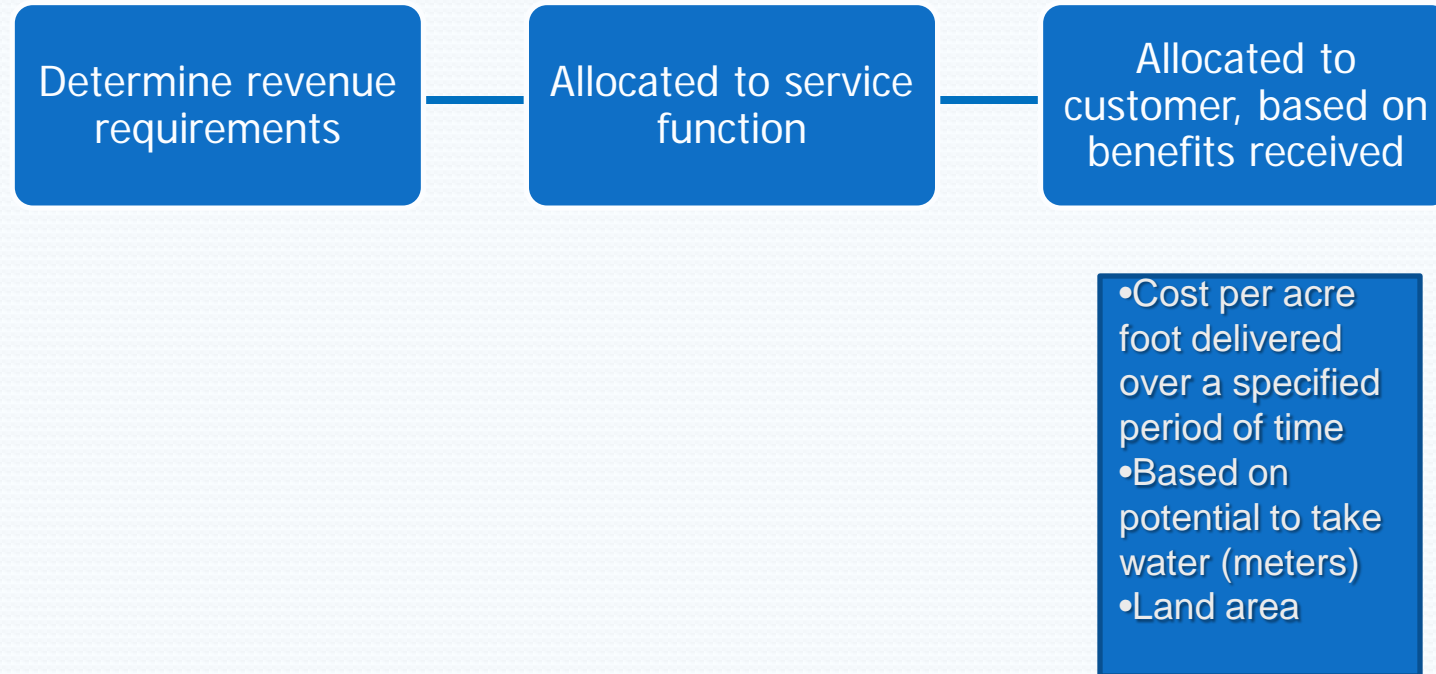
Beneficiaries Pay Principle

- Identifies full range of beneficiaries, allocates benefits, and provides cost recovery mechanisms
- Inclusive of all beneficiaries
- A clear nexus between charges and benefits received
- Specificity, based on defined projects and costs
- Transparency of benefit and cost allocation decisions, understandable to beneficiaries
- Addresses the issue of free ridership



CUWA Public Investment White Paper (Oct. 2011)

3 Steps of Cost of Service



Water Authority Rates and Charges

Cost Allocation to Service Function

Service Function	Cost Allocation	What makes up service category
Supply	Costs water purchases (MWD, IID, canal lining, (<i>Desalination</i>))	Water purchase price, transportation charges, debt service capital facilities
Treatment	MWD, Twin Oaks WTP and other in-region treatment facility costs	MWD treatment surcharge, operational costs, debt service
Customer Service	Costs to support the functioning of the Water Authority and regional planning	Operating budget, debt service
Transportation	Costs associated with the backbone conveyance of water	Maintenance costs, debt service on capital
Storage	ESP, CSP and associated conveyance	Primarily debt service on capital facilities, minor operating costs

Water Authority Rates and Charges Allocation To Customers

Charge	Method of Collection	Use of Funds
Non-Commodity Charges		
Property tax	Share of County property tax assessment	Unrestricted
Stand-By Charges	\$10 per acre or parcel	Capital facilities
Capacity Charges	New meter charges (System - \$4,326/ME) (Treatment - \$166/ME)	Capital facilities
IAC Charge	Fee per meter equivalent	Unrestricted

Water Authority Rates and Charges

Allocation To Customers

Charge	Method of Collection	Use of Funds
Water Sales Revenues		
Melded Supply Charge	Per acre foot of water purchased	Purchase of water and related transportation, debt service
Transportation Charge	Per acre foot of water purchased	Operations, maintenance, debt service on pipelines
Customer Service	Fixed charge allocated based upon share of 3-year average deliveries	Operations and debt service
Storage	Fixed Charge based upon share of 3-year average M&I deliveries	Debt service for ESP/CSP facilities, O&M
Melded Treatment	Per acre foot of water purchased	Water treatment debt service, O&M, MWD treatment charges



Desalination and Rates & Charges

Previous Board Direction

- Adoption of 2004 Master Plan and Member Agency Rate Impact Review Committee (MARIRC) Findings
- Approval of 2004 Long Range Financing Plan (LRFP)
 - Established that raw water customers not be charged the melded treated water surcharge as part of the supply cost of desalination
 - Monetized treatment benefit as equal to melded treatment surcharge
 - Identified beneficiaries as treated water customers
- Approval of 2005 Fixed Revenue Study
 - Established a *New Supply Development Charge* for desalination project
 - Consistent with Board policy that growth pays its fair share
 - Charge not imposed without Board approved project

Desalination and Rates & Charges

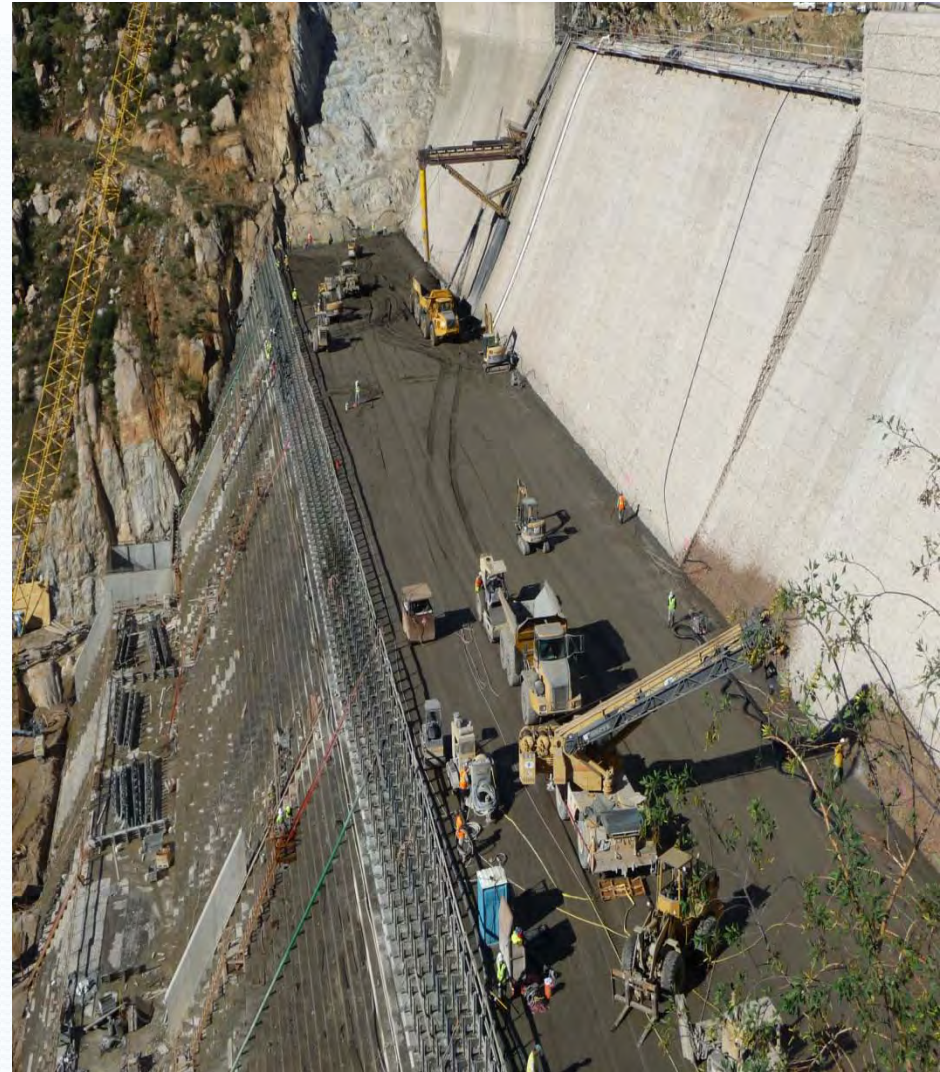
Previous Board Direction

- Adoption of Board Policies for Wheeling Local Supplies by Member Agencies (2009)
 - Established that new desalinated supplies were highly reliable and offset equivalent need for Water Authority service from storage
 - ESP/CSP
 - Established that desalinated water transported through the Water Authority's system would not be subject to the storage charge
 - Set the monetary value of the storage benefit as the amount of storage charge paid by a member agency
 - Credit for storage benefit did not differentiate between emergency storage or carryover storage

Storage Benefit of Desalination

Emergency Water Service

- 75% level of service during 2mo/6mo emergency
 - Maintain regional economy
 - complete or partial shut down of imported water system
 - Sized assuming availability of reliable member agency supplies
 - Planning assumption did not include seawater desalination
- Maximum Emergency Storage Pool= 90,000 AF



Storage Benefit of Desalination

Desalination Enhances

Emergency Water Service

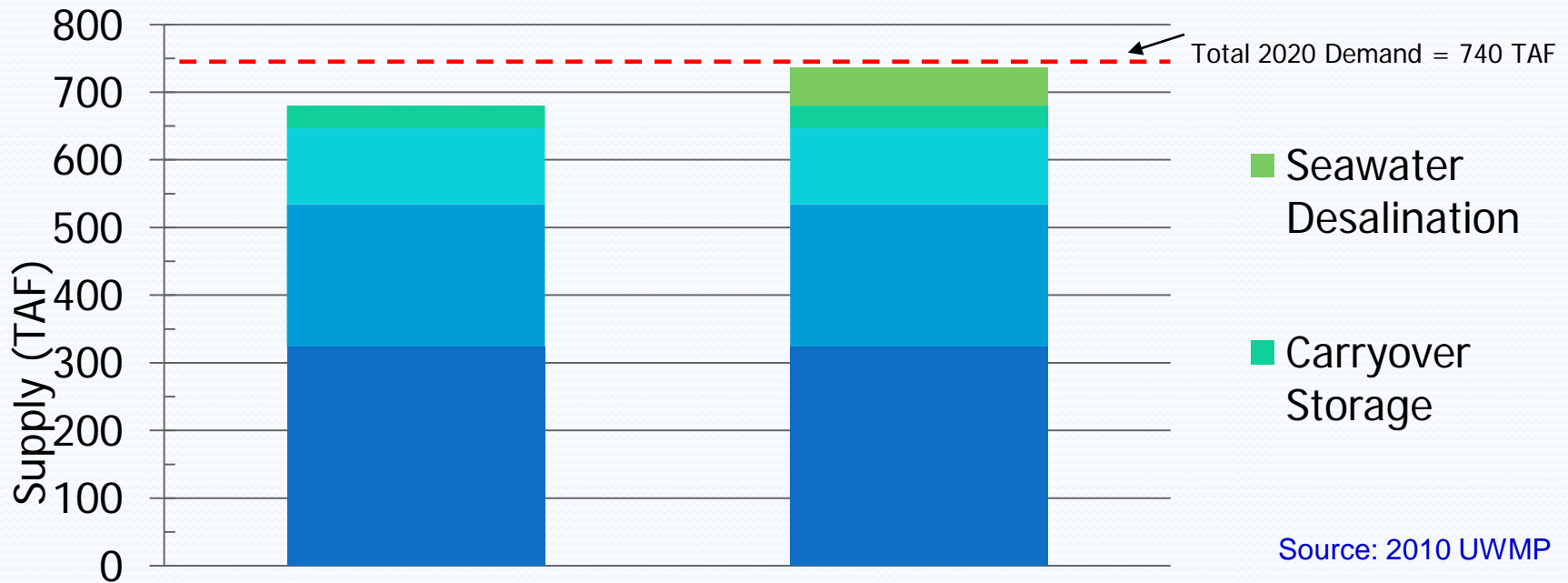
- 2 months of Desalinated Water= 10,000 AF
- 6 months of Desalinated Water= 30,000 AF
- Increases 2 month Emergency Water Service by 11%
- Increases 6 month Emergency Water Service by 33%



Storage Benefit of Desalination

Carryover Storage Service

- 100,000 AF utilized over 3 year period per 2010 UWMP
- 3 year production of desalinated water = 168,000 AF
- Increases effectiveness of Carryover Storage by 68%
- Reduces carry over storage demand by total desal production

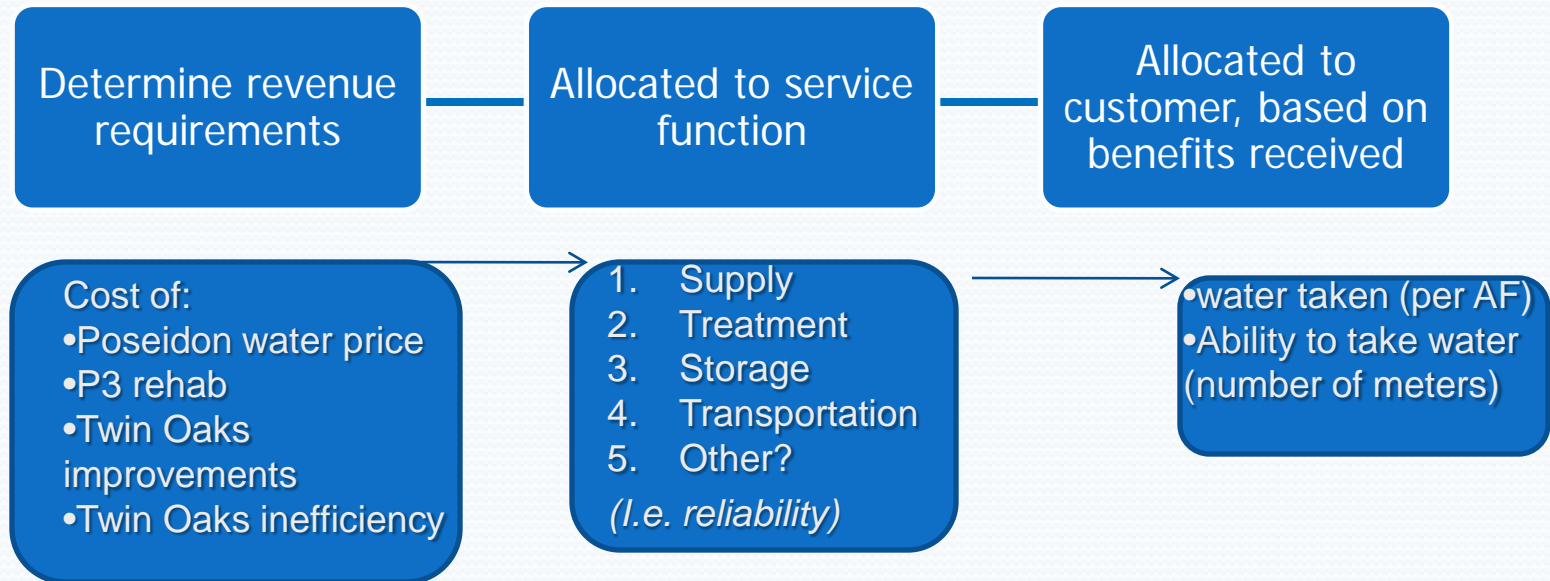


Source: 2010 UWMP

Allocating Carlsbad Desalination Project Costs into Water Authority Service Categories

Service Category	Carlsbad Desalination	Cost of Service Benefit Provided
Supply	Yes	New highly reliable supply
Treatment	Yes	Process results in new supply that meets all federal and state drinking water requirements
Customer Service	No	None
Transportation	Yes	Uses facilities owned by Water Authority
Storage	Yes	Enhances Level of Service from ESP and CSP and offsets a need to provide storage service

3 Steps of Cost of Service Applied to Carlsbad Desalination



Key Considerations

In applying the principles of *Cost of Service* and *Beneficiaries Pay* to Carlsbad Desalination

- Multiple service categories benefit from the production of desalinated water
- Revenue requirements for each category should be collected through the current mix of fixed and commodity charges
 - Best reflects beneficiaries and avoids free ridership
- Reliability is a key driver of desalination and a primary benefit
 - Consider a potential service category for reliability

Next Steps

- Staff will continue to refine costs and allocation methodology
- Further refinements will be made to provide alternatives
- Staff will work with the Desalination Advisory Group and seek input from the Member Agency Managers
- Return to Water Planning Committee
 - Seek Board input on alternatives
- Request Board consideration of preferred alternative
 - Prior to consideration of a final agreement with Poseidon

Questions?