Potential Triggers Associated with the San Diego County Water Authority’s Water Shortage and Drought Response Plan Stages and Model Drought Response Levels

Water Planning Committee
February 27, 2014

Presentation by:
Dana Friehauf, Acting Water Resources Manager
Water Authority
Drought Response Tools

- Water Shortage and Drought Response Plan
  - Regional Management Actions
  - Coordination with Member Agency Managers

- Model Drought Response Ordinance
  - Consumer Demand Reduction Measures
  - Member Agency’s Drought Response Ordinances
Elements of the Water Authority’s Water Shortage and Drought Response Plan

Water Shortage and Drought Response Plan

- Drought Response Matrix
- Communication Strategy
- Allocation Methodology
## Water Shortage and Drought Response Plan

### Drought Response Matrix – Firm Demands

<table>
<thead>
<tr>
<th>POTENTIAL SDCWA DROUGHT ACTIONS</th>
<th>REGIONAL STAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voluntary Supply Management&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Ongoing BMP Implementation</td>
<td>X</td>
</tr>
<tr>
<td>Communication Strategy</td>
<td>X</td>
</tr>
<tr>
<td>Monitoring supply conditions and storage levels</td>
<td>X</td>
</tr>
<tr>
<td>Call for increased voluntary conservation</td>
<td>X</td>
</tr>
<tr>
<td>Put in and take from SDCWA Carryover Storage</td>
<td>X</td>
</tr>
<tr>
<td>Secure transfer option contracts</td>
<td>X</td>
</tr>
<tr>
<td>Buy phase 1 spot transfers (cost at or below Tier 2 rate)</td>
<td>X</td>
</tr>
<tr>
<td>Call transfer options</td>
<td></td>
</tr>
<tr>
<td>Buy phase 2 spot transfers (cost at or below Tier 2 rate)</td>
<td>X</td>
</tr>
<tr>
<td>Implement allocation methodology</td>
<td></td>
</tr>
<tr>
<td>Utilize ESP Supplies</td>
<td></td>
</tr>
</tbody>
</table>

<sup>1</sup>Activated February 2014
# Water Shortage and Drought Response Plan

## Regional Stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Potential Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1&lt;br&gt;Voluntary Supply Management</td>
<td>MWD has been experiencing shortages in its imported water supply and is withdrawing water from storage due to drought conditions to meet demands</td>
</tr>
<tr>
<td>Stage 2&lt;br&gt;Supply Enhancement</td>
<td>Entered into a prolonged drought where securing supplemental dry-year supplies is warranted to minimize impacts due to potential or actual shortages</td>
</tr>
<tr>
<td>Stage 3&lt;br&gt;Mandatory Cutbacks</td>
<td>MWD is allocating supplies to its member agencies and implementation of the Water Authority’s allocation methodology is required</td>
</tr>
</tbody>
</table>
## Water Authority Model Ordinance
### Progressive Severity of Restrictions

<table>
<thead>
<tr>
<th>Level</th>
<th>Key Measures</th>
</tr>
</thead>
</table>
| 1 Voluntary | Water waste prohibitions  
Time of day watering  
Eliminate inefficient landscape watering (no runoff) |
| 2 Mandatory | Level 1 restrictions apply  
Limit watering time (10 min/station)  
Assigned watering days (3 days – summer /1 day – winter) |
| 3 Mandatory | Levels 1,2 restrictions apply  
Assigned watering days (2 days – summer/1 day – winter)  
Restriction on issuance of meters  
Establish customer water allocation |
| 4 Mandatory | Levels 1,2,3 restrictions apply  
Prohibit landscape irrigation (with some exceptions) |
## Model Drought Response Ordinance Levels

<table>
<thead>
<tr>
<th>Drought Response Levels</th>
<th>Voluntary or Mandatory Restrictions</th>
<th>Potential Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Drought Watch</td>
<td>Voluntary</td>
</tr>
<tr>
<td>2</td>
<td>Drought Alert</td>
<td>Mandatory Up to 20%</td>
</tr>
<tr>
<td>3</td>
<td>Drought Critical</td>
<td>Mandatory Up to 40%</td>
</tr>
<tr>
<td>4</td>
<td>Drought Emergency</td>
<td>Mandatory Above 40%</td>
</tr>
</tbody>
</table>
# Plan Stages and Model Ordinance Levels
## 2007-2011 Shortage Management Period

<table>
<thead>
<tr>
<th>Date</th>
<th>Stage/Level</th>
<th>Summary of Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2007</td>
<td>Stage 1</td>
<td>MWD drawing water from storage due to drought to meet demands</td>
</tr>
<tr>
<td>Dec 2007</td>
<td>Stage 2</td>
<td>Court order reducing SWP deliveries further to protect Delta Smelt</td>
</tr>
<tr>
<td>March 2008</td>
<td>Board</td>
<td>approves Model Drought Response Ordinance</td>
</tr>
<tr>
<td>April 2008</td>
<td>Level 1</td>
<td>Probability of shortages from MWD if dry conditions continue</td>
</tr>
<tr>
<td>April 2009</td>
<td>Stage 3 and Level 2</td>
<td>MWD approves allocating supplies starting FY 2010. Water Authority to begin allocating supplies to its member agencies in FY 2010.</td>
</tr>
<tr>
<td>April 2011</td>
<td></td>
<td>Deactivated Plan and drought response levels due to wet conditions in water year 2011</td>
</tr>
</tbody>
</table>
## Correlation between Plan Stages and Model Ordinance Levels

<table>
<thead>
<tr>
<th>Plan Stage</th>
<th>Potential Drought Response Level</th>
<th>Use Restrictions</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Stage 1</td>
<td>1- Drought Watch</td>
<td>Voluntary</td>
</tr>
<tr>
<td>Stage 2</td>
<td>1- Drought Watch</td>
<td>Voluntary</td>
</tr>
<tr>
<td></td>
<td>2- Drought Alert</td>
<td>Mandatory</td>
</tr>
<tr>
<td>Stage 3</td>
<td>2- Drought Alert</td>
<td>Mandatory</td>
</tr>
<tr>
<td></td>
<td>3- Drought Critical</td>
<td>Mandatory</td>
</tr>
<tr>
<td></td>
<td>4- Drought Emergency</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>

*Currently at Stage 1, Level 1*
Current Shortage Management Period

- MWD expects to fully meet imported water demands in 2014
  - Do not anticipate more severe stage/level in 2014

- Closely monitor actions and conditions during 2014
  - Demands, storage levels, supply conditions and MWD actions

- Potentially trigger more severe stage/level if dry period extends into 2015
  - Based on supply outlook, potential or actual shortage cutback level and availability of supplemental dry-year supplies
  - MWD may allocate supplies to preserve remaining storage reserves
State of Emergency in California due to drought proclaimed on January 17, 2014

SWP Table A allocation remains at zero for CY 2014

- Allocation may be updated based on changing conditions

Snowpack conditions

- 3rd snow survey of season on February 27, 2014
- Electronic readings on Feb. 25:
  - Northern California – 13% normal
  - Statewide - 22% normal
Average Water Year Statewide Runoff
(Water Year: Oct 1 – Sept 30)

*Forecasted water year runoff as of February 1, 2014
Reservoir Conditions - Lake Oroville

Lake Oroville Levels: Various Past Water Years and Current Water Year, Ending At Midnight February 24, 2014

Total Reservoir Capacity: 3,538,000 AF

Current Level: 1,389,487.1 AF

Lake Oroville Conditions
(as of Midnight - February 24, 2014)

Reservoir Capacity (TAF)

Current Level: 1,389,487.1 AF

39% (Total Capacity)  57% (Historical Avg.)

Data Updated 02/25/2014 04:45 PM
Colorado River Hydrologic Conditions
February 24, 2014

- Water year 2014 conditions are normal

- Storage in Lake Mead and Powell
  - 2014: 22.1 MAF, 44% Capacity
  - 2013: 25.8 MAF, 51% Capacity

- 45% chance of shortage declaration in 2016, based on January 2014 hydrology
  - Would affect Nevada and Arizona before California
  - MWD’s ability to take reserves from Lake Mead would be restricted
MWD Storage Reserves
End of Year Balances*

Storage use will vary based on actual conditions

Source: February 10, 2014 MWD Water Planning and Stewardship Committee
Water Authority Service Area Local Reservoir Storage as of February Month-End

*Projected 2014 month-end storage based on weekly data of 2/18/14.
Fiscal Year Potable Water Use within Water Authority Service Area

July – February of FY 2014 is 4% more than in FY 2013

Rainfall at Lindbergh Field
January 2013: 60% average
January 2014: 0.5% average

January 2013: 64.6° F
January 2014: 70.5° F
Normal: 65° F

Note: February 2014 water use is estimated.
National Weather Service Outlook
March – May 2014

Precipitation Outlook

Temperature Outlook

Probability of Below

Probability of Above

0.5 MONTH LEAD
VALID MAM 2014
MADE 20 FEB 2014
Current Activity

- Enhanced outreach under way
  - High media interest in drought and conservation
- Developing partnerships
- Advertising
  - Coordinating plans
- Plan and creative development

Feb. 22 - First U-T water-saving installment
Motivate water users to increase conservation

Recognize water users for conservation achievements and support of supply reliability efforts

Raise public understanding of how water agency supply reliability investments are working
Audiences

- General public
  - Homeowners
- Multifamily property owners/managers/HOAs
- Commercial/industrial property managers
- Public officials
- Landscape contractors/suppliers
- Business/civic leaders
- High visibility/high-water-use industries
- Environmental groups
- Agriculture
Key Strategies

- Develop drought response campaign with input/support from member agencies
- Send clear, consistent and understandable message
- Increase frequency of communications
- Coordinate efforts; leverage resources (Water Authority and member agencies)
Campaign Challenges

- Region is now beyond “basic” conservation
- Many may feel they’ve done their part
- Concern about conservation’s impact on rates
- Different conditions here than elsewhere
Other Campaigns

City of Sacramento
(20% mandatory)

Spare the Water SACRAMENTO

Folsom Lake agencies
(Up to 20% mandatory; some ask for no outdoor water use)
Other Campaigns

Roseville
(20% voluntary)

Water Conservation
Necessary Now!
Reduce your water use by 20% today

Healdsburg
(stage 2 mandatory conservation)
Other Campaigns

Sonoma-Marin counties
(up to 25% voluntary)
Other Campaigns

ACWA-DWR: “Californians Don’t Waste”
Key Messages for San Diego Region

- Existing conservation, supply reliability investments are paying off
- Thank you for already doing a great job saving water
- More help needed in response to unprecedented drought conditions
  - Preserve our regional reserves for 2015 if drought persists
  - Saving water helps other California communities
Theme Drivers

Positive

Compelling

Pulling Together

“Continuation”

Adaptable (short-term/long-term)
Timeline

- February/March – Creative and plan development
  - Review/feedback from Joint Public Information Council, member agency managers
- March 27 – Board presentation
- Late March/April – Campaign launch
Bay Delta Conservation Plan: Economic and Financial Risk Assessment to the Water Authority

Imported Water Committee
February 27, 2014

Amy I. Chen, Director of MWD Program
Dan Denham, Acting Director of Colorado River Program
Three key points

1. BDCP is a massive infrastructure project, will take tremendous effort to implement, costs will likely go up

2. How costs are allocated, and who will ultimately commit to pay for the project are vitally important to Water Authority’s ratepayers

3. Water Authority’s region has additional local projects that may be explored to lessen the supply impact, although at a cost, but with more local control
# Cost Estimate and Yield* Summary

<table>
<thead>
<tr>
<th>Capacity</th>
<th>9,000 cfs</th>
<th>6,000 cfs</th>
<th>3,000 cfs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Primary type of conveyance</strong></td>
<td>pipelines/tunnels</td>
<td>pipelines/tunnels</td>
<td>pipelines/tunnels</td>
</tr>
<tr>
<td><strong>Tunnel</strong></td>
<td>Twin</td>
<td>Twin</td>
<td>Twin</td>
</tr>
<tr>
<td><strong>Operations</strong></td>
<td>High Outflow</td>
<td>Low Outflow</td>
<td>High Outflow</td>
</tr>
<tr>
<td><strong>Total Export</strong></td>
<td>4.7 MAF</td>
<td>5.6 MAF</td>
<td>4.5 MAF</td>
</tr>
<tr>
<td><strong>BCDCP Benefits ^b</strong></td>
<td>1.2 MAF</td>
<td>1.7 MAF</td>
<td>1 MAF</td>
</tr>
<tr>
<td><strong>Capital Cost ^c</strong></td>
<td>$14,344M</td>
<td>$13,146M</td>
<td>$10,821M</td>
</tr>
<tr>
<td><strong>O&amp;M Cost ^c, d</strong></td>
<td>$1,456M</td>
<td>$1,311M</td>
<td>$1,118M</td>
</tr>
</tbody>
</table>


^b When compared against “no action” alternative as described in BDCP Chapter 9, Alternative to Take

^c Value expressed in undiscounted 2012 dollars


*Export water yield from the “no action” alternative: 3.5 MAF– 3.9 MAF
Potential Cost Risks

- Project costs: escalation/overruns
- Construction schedule: delays
- Cost allocation:
  - Unclear; Project costs to be shared by SWP and CVP contractors, yet, allocation of cost obligations will not be determined until “near the time that permits are issued for BDCP”
- Financing costs
- Reduced yield from Decision Tree/Adaptive Management
- State and federal funding doesn’t materialize
  - “Funding estimates from state and federal agencies do not represent commitment”
Potential Cost Risks (cont.)

- MWD is the largest SWP contractor
  - How costs are allocated among the contractors critical
  - MWD could be exposed to between 25% to more than half of total BDCP cost
  - Supply benefit hinges on MWD’s ability to capture and store wet-year supply for dry-year use

- Water Authority’s potential share: 25%–37%
  - Based on MWD’s current cost allocation methodology
  - Water supply benefit subject to MWD’s control
    - MWD controls blend of supply to Water Authority
    - MWD determines when supplies are stored and withdrawn
# BDCP Conveyance Alternatives Yields and Costs to Water Authority

<table>
<thead>
<tr>
<th>BDCP Conveyance Alternatives</th>
<th>BDCP Yield MWD</th>
<th>BDCP Yield Water Authority</th>
<th>Total Cost to Water Authority</th>
<th>Additional Common Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>9,000 cfs (proposed action)</td>
<td>302 taf – 428 taf</td>
<td>55 taf - 78 taf</td>
<td>$1,066M – $2,208M</td>
<td>Construction estimate Scheduling delay Financing cost Reduced yield from Decision Tree / adaptive management process</td>
</tr>
<tr>
<td>6,000 cfs</td>
<td>262 taf</td>
<td>48 taf</td>
<td>$911M-1,885M</td>
<td></td>
</tr>
<tr>
<td>3,000 cfs</td>
<td>187 taf</td>
<td>34 taf</td>
<td>$612M-$1,267M</td>
<td></td>
</tr>
</tbody>
</table>

1. Based on average of potential BDCP benefit when compared with “no action” as described in BDCP Chapter 9; yield benefit is shared 55/45 SWP/CVP with MWD getting its Table A allocation
2. Based on Water Authority’s preferential right to MWD water as of 6/30/2013
3. In 2012$, based on cost allocation assumptions described in this memo, with Water Authority paying for 25% of MWD share, based on MWD’s current cost allocation methodology
4. Modeling results for high outflow and low outflow are provided for 9,000 cfs only; export yields for other conveyance capacity options included results from high outflow only.
Local Projects

- To address potential supply gap, a selection of local resources projects were investigated
- Projects were not included in 2010 UWMP as “verifiable projects”

<table>
<thead>
<tr>
<th></th>
<th>Potential Annual Yield</th>
<th>Total Capital Cost to Region</th>
<th>Unit Cost ($/af)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Seawater desal</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>56 taf-168 taf</td>
<td>$1.43B-$3.2B</td>
<td>$2,260-$2,860</td>
</tr>
<tr>
<td><strong>Indirect Potable Reuse</strong>&lt;sup&gt;2&lt;/sup&gt;</td>
<td>93 taf</td>
<td>$2.1B</td>
<td>$2,175-$2,375</td>
</tr>
</tbody>
</table>

<sup>1</sup> Based on cost estimates prepared for proposed Camp Pendleton Seawater Desalination Project (Oct/Nov 2013); unit cost includes annual O&M costs; 30-year amortization @5% assumed

<sup>2</sup> “Gross costs” based on city of San Diego Recycled Water Study (Integrated Reuse Alternatives); does not include any potential avoided wastewater costs or potential offset savings such as grants, or low interest loans; project may be scalable; unit cost includes annual O&M costs; 30-year amortization @5% assumed
Cost Impact Analysis Assumptions

- Scenarios based on contractors paying for conveyance
  - "Low" scenario assumes cost share between SWP and CVP of 55 percent/45 percent, respectively
    - MWD shares = Existing Table A allocation
  - "High" scenario assumes urban and agricultural split of 90 percent/10 percent, respectively
    - MWD Shares = proportional share of urban deliveries
  - Additional “risk premiums” are added to both low and high scenarios
## Risk Assumptions

<table>
<thead>
<tr>
<th>Risk Element</th>
<th>Evaluation Assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction Cost</td>
<td>50% increase applied to capital cost estimates</td>
</tr>
<tr>
<td>Construction Delay</td>
<td>5-year delay in bond issuance</td>
</tr>
<tr>
<td>Cost of Funds</td>
<td>100 basis points added to project financing</td>
</tr>
<tr>
<td>Failure of Public Financing</td>
<td>Contractors pay for 100% of public habitat funding</td>
</tr>
<tr>
<td>Decision Tree Impacts to Operations</td>
<td>3% added to O&amp;M costs 10 years after project completion</td>
</tr>
</tbody>
</table>
Projected SWP/Bay Delta Portion of MWD Rates in 2025 ($/AF)

Based on MWD’s Integrated Resources Plan sales projection of 1.8 MAF in 2025
Projected BDCP Options and Carlsbad Desalination on Water Authority Rates in 2025

($/AF)

- Carlsbad Desalination (48KAF - 56KAF):
  - Low: $236
  - High: $243

- 9,000 cfs:
  - Low: $292
  - High: $592

- 6,000 cfs:
  - Low: $272
  - High: $569

- 3,000 cfs:
  - Low: $181
  - High: $385
Summary

- The Delta is broken and current operations are not sustainable.
- It is unclear if BDCP proposed action would secure California’s water supply and improve the ecological health of the Delta.
- NRDC Portfolio and BDCP Plus alternatives produce less Delta exports and require investments in storage and local resources.
- Investment in local resources in San Diego County could fill supply gap widened by reduced exports.
- Without clear and committed funding sources, the Water Authority is faced with undefined cost exposure.
MWD Fiscal Years 2014/15 & 2015/16 Budget and Rates

Amy I. Chen, Director of MWD Program
February 27, 2014
## Budget and Rates Key Assumptions

<table>
<thead>
<tr>
<th>Fiscal year Ending</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>MWD supply assumptions</td>
<td>1.75 MAF</td>
<td>1.75 MAF</td>
</tr>
<tr>
<td>State Water Project allocation</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Colorado River Aqueduct deliveries</td>
<td>0.88 MAF</td>
<td>0.88 MAF</td>
</tr>
<tr>
<td>Interest income rate</td>
<td>1.15%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Ad Valorem Tax Revenues</td>
<td>$90.2 M</td>
<td>$92.2 M</td>
</tr>
<tr>
<td>Capital Investment Plan Funding</td>
<td>100% PAYGo</td>
<td>100% PAYGo &amp; R&amp;R Fund</td>
</tr>
<tr>
<td>Total water sales &amp; exchanges</td>
<td>1.75 MAF</td>
<td>1.75 MAF</td>
</tr>
<tr>
<td>Full service</td>
<td>1.57 MAF</td>
<td>1.57 MAF</td>
</tr>
<tr>
<td>Water Authority exchange</td>
<td>181 TAF</td>
<td>179 TAF</td>
</tr>
</tbody>
</table>
MWD Staff Recommendations

- Increase average rates by 1.5 percent for CY 2015 and 2016
- Increase tax revenues by continual suspension of ad valorem tax rate limitation under MWD Act
- Increase PAYGo funding and establish PAYGo target of 60% of projected CIP expenditures
- Accelerate OPEB funding schedule – Fully fund OPEB annual required contribution starting 2015
Projected Reserve Fund Balance
FY 2013/14
($ in millions)

~$320 over target
Recommended Use of Projected Reserves Over Maximum Reserves Target

- $100 M in Replacement and Refurbishment Fund
- $100 M into Other Post-Employment Benefit Trust
- Balance of any amount over the reserve target in newly created Water Management Fund ($120M or more)
Projected Financial Metrics

![Graph showing projected financial metrics over fiscal years 2014 to 2024. The graph includes bars for Reserves, Target Reserve, and Minimum Reserve, with values for each year. The table below the graph lists projected values for various financial metrics such as Average Rate Inc., Sales, CIP, PAYGO, Rev. Bond Cvg, Fixed Chg Cvg, Inflation, AV Taxes, and BDCP, with corresponding percentages and dollar amounts.]

* Revenue Remainder & WRSF
Next steps

- March 10: Budget workshop
  - Evaluate expanding MWD’s fixed charges
  - Review PAYGo Funding Policy
  - Discuss reverting back to a one-year budget and adopting rates and charges annually
  - Assess Potential Bay Delta Conservation Plan Charges
  - Review Operating Budget
- March 11: Public Hearings
- March 25: Budget workshop, if needed
- April 8: Approve budget and rates and charges
Adopt Positions on Bills

Legislation, Conservation & Outreach Committee
February 27, 2014
Staff Recommendation

- Adopt the following bill positions:
  - **AB 1249** (Salas): Oppose
  - **AB 1331** (Rendon): Oppose Unless Amended
  - **AB 1445** (Logue): Oppose Unless Amended
  - **SB 848** (Wolk): Oppose Unless Amended
  - **SB 927** (Cannella): Support If Amended
Updated Water Bond Priorities

Legislation, Conservation & Outreach Committee
February 27, 2014

Glenn Farrel, Government Relations Manager
Updated Water Bond Priorities

- Important to have a clear, understandable, reasonable, and achievable set of priorities
- Helps to unify efforts of the San Diego legislative delegation
- Can become the guiding priorities for supporting a water bond for the San Diego region
- Need to update the existing water bond priorities to ensure they reflect the region’s needs and water bond political dynamics
Water Bond Priority #1

- Equitable, proportional funding among regions of the state

- Regionally allocated funding should be based upon population
  - San Diego County’s population is approximately 8.3 percent of the state’s overall population
Water Bond Priority #2

- Robust integrated regional water management program
- Must be a dedicated proportional allocation to the San Diego sub-region
  - Clear delineation of project eligibility for water reuse (including direct and indirect potable reuse) and seawater desalination projects
  - IRWM administrative processes should be streamlined to improve efficiency of program implementation
Water Bond Priority #3

- Clearly delineated funding opportunities for ocean water desalination projects
- Funding should be available for competitive opportunities for seawater desalination projects
  - Including desalination plants, water conveyance pipelines, and other appurtenances
  - Continuous appropriation
Water Bond Priority #4

- Clearly delineated funding opportunities for water reuse, including direct and indirect potable reuse, projects
- Funding should be made available for competitive opportunities for water reuse projects, including IPR and DPR
Water Bond Priority #5

- Funding for ecosystem restoration of the Delta in support of the co-equal goals of ecosystem restoration and water supply reliability
- Funding should be available for projects that would provide public benefits and support Delta sustainability, and protect and enhance the sustainability of the Delta ecosystem
Water Bond Priority #6

- Clearly delineated funding for expansion and addition of surface storage projects
- Funding should be competitive on a statewide basis for a broad scope of eligible projects
  - Include opportunities for surface storage projects that provide multiple benefits
    - Pumped hydro storage projects that improve the ability to meet peak energy demands or improve energy reliability
Water Bond Priority #7

- Funding for Salton Sea mitigation and restoration
- Funding should be provided to meet both of the states’ commitment to:
  - Salton Sea mitigation as part of the QSA
  - Carry out ecosystem restoration projects at the Salton Sea
Bond streamlining

- Funding should be provided for projects without encumbrances of new policy or regulatory conditions
- Limits should be imposed to cap costs for administration of bond programs to no more than 5 percent
  - Prohibition for add-on administrative and bond-handling costs
Staff Recommendation

- Approve the updated water bond priorities.
Hydropower Task Force Scope

- Track operations existing hydro facilities
- Provide guidance on the San Vicente Pumped Storage Project
- Provide guidance on hydropower purchase agreements
- Oversee the planning and installation of in-line hydro facilities
Taskforce Members

- Mike Hogan (Chair)
- Gary Arant
- Brian Brady
- Marty Miller
- Javier Saunders
- Ron Watkins
- Ken Williams
- Doug Wilson
Annual Revenue Goal: $900K
FY14 Revenue to Date: $647K
Lake Hodges
Revenue & Availability

Annual Revenue Goal: $1.82M
FY14 Revenue to Date: $1.62M
San Vicente Pumped Storage Project

- Up to 500 Megawatts
- Existing infrastructure
  - Lower reservoir – San Vicente
  - Sunrise Powerlink
- New infrastructure
  - Upper reservoir
  - Pump house and tailrace
  - Pipeline tunnel
  - Electrical substation and transmission line
- Preliminary FERC permit renewed
  - Dam raise has been our “progress” on prior preliminary permits
San Vicente Pumped Storage Project Players

- Water Authority
- City of San Diego
- Regulatory agencies
- Resource agencies
- Potential customers
- Potential private partners
- Professional services contractors
Black & Veatch Contract

- Scope of Work - $150K Initial Study
  - Perform power design configuration and costing
  - Identify potential power purchase customers
  - Overview of funding opportunities
  - Evaluate project delivery alternatives
  - Conduct risk assessment
  - Determine ways to mitigate risk
  - Complete economic and financial analysis
Navigant Consulting

- Scope of Work - $60K Independent Advisor/Reviewer
  - Provide economic and financial study independent review
  - Engage in preliminary discussions with potential power purchasers and regulatory agencies
  - Prepare project interconnect request for submission to the California Independent System Operator
City Coordination

- Board approved Memorandum of Understanding with City in October 2013
  - Discusses City participation in economic and financial study
  - Outlines cost sharing
  - Discusses interagency coordination
  - Requires Principles of Understanding for future
City Coordination

- Have been meeting with City staff since December 2013
- January 22, 2014 meeting - presented initial study findings
- City reviewed and commented on study
- February 13, 2014 meeting - addressed reviewer comments
Regulatory Agencies

- Federal Energy Regulatory Commission (FERC)
- California Independent System Operator (CAISO)
- California Energy Commission (CEC)
- California Public Utilities Commission (CPUC)
- California Air Resources Board (CARB)
Current Regulatory Context

- **Oct 17, 2013** - CPUC issued Decision 13-10-040 on Energy Storage Proceeding
  - Excluded >50 MW pumped storage projects
  - Directed CPUC staff to conduct a workshop “...to further explore the operational characteristics and uses for pumped storage projects”

- **Dec 2013** - 2012 Long-Term Procurement Plan (LTPP) Proceeding closed

- **Dec 19, 2013** - 2014 LTPP Proceeding opened, Commissioner Florio was assigned, new Commissioner Picker now assigned
Agency Coordination Progress

- **Jan 13, 2014** - Meetings with CPUC Commissioners Sandoval and Florio to present San Vicente Pumped Storage
- **Jan 16, 2014** - Attended CPUC workshop on pumped storage
  - Submitted post-workshop Project talking points
- **Jan 29, 2014** - Obtained “Party” status for the new 2014 LTPP
- **Feb 11, 2014** - Commissioner Florio issued Proposed Decision, which includes large-scale pumped storage
- **Feb 20, 2014** - Meetings with CAISO and Senator Steinberg’s Energy Policy Advisor
- **Feb 25, 2014** - Attended Prehearing Conference on 2014 LTPP and submitted comments on scope
Continuing Agency Coordination

- Participate in 2014 LTPP Proceeding and submit comments to Commission as a Party
  - Advocate for the Project
  - Advocate for including pumped storage in long-term planning and procurement plans
- Monitor CAISO 2014-2015 Long Term Transmission Plan (LTTP)
- Continue meetings with CPUC and CAISO as project moves forward
Embedded Energy Tracking

MWD System
2,432 kWh/AF

Source

Supply & Conveyance (SWP and CRA)

Water Authority System
16.3 kWh/AF

SDCWA Conveyance

SDCWA Water Treatment (Twin Oaks Valley WTP)

Member Agency Systems
XX kWh/AF

Member Agency Treatment & Distribution

End User

San Diego County Water Authority
Cost of Power - Significant Factor for the Water Authority

- Average Energy Intensity of water delivered to customers (end user): $2,432 + 16.3 + X = \text{total kWh/AF}$
- Energy costs for SDCWA $\sim$ $\$2M$/year$
- Energy Audit of facilities in 2012
- Power generated at various locations to offset costs
  - Lake Hodges pumped storage
  - Rancho Peñasquitos PCHF
  - Three solar installations
- San Vicente Pumped Storage would further offset
Anticipated Market Demand Shift

The graph illustrates the net load over the years from 2014 to 2023. There is a significant change starting in 2015, with potential over-generation in 2020.
March Peak Day 2020

2020 Installed Capacity

<table>
<thead>
<tr>
<th>MONTH</th>
<th>SOLAR DG (MW)</th>
<th>SOLAR CENTRAL (MW)</th>
<th>WIND (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mar</td>
<td>600</td>
<td>1250</td>
<td>725</td>
</tr>
</tbody>
</table>
Future Potential Power Sources
Energy Market Summary

- SDG&E’s Daily Needs
  - Min of 500 MW
  - 8 hours of generation
  - Anticipates morning and evening generation

- Market Analysis
  - Others need similar capacity and storage
Upper Reservoir Options

Alternative A
- Reservoir Elevation = 2,110 feet
- 93 acre Pond Surface Area

Alternative B
- Reservoir Elevation = 1,490 feet
- 100 acre Pond Surface Area

Alternative C
- Reservoir Elevation = 1,600 feet
- 60 acre Pond Surface Area

Alternative D
- Reservoir Elevation = 1,800 feet
- 80 acre Pond Surface Area

Reservoir Elevation = Up to 764 feet
# Configuration Options

<table>
<thead>
<tr>
<th>Parameter</th>
<th>A1</th>
<th>B1</th>
<th>B2</th>
<th>B3</th>
<th>C1</th>
<th>C2</th>
<th>C3</th>
<th>D1</th>
<th>D2</th>
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</thead>
<tbody>
<tr>
<td>Output (MW)</td>
<td>500</td>
<td>500</td>
<td>340</td>
<td>500</td>
<td>500</td>
<td>310</td>
<td>500</td>
<td>500</td>
<td>350</td>
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<tr>
<td>Generating Time (hrs)</td>
<td>8.0</td>
<td>5.5</td>
<td>8.0</td>
<td>8.0</td>
<td>5.0</td>
<td>8.0</td>
<td>8.0</td>
<td>5.7</td>
<td>8.0</td>
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<tr>
<td>Pumping Time (hrs)</td>
<td>9.6</td>
<td>6.6</td>
<td>9.3</td>
<td>13.6</td>
<td>6.0</td>
<td>9.0</td>
<td>10.0</td>
<td>6.9</td>
<td>9.3</td>
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<tr>
<td>Cost ($ million)</td>
<td>945</td>
<td>785</td>
<td>663</td>
<td>843</td>
<td>845</td>
<td>580</td>
<td>862</td>
<td>942</td>
<td>762</td>
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<tr>
<td>Tunnel Length (Feet)</td>
<td>14,800</td>
<td>1,910</td>
<td>2,070</td>
<td>1,910</td>
<td>3,500</td>
<td>3,340</td>
<td>3,500</td>
<td>10,000</td>
<td>9,740</td>
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<tr>
<td>Tunnel Diameter (Feet)</td>
<td>24</td>
<td>31</td>
<td>27</td>
<td>31</td>
<td>30</td>
<td>25</td>
<td>30</td>
<td>29</td>
<td>25</td>
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<tr>
<td>Reservoir Size (AF)</td>
<td>6,103</td>
<td>5,661</td>
<td>5,661</td>
<td>7,842</td>
<td>4,534</td>
<td>4,534</td>
<td>7,691</td>
<td>4,534</td>
<td>4,534</td>
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<tr>
<td>Cost per KW</td>
<td>1,890</td>
<td>1,571</td>
<td>1,951</td>
<td>1,687</td>
<td>1,691</td>
<td>1,870</td>
<td>1,725</td>
<td>1,884</td>
<td>2,177</td>
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<tr>
<td>Annual Generation (MW x 1000) at 70% capacity factor</td>
<td>1,022</td>
<td>703</td>
<td>695</td>
<td>1,022</td>
<td>639</td>
<td>634</td>
<td>1,022</td>
<td>728</td>
<td>715</td>
</tr>
</tbody>
</table>

Legend:  
hrs – hours  
KW – Kilowatts  
MW – Megawatts
Key Risks

- Institutional Risks
  - Native American Coordination
  - Land Acquisition

- Environmental Permitting
  - Inundation area for reservoir

- Schedule
  - Potential Delays
    - Construction (unforeseen changed conditions)
    - Regulatory permitting

- Regulatory
  - Many regulators – DSOD / FERC / CAISO / CPUC

- Cost Uncertainty
Project Procurement Options

- Involves private development partner and power buyer
- Conduct a competitive solicitation
- Two alternatives
  - **Two Partners** – Water Authority enters into Power Purchase Agreement first, then brings Project Developer on board
  - **One Partner** – Water Authority hires a single entity responsible for Power Purchase Agreement and Project Development
Two Partner Option

Development Timeline

- Feasibility Study (in progress)
- Conceptual Design
- Economic / Pricing Analysis
- Seek PPA Offtaker (Respond to RFP or Bilateral)
- Negotiate and sign a PPA
- Solicit and Select Development Partner
- Sign Interconnection Agreement
- Permitting (Env and FERC)
- Design Engineering
- Financing
- Pay System Upgrades
- Transmission
- Construction
- Operations and Energy Sales
- Purchase Energy
# Two Partner Option

Total cost before engaging a partner = $30 to $50M

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>May maximize revenues</td>
<td>Negotiating with two entities and is responsible for a majority of the activities</td>
</tr>
<tr>
<td>More control over project design and execution</td>
<td>Subject to power purchase agreement liquidated damages</td>
</tr>
<tr>
<td>Power purchase agreement signed early which could facilitate project approvals</td>
<td>Power purchase agreement negotiated early in design process</td>
</tr>
</tbody>
</table>
One Partner RFP

Development Timeline

- Feasibility Study (in progress)
- Identify Technical and Partnership Requirements
- RFP Seeking Development Partner
- Sign MOU
- PPA with Offtaker
- Sign Lease/Usage Agreement
- Interconnection Study
- Sign Interconnection Agreement
- Permitting (Environmental, FERC)
- Financing
- Design Engineering
- Construction
- Operations and Energy Sales
- Purchase Energy
- Pay System Upgrades
# One Partner Option

Total cost before engaging a partner = $2 to $12M

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
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</thead>
<tbody>
<tr>
<td>Negotiating with one entity that is responsible for a majority of the activities</td>
<td>May not maximize revenues</td>
</tr>
<tr>
<td>Can reject all developer proposals</td>
<td>Less control over project design and execution</td>
</tr>
<tr>
<td>Developer holds power purchase agreement and is subject to liquidated damages</td>
<td>Power purchase agreement signed later which could delay project approvals</td>
</tr>
<tr>
<td>Developer is lead on regulatory issues</td>
<td></td>
</tr>
</tbody>
</table>
Obligations of Power Purchase Agreement Holder

- Operation start date
- Daily generation requirements
- Maintenance
- Permits
- Licensing
- Cover debt service (financing)
- Liquidated damages
Development Timeline

2014

- Feasibility Study (in progress) - $250K
- CAISO application fee/deposit ($600K with $300K refundable)
- Conceptual Design - $500K - $10M
- Economic / Pricing Analysis - $100K
- Agency Coordination
- CAISO / CPUC - $100K
- Permitting (Env and FERC) - $8M
- Design Engineering - $25M
- Financing - $1M
- Construction / CM
- Transmission Upgrades - $20M - $100M
- Secure PPA - $500K
- $500M - $900M
- $5M - Start-up and Operations

2021

San Diego County Water Authority
Hydropower Task Force Meeting #3

Topics

- Lessons learned from the Lake Hodges project
- Conceptual design costs and timeline
- Revenue projections
- Power purchase agreement boilerplate
- When is best time to investigate water quality and Indirect Potable Water reuse considerations
- Discuss strategic points to retain project developer
- Discuss CAISO interconnection request process
- March Board recommendations
  - Add project to CIP
  - Approve project budget
  - Approve CAISO interconnection request submission
Today’s Agenda

- Defining Fixed Costs – (FSTF Recommendation #1)
  - Feedback (Board/GMs)
  - Policy Issues and Alternatives
- Storage Charge Allocation – (FSTF Recommendation #2) as Amended
  - Feedback (Board/GMs)
  - Policy Issues and Alternatives
- Allocation of Non-commodity Revenues to Treatment – (FSTF Recommendation #3)
  - Feedback (Board/GMs)
  - Policy Issues and Alternatives
- Supply Reliability Charge – (FSTF Recommendation #4) Deferred
  - Feedback (Board/GMs)
  - Policy Issues and Alternatives
- Next Steps
Task Force Recommendation #1

1. Fiscal Sustainability Task Force recommends the Board determine that the definition of Water Authority fixed costs include:

- All Water Authority payments towards the cost of Debt Service associated with the Carlsbad Desalination Project
- Fixed Operations and Maintenance costs of the Carlsbad Desalination Project;
- Fixed Operations and Maintenance costs associated with the All-American and Coachella Canal lining projects
- The take-or-pay purchase price of conserved Colorado River Water associated with the SDCWA–IID Water Transfer Agreement
# Key Comments from Directors and Member Agencies

<table>
<thead>
<tr>
<th>Inclusion of Desal Debt in IAC</th>
<th>Inclusion of Supply O&amp;M in IAC</th>
<th>Process Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debt service Poseidon’s not Water Authority</td>
<td>Why discount fixed O&amp;M costs by 20% when know its fixed?</td>
<td>Analysis of rate volatility Define stable revenues</td>
</tr>
<tr>
<td>Water Authority doesn’t own desal plant No difference from QSA water purchase agreement</td>
<td>Inconsistent to not include MWD wheeling and Twin Oaks WTP O&amp;M</td>
<td>Analysis of member agency impact by including desal debt and fixed O&amp;M in IAC</td>
</tr>
<tr>
<td>Is desal revenue collection same as MWD allocation of SWP costs?</td>
<td>Will MWD O&amp;M related to supply be considered fixed – sets bad precedent</td>
<td>Don’t split fixed charges discussion between phases</td>
</tr>
</tbody>
</table>
Underlying Policy Basis for Recommendation

- IAC established as result of 1998 RW Beck Revenue Study recommendations
  - Objective was to provide fixed revenue for fixed costs
  - Recognized rate volatility and member agency roll-off
- Existing IAC language
  - “fixed costs shall include annual payments of principal and interest on debt of the Authority…”
- Intent of IAC to provide revenue for specific types of costs e.g. debt
  - Ownership, form of payment, or issuer of debt does not change nature of cost
  - Results in the inclusion of desal capital costs in the IAC
  - Fixed QSA water supply costs not included in IAC
    - No debt linked to physical asset or O&M component
## Debt Payments Included in IAC

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Owned By Water Authority</th>
<th>Not Owned By Water Authority</th>
<th>Debt Paid By Water Authority</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAC–Coachella Canal</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Levy WTP &amp; Related Facilities</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>IID On–farm Conservation Improvements</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Desal Conveyance</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>San Vicente Dam Raise</td>
<td></td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lake Hodges Pumped Storage</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
Desal Revenue Collection vs. MWD Allocation of SWP Costs

- MWD Misallocates Supply Costs to Transportation
- Fixed and Variable Revenue Collection is Not Allocation

<table>
<thead>
<tr>
<th></th>
<th>Allocation Issue</th>
<th>Revenue Collection Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Supply</td>
<td>Transportation</td>
</tr>
<tr>
<td>Desal Facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owned By Water Authority</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>SWP Facilities Not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owned By MWD</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Facilities Not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owned By Water Authority</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
Sales Volatility — One Year Ahead

- Empirical View of Volatility: Definition in Finance
- One Year Change in SDCWA Sales: FY1994–2013
- Sales Volatility, Standard Deviation of $\approx 11\%$

Assuming Normality, a 95% Confidence Interval Would Be Defined by $\pm 22\% (\pm 2*\sigma)$

Thus, Only 2.5% of the Time Would One Expect Sales Less Than 78% of the Expected Sales

$\pm 11\%$ Std. Dev. Is a 66% C.I.
What Are Minimal Sales Over the Long-term?

- Note That One-year-ahead Sales Volatility Is Not Independent from Year to Year
  - Business Cycle – 5 to 7 years
  - El Nino Weather Cycles—year to year memory
  - Member agency local resource development
- Observe Sales Drop Over More Than 1 year
  
  Max Sales Drop (FY 1994–2013)
  
  1 year = -14.5%
  2 years = -26.5%
  3 years = -35.6%

- Standard of Bond Rating Agencies: Contractually Committed Sales Is Exactly Zero
- SDCWA Provides a Risk Pooling Benefit: Volatility of Sales Volume ≠ Risk of Shortfall
Assessing the Financial Impact of Recommendation #1

- Reallocates $17 million, or 2%, from variable revenue to fixed revenue
- Desal Plant and Pipeline Debt and Fixed O&M
  - $1.55 per meter equivalent per month additional
- Desal Plant and Pipeline Debt only
  - $1.10 per meter equivalent per month additional
- Impact to Member Agencies
  - Less affected by transferring variable revenue to IAC
    - Agencies purchasing consistent amounts year to year
    - Agencies with percentage of total sales similar to percentage of total meters
- Intermittent Users and Agencies with Higher Proportion of Meters Compared to Sales Are Affected More
Range of Average Impact to Retail Residential Customers

- 5 Retail Agency Average Composite Cost (CY 2013)
  - Fixed Charge: $19.88 monthly
  - Commodity Charge: $52.58 (15 HCF weighted average)
  - Composite Monthly Residential Bill: $72.46
- Passed Through to Monthly Service Charge
  - $1.10 – $1.55 if all on monthly service charge
- Passed Added Expense Through to Commodity Rate
  - Impact depends on number of meters and amount of annual retail water sales
Impact Passed Through to Residential Customers on Commodity Charge

- If Annual Impact from Addition to IAC is:
  - $200K
    - 10,000 AF of annual sales: $0.68 per month
  - $500K
    - 20,000 AF of annual sales: $0.86 per month
    - 30,000 AF of annual sales: $0.57 per month
  - $1M
    - 40,000 AF of annual sales: $0.86 per month
    - 200,000 AF of annual sales: $0.17 per month
- Range of impacts on average residential customer
  - <1% if passed through direct to monthly service charge
  - 1–2% if passed to commodity rate
- Completely up to member agencies how to collect IAC
Task Force Recommendation #1

- Task Force continued to support original recommendation
  - Task Force maintained its interpretation that desal debt and equity payments and fixed O&M for desal and canal linings be included in the IAC; however,
    - Task Force asks for Board direction on interpreting whether O&M be included
2. The Fiscal Sustainability Task Force recommends that the allocation of storage charge costs to member agencies be revised from a three-year rolling average of Municipal & Industrial water deliveries to a prior 10-year rolling average of Municipal & Industrial water deliveries [Original Recommendation]
### Key Comments from Directors and Member Agencies

<table>
<thead>
<tr>
<th>Local Supply Development</th>
<th>Requested Analysis</th>
<th>Process Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Like the alternative opinion or stay with 3-year average to avoid impacting IPR</td>
<td>Analysis of roll-off included with 3-year vs. 10-year</td>
<td>Do not piecemeal recommendations</td>
</tr>
<tr>
<td>Adjust member agency supplies in shortage if local projects do not produce as planned</td>
<td>Want analysis without FY 2007</td>
<td></td>
</tr>
<tr>
<td>Use alternative approach to protect local supply development</td>
<td>Look at alternatives e.g. 5-year</td>
<td></td>
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</tbody>
</table>
## Water Authority Backstopping Regional Reliability

### 2030 Dry Year Reliability

<table>
<thead>
<tr>
<th></th>
<th>(in Acre Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Demand</strong></td>
<td>804,000</td>
</tr>
<tr>
<td><strong>Verifiable Local</strong></td>
<td>124,000</td>
</tr>
<tr>
<td><strong>Additional Planned</strong></td>
<td>75,000</td>
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<tr>
<td><strong>CWA Net Demand</strong></td>
<td>605,000</td>
</tr>
<tr>
<td><strong>CWA Supplies</strong></td>
<td>336,000</td>
</tr>
<tr>
<td><strong>MWD Supply</strong></td>
<td>269,000</td>
</tr>
<tr>
<td><strong>Take from Carryover Storage</strong></td>
<td>30,000</td>
</tr>
</tbody>
</table>

### Reliability Analysis
- **MWD Cutback (%)** 25%
- **Available MWD (AF)** 201,750
- **Level of Service** 89%
- **Level of Service w/CSP** 94%

### Reliability Analysis w/roll-on
- **Loss of Local Supply (%)** 25%
- **Loss of Local Supply (AF)** 49,750
- **Demand on CWA (AF)** 654,750
- **Level of Service** 82%
- **Level of Service w/CSP** 87%

---

1. Local surface water is normal year yield
2. Includes reduction of 30,000 AF surface water in dry year
# Water Authority Backstops

## Regional Reliability

### 2030 Dry Year Reliability

<table>
<thead>
<tr>
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</tr>
<tr>
<td>Take from Carryover Storage</td>
<td>30,000</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Reliability Analysis

- **MWD Cutback (%):** 25%

- **Available MWD (AF):** 153,000

- **Level of Service:**
  - 91%
  - 96% (with CSP)

- **Reliability Analysis w/roll-on**
  - **Loss of Local Supply (%):** 25%
  - **Loss of Local Supply (AF):** 66,000
  - **Demand on CWA (AF):** 606,000

<table>
<thead>
<tr>
<th>Demand on CWA (AF)</th>
<th>606,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Service</td>
<td>81%</td>
</tr>
<tr>
<td>Level of Service w/CSP</td>
<td>86%</td>
</tr>
</tbody>
</table>

1. Local surface water is normal year yield
2. Includes reduction of 30,000 AF surface water in dry year
Underlying Policy Basis For Recommendation

- Adjusting rolling average for Storage Charge transfers risks among member agencies
  - As agencies roll-off fewer responsible for cost of facilities that serve all agencies
    - Emergency or Shortage Conditions
- Longer Cost Responsibility Period May Deter Local Supply Development
  - Avoidable costs
  - Unavoidable costs
- **Key Policy Question:** How to balance Fiscal Sustainability and equity to member agencies with supporting member agency local supply development
Economics of Local Supply Development

Avoidable: 1000
- IAC
- Cust. Svc
- Transp.
- Supply

Roll Off: 200
- Storage

Unavoidable: 100
- Treatment
Task Force Recommendation #2, as amended

2. The Fiscal Sustainability Task Force recommends that the allocation of storage charge costs to member agencies be revised from a three–year rolling average of Municipal & Industrial water deliveries to a prior five–year rolling average of Municipal & Industrial water deliveries [Amended Recommendation]
Task Force Recommendation #3

3. Fiscal Sustainability Task Force recommends that the Water Authority consistently apply non-commodity revenue offsets to all revenue categories including Treatment.

“Carollo Recommendation From Phase I Cost of Service Report”
Key Comments from Directors and Member Agencies

Why would untreated customers property taxes be taken to offset treatment expenses?
Underlying Policy Basis of Recommendations

- All Member Agencies, with the Exception of the City of Poway, Have Treated Water Access and Have Taken Treated Water
- Supports Carollo’s Finding From Phase I Cost of Service Study
Task Force Recommendation #3

3. Fiscal Sustainability Task Force recommends that the Water Authority consistently apply non-commodity revenue offsets to all revenue categories including Treatment.

“Carollo Recommendation From Phase I Cost of Service Report”
Task Force Recommendation #4

4. Fiscal Sustainability Task Force recommends that the Water Authority establish a fixed Supply Reliability Charge allocated to member agencies on the basis of a prior 10 year non-concurrent peak amount of deliveries of Water Authority supplies.
## Key Comments from Directors and Member Agencies

<table>
<thead>
<tr>
<th>Local Supply Development</th>
<th>Requested Analysis</th>
<th>Process Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree with Reliability but don’t over burden member agencies developing local supplies</td>
<td>Want detailed analysis of impact to all member agencies</td>
<td>Feel rushed, need to take all new recommendations together</td>
</tr>
<tr>
<td>Agree with recovering some level of fixed revenue for QSA &amp; desal</td>
<td>Quantify value of reliability benefits</td>
<td>Should not split fixed charges discussion between phases</td>
</tr>
<tr>
<td>local supply reliability benefits other member agencies?</td>
<td>Consider take or pay contracts for a portion of total costs</td>
<td>Need more time</td>
</tr>
</tbody>
</table>


Underlying Basis of Recommendation

- Defer Recommendation #4 to later phase
  - Include with discussion of fixed cost coverage %
  - Include take or pay contracts

- How Do You Insure Against Loss of Local Supply and Have Supplies Available to Serve Intermittent Users Without a Mechanism to Pay
  - Roll on dilutes the reliability benefit of the ratepayers that do not peak

- How to Recognize Member Agency Local Supply Development Also Improves Regional Reliability
  - Credit for local supply development
Task Force Recommendation #4, Deferred

4. Fiscal Sustainability Task Force recommends deferring the establishment of a fixed Supply Reliability Charge until a later time and working with member agencies to also evaluate take-or-pay supply contracts using a 10-year non-concurrent peak as an alternative means of meeting the same objective.

- Not an immediate issue for CY 2015 rates and charges
- Longer term impacts consistent with
  - Fixed cost coverage
  - Take-or-pay water supply contracts
  - Local supply development credits
Next Steps

- Additional Fiscal Sustainability Task Force Meeting in March
- Special A&F Committee March 20, 2014 (1:30 pm)
- Return to Board Meeting March 27, 2014
Recommended Variable Rate Debt Management Strategy

David Shank – Financial Planning Manager
Administrative and Finance Committee
February 27, 2014
The recommended updated variable rate debt management strategy is:

1. Renew 2–year Wells Fargo Liquidity Facility
2. Replace BayernLB Liquidity Facility with 3–year Bank of Tokyo Liquidity Facility
3. Replace $50M of TECP with ECP
### Annual Fee Cost Savings

**FY 2015 & 2016**

<table>
<thead>
<tr>
<th>Recommended Action</th>
<th>Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Savings from extending Wells Fargo liquidity facility</td>
<td>$275,000</td>
</tr>
<tr>
<td>Savings from replacing BayernLB liquidity facility</td>
<td>$192,500</td>
</tr>
<tr>
<td>Savings from issuing ECP</td>
<td>$288,000</td>
</tr>
<tr>
<td>Total</td>
<td>$755,500</td>
</tr>
</tbody>
</table>

- FY 2014 cost savings of $139,792
Today’s Action

1. Approve the recommended variable rate debt management strategy;

2. Approve the renewal of the Wells Fargo liquidity facility agreement and adopt Resolution 2014–___ authorizing the amendment of the Wells Fargo Bank agreement;

3. Approve the selection the Bank of Tokyo to replace the Bayerische Landesbank (BLB) liquidity facility and adopt Resolution 2014–___ authorizing the issuance and sale of short-term revenue Certificates and authorizing and approving certain actions in connection therewith; and

4. Approve the selection of Morgan Stanley and Bank of America/Merrill Lynch to serve as dealers on the ECP series.