Carlsbad Desalination Project – Pavement Restoration

Engineering and Operations Committee
April 23, 2015
Design Build Agreement requires that the streets be restored in the area where pavement had been disturbed (cost to the project).

City of Carlsbad would like to re-surface entire street width (curb-to-curb). Cannot ‘sole source’ the work to Kiewit-Shea pavement subcontractor.

In order to perform the work in one effort:
- Water Authority would execute a change order with Poseidon.
- Poseidon would amend its contract with Kiewit-Shea.
- Water Authority would execute a reimbursement agreement with the City of Carlsbad.
Project Recommendation

- **Staff recommendation**
  - Authorize the General Manager to execute an agreement with the City of Carlsbad for reimbursable costs for street paving work within the City of Carlsbad right-of-way work area of the Carlsbad Desalination Project Conveyance Pipeline
  - Increase the FY 2014/2015 Capital Improvement Program appropriation and lifetime budget for the Carlsbad Desalination Project by $1,300,000 for reimbursable costs related to street paving work within the City of Carlsbad right-of-way work area of the Carlsbad Desalination Project Conveyance Pipeline
Pipeline Inspection Technology (Information)

Engineering & Operations Committee
April 23, 2015
Pipeline Inspections

- **Benefits**
  1. Proactive/Reliable
  2. Extend Life
  3. Efficient Repairs

- **Technologies**
- **Frequency**
- **Cost**

Magnetic Flux Leakage Inspection Tool
Typical Inspection Animation

Pipeline Cutaway View (Profile)
Remote Operated Vehicle (ROV) Unit

- Sonar
- Thrusters
- Camera
- Lights
- Grabber/Metal Thickness Gage

Swimming ROV Unit
NORTH COUNTY DISTRIBUTION PIPELINE
ROV Animation

Pipe 382 Midpoint 1.427 m

Draining (Gravity)

Pipeline Cutaway View (Profile)
Remote Operated Vehicle (ROV) Inspection
ROV and Inspection Technology

Advances
- Resolution
- Power/Cables
- Lights

Future
- Faster
- Longer Lengths
- Better Viewing

Leak Detection
- Microphone
- SmartBall
State Treasurer’s Assessment of the Affordability and Financing Considerations of the Bay Delta Conveyance Facility

Imported Water Committee
April 23, 2015

Amy Chen, Director of MWD Program
Findings of the State Treasurer’s Report

- Cost of the Delta conveyance facility is within range of urban and agricultural users capacity to pay
- On average, supply costs for the BDCP are competitive to alternative supplies
- CVP contractors will need to develop financing mechanism to fund their share of BDCP, including creation of take-or-pay contracts or rate stabilization fund
Report includes multiple qualifiers

Issuance of bonds:

“a number of important financing issues...will need to be resolved before bonds could be issued to support construction of the BDCP conveyance facility...”

Modeled four agencies:

“may not be representative of the many smaller SWP and CVP contactors, most notably CVP agricultural water users.”

Agricultural contractors:

“ability to pay for the BDCP-related costs depends primarily upon their agricultural customers’ capacity to absorb these higher water costs...”

Capacity to Pay:

“much higher for permanent crops and vegetable crops and much lower for row crops.”
“CVP contractors will need to develop financing mechanism…”

Even if the CVP contractors develop a new credit with take-or-pay obligations and similar credit features to the DWR bonds, it is not clear at this point whether $10.25 billion of bonds (assuming a 50/50 split) in the base case could reasonably be issued without a large rate stabilization fund or other credit enhancement or subsidy from the federal government, state government, or SWP contractors.”
“..there are a number of important risks...
Construction cost overruns and delays...Regulatory uncertainty...if.. State and federal funding for habitat conservation is not ...forthcoming, the ability to operate the tunnels could be jeopardized.. Climate change...presents a financing risk...”

Potential Risk: recent reports by the Los Angeles Times and E&E News indicate the Bay Delta Conservation Plan’s Habitat Conservation Plan is being abandoned
State Treasurer’s Analysis Assumptions

- Total estimated BDCP costs: $25 billion
  - Water contractors’ share: $17 billion
- Cost allocation between SWP and CVP
  - Two scenarios: 50/50, 60/40
- Three cases evaluated
  - Base
    - Costs and construction schedule, same as BDCP; 40-year bond
  - Best
    - Capital costs 10% less than base; interest rates 1% lower
  - Worst
    - Capital costs 30% higher; interest rates 2% more
# Debt Financing by the Water Contractors – in 2015$¹

<table>
<thead>
<tr>
<th></th>
<th>Base Case</th>
<th>Best Case</th>
<th>Worst Case</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Peak Cost</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peak Contractor Cost</td>
<td>$909M</td>
<td>$604M</td>
<td>$1,359M</td>
</tr>
<tr>
<td>($2015)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SWP Share</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50/50 Split for SWP/CVP</td>
<td>$455M</td>
<td>$302M</td>
<td>$680M</td>
</tr>
<tr>
<td>($2015)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60/40 Split for SWP/CVP</td>
<td>$546M</td>
<td>$362M</td>
<td>$816M</td>
</tr>
<tr>
<td>($2015)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>MWD Share (Table A)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>50/50 Split for SWP/CVP</td>
<td>$211M</td>
<td>$140M</td>
<td>$315M</td>
</tr>
<tr>
<td>($2015)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60/40 Split for SWP/CVP</td>
<td>$253M</td>
<td>$168M</td>
<td>$378M</td>
</tr>
<tr>
<td>($2015)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Source: MWD presentation from January 27, 2015

* MWD performed its own analysis in 2013, when that analysis is brought forward to 2015$, it shows MWD share would be $250M under a 50/50 split or $299M under a 60/40 split
MWD’s Incremental BDCP Unit Cost

<table>
<thead>
<tr>
<th>MWD Incremental BDCP Benefits (Based on Table A%) = 199,337AF(^1)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cost Split</strong></td>
</tr>
<tr>
<td>MWD Share Peak Annual Cost(^3) (2015$)</td>
</tr>
<tr>
<td>MWD Cost/ BDCP Incremental Benefit</td>
</tr>
</tbody>
</table>

1. Based on data provided in MWD’s September 23, 2014 presentation, MWD’s calculated incremental BDCP benefit is about 200,000 AF/Y on average, based on its Table A allocation
2. MWD's 2013 estimate (presented in 2014) displayed in 2015 $s
3. Costs shown differ from State Treasurer's Report: Nominal $ shown in State Treasurer's Report; 2015$ shown in MWD PPT and here. Data shown can be found in MWD’s January 27, 2015 presentation
# Meeting San Diego’s Supply Needs

<table>
<thead>
<tr>
<th>Meeting San Diego County’s Water Supply Demands</th>
<th>Long-Term Cost to San Diego Region</th>
<th>Cost-Control/Predictability</th>
<th>Reliability</th>
<th>Drought Proof</th>
<th>Local Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conservation</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>MWD’s SWP Supplies without BDCP</td>
<td>●</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>MWD’s SWP Supplies with BDCP</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>MWD’s Colorado River Supplies</td>
<td>●</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>●</td>
</tr>
<tr>
<td>Imperial Irrigation District-Water Transfer</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>○</td>
</tr>
<tr>
<td>All American Canal Lining Project/Coachella Canal Lining Project Supplies</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Carlsbad Desalination</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Recycled Water</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Potable Reuse</td>
<td>○</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Groundwater</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>

**Key:**
- ●: Best
- ○: Least

---

**San Diego County Water Authority**
Considerations

- State Treasurer’s Report is illustrative
- Important financing issues must be resolved before bonds could be issued
  - Certainty of revenue stream critical
  - Debt service requirements for SWP contractors
  - Need for CVP contractors to develop new credit to finance their share
- Recent reports on Administration’s proposal to abandon BDCP as HCP will significantly increase financing risks
Colorado River Reservoir Operations and Shortage Projections

- Criteria outlined in 2007 Interim Guidelines
- 2015 reservoir releases determined in August but updated this month
- Implications of future shortage predictions
## Current Water Supply Outlook

### As of April 20, 2015

<table>
<thead>
<tr>
<th>Current Storage</th>
<th>Percent Full</th>
<th>Volume (MAF)</th>
<th>Elevation (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Powell</td>
<td>45%</td>
<td>10.87</td>
<td>3,590.6</td>
</tr>
<tr>
<td>Lake Mead</td>
<td>39%</td>
<td>10.12</td>
<td>1,081.3</td>
</tr>
<tr>
<td><strong>Total System Storage</strong></td>
<td><strong>48%</strong></td>
<td><strong>28.53</strong></td>
<td>-----</td>
</tr>
<tr>
<td><strong>Upper Basin Snowpack</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>56% of Average</td>
</tr>
<tr>
<td><strong>Forecasted Water Year</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Runoff into Powell</td>
<td></td>
<td></td>
<td>6.83 MAF</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>63% of Average</td>
</tr>
</tbody>
</table>
Lake Mead End of Month Elevations
Based on April 2015 Projections

9.0 MAF is most probable release volume from Lake Powell in 2015 and 2016.
Shortage from Lake Mead

### Probability of Lower Basin Shortage

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0%</td>
<td>21%</td>
<td>54%</td>
<td>62%</td>
<td>59%</td>
</tr>
</tbody>
</table>

Based on January 2015 Projections

Reductions under 1st shortage trigger at 1,075’

- No Cut
- 320,000 AF (11%)
- 13,000 AF (4%)
- 50,000 AF (3.5%)
Preparing for Shortage

- California’s allocation is not impacted
- Potential restrictions on ICS deliveries
- Overruns prohibited
- Nevada has a new intake pipe under construction
- Arizona faces largest cut from shortage
- Seeking creation of an ICS account
- Looking for alternative supply options
Controller’s Report
February 2015

Administrative & Finance Committee
April 23, 2015

Presented by Rod Greek, Controller
Report Format

Main Staff Report: Budget Variance Analysis and Discussion

*Attachments*

A: Water Sales Volumes (Acre-Feet)
B: Water Sales Revenues (Dollars)
C: Water Purchases & Treatment Costs (Dollars)
D: Multi-Year Budget Status Report (Actuals)
E: Operating Department (2 Charts)
   E1: Two-Year Amended Budget (Dollars)
   E2: Expenditures (Dollars)
F: Schedule of Cash & Investments
Attachment A

WATER SALES VOLUMES
Budget Versus Actual (in Acre-Feet)
for the 20 Months Ended February 28, 2015

11% Over/51KAF

Actual
861,748 AF

Budget
796,847 AF

*Budget (a) vs. Actual

San Diego County Water Authority
Attachment B

WATER SALES REVENUES
Budget Versus Actual (in Millions $)
for the 20 Months Ended February 28, 2015

Actual
$988.0

7%

Budget
$921.1
Attachment C

WATER PURCHASES AND TREATMENT COSTS
Budget Versus Actual (in Millions $)
for the 20 Months Ended February 28, 2015

6% Variance

Budget $668.3
Actual $699.1

5%
## Attachment D

### Net Water Sales Revenue

<table>
<thead>
<tr>
<th></th>
<th>[A] 20 Months Amended Budget</th>
<th>[B] 20 Months Period-to-Date Actual</th>
<th>[B - A] Variance with Amended Budget Positive (Negative)</th>
<th>[B / A] % Actual/Amended Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net Water Sales Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water sales</td>
<td>$921,077,295</td>
<td>$987,987,041</td>
<td>$66,909,746</td>
<td>89%</td>
</tr>
<tr>
<td>Water purchases &amp; treatment</td>
<td>(668,281,188)</td>
<td>(699,088,422)</td>
<td>(30,807,234)</td>
<td>87%</td>
</tr>
<tr>
<td><strong>Total Net Water Sales Revenue</strong></td>
<td><strong>$252,796,107</strong></td>
<td><strong>$288,898,619</strong></td>
<td><strong>$36,102,512</strong></td>
<td><strong>94%</strong></td>
</tr>
</tbody>
</table>
### Revenue and Other Income

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Infrastructure Access Charges</td>
<td>$48,768,747</td>
<td>$48,970,778</td>
<td>$202,031</td>
<td>83%</td>
</tr>
<tr>
<td>Property Tax &amp; In-Lieu Charges</td>
<td>17,926,685</td>
<td>18,200,806</td>
<td>274,121</td>
<td>82%</td>
</tr>
<tr>
<td>Investment Income</td>
<td>10,553,450</td>
<td>6,586,136</td>
<td>(3,967,314)</td>
<td>52%</td>
</tr>
<tr>
<td>Hydroelectric Revenue</td>
<td>4,209,907</td>
<td>6,475,620</td>
<td>2,265,713</td>
<td></td>
</tr>
<tr>
<td>Grant Reimbursements</td>
<td>17,347,337</td>
<td>10,967,629</td>
<td>(6,379,708)</td>
<td></td>
</tr>
<tr>
<td>Build America Bonds Subsidy</td>
<td>18,044,902</td>
<td>17,252,084</td>
<td>(792,818)</td>
<td></td>
</tr>
<tr>
<td>Other Income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Contributions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity Charges</td>
<td>23,006,632</td>
<td>24,284,035</td>
<td>1,278,341</td>
<td>82%</td>
</tr>
<tr>
<td>Water Standby Availability</td>
<td>17,687,597</td>
<td>17,811,621</td>
<td>124,024</td>
<td>79%</td>
</tr>
<tr>
<td>Contributions in Aid of CIP</td>
<td>630,800</td>
<td>4,241,536</td>
<td>3,610,736</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Total Revenue &amp; Other Income</strong></td>
<td><strong>$158,894,065</strong></td>
<td><strong>$158,138,243</strong></td>
<td><strong>$755,822</strong></td>
<td>75%</td>
</tr>
</tbody>
</table>

- $6.4M under
- $4.0M under
- $3.3M over
## Attachment D

### Expenditures

<table>
<thead>
<tr>
<th></th>
<th>FY 14 &amp; 15</th>
<th>20 Months Amended Budget</th>
<th>FY 14 &amp; 15</th>
<th>20 Months Period-to-Date Actual</th>
<th>Variance with Period-to-Date Amended Budget Positive (Negative)</th>
<th>[B / A] %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stored Water Purchases</td>
<td>$</td>
<td>-</td>
<td>$</td>
<td>-</td>
<td>$</td>
<td>-</td>
</tr>
<tr>
<td>Debt Service</td>
<td>210,370,080</td>
<td>203,471,045</td>
<td>6,899,035</td>
<td>72%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QSA Mitigation</td>
<td>13,477,000</td>
<td>13,477,190</td>
<td>(190)</td>
<td>73%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hodges Pumped Storage</td>
<td>3,430,390</td>
<td>2,813,544</td>
<td>616,846</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment Replacement</td>
<td>2,782,990</td>
<td>2,520,257</td>
<td>262,733</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grant Expenditures</td>
<td>17,347,337</td>
<td>8,896,604</td>
<td>8,450,733</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Expenditures</td>
<td>-</td>
<td>1,406,414</td>
<td>(1,406,414)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Departments</td>
<td>82,138,016</td>
<td>68,822,939</td>
<td>13,315,077</td>
<td>70%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total Expenses</strong></td>
<td><strong>$ 329,545,813</strong></td>
<td><strong>$ 301,407,993</strong></td>
<td><strong>$ 28,137,820</strong></td>
<td>66%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CIP Expenditures</strong></td>
<td><strong>$ 170,981,956</strong></td>
<td><strong>$ 155,711,880</strong></td>
<td><strong>$ 15,270,076</strong></td>
<td>76%</td>
<td><strong>55% Bonded</strong></td>
<td></td>
</tr>
</tbody>
</table>
Attachment F  Cash and Investments

Discretionary Funds

Non–Discretionary Funds

In Millions

Balance
Target
Maximum

Operating Fund
Rate Stabilization Fund

In Millions

Stored Water
Equip Repl
PayGo
CIP/Bond
Debt Service
Treasurer’s Report
External Investment Manager Updates

Administrative and Finance Committee
April 23, 2015

Presented by: Lisa Marie Harris,
Director of Finance
Agenda

- External Investment Manager Summary
- Treasurer’s Report
  - Portfolio Master Summary
  - Portfolio Characteristics
  - Investment Manager Summary
- External Manager Quarterly Update and Report
External Investment Manager

- Board approved Chandler Asset Management (Investment Manager) on November 20, 2014
- Investments are included in the Water Authority’s Pooled portfolio
- Began investment purchases in February 2015
- Goal of $20–$40 million, representing 5–10% of Pooled portfolio
- Authorized to purchase corporate notes and municipal securities for diversification and to enhance yield
# Portfolio Master Summary

**PORTFOLIO MASTER SUMMARY**  
*as of March 31, 2015*

## PORTFOLIO PERCENTAGES

<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Permitted By Board Policy</th>
<th>Portfolio Percentage</th>
<th>Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Agency Investment Fund (LAIF) $50 Million</td>
<td>20%</td>
<td>12.39%</td>
<td>$49,045,770</td>
</tr>
<tr>
<td>Banker's Acceptances</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Treasury Securities</td>
<td>15% Minimum</td>
<td>16.09%</td>
<td>66,890,550</td>
</tr>
<tr>
<td>Agency Securities</td>
<td>85%</td>
<td>59.45%</td>
<td>238,171,194</td>
</tr>
<tr>
<td>Supranational Securities</td>
<td>10%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Reverse Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Placements Service Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Negotiable Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>25%</td>
<td>7.50%</td>
<td>31,664,481</td>
</tr>
<tr>
<td>Medium Term Notes/Corporates</td>
<td>30%</td>
<td>2.01%</td>
<td>8,044,563</td>
</tr>
<tr>
<td>Municipal Securities</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
<td>25%</td>
<td>1.43%</td>
<td>5,734,355</td>
</tr>
<tr>
<td>Money Market Funds</td>
<td>15%</td>
<td>0.13%</td>
<td>503,299</td>
</tr>
<tr>
<td><strong>Subtotal for Pooled Funds:</strong></td>
<td></td>
<td>100.00%</td>
<td>$400,654,612</td>
</tr>
<tr>
<td>Accrued Interest (unavailable for investing)</td>
<td></td>
<td></td>
<td>55,595</td>
</tr>
<tr>
<td>Checking/Petty Cash/Available Funds (unavailable for investing)</td>
<td></td>
<td></td>
<td>1,488,638</td>
</tr>
<tr>
<td><strong>Subtotal for Pooled Funds:</strong></td>
<td></td>
<td>$402,198,845</td>
<td></td>
</tr>
</tbody>
</table>

**Bond/CP Fund Excluded from Portfolio Percentages:**

<table>
<thead>
<tr>
<th></th>
<th>Treasury Securities</th>
<th>Agency Securities</th>
<th>Placements Service Certificates of Deposit</th>
<th>Commercial Paper</th>
<th>Local Agency Investment Fund (LAIF)</th>
<th>JPA Pools (CAMP)</th>
<th>Money Market Funds</th>
<th>(Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subtotal for Bond/CP Fund (available for CIP expenditures):</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99,429,900</td>
<td>5,734,355</td>
<td>503,299</td>
<td>$101,815,514</td>
</tr>
<tr>
<td>Accrued Interest (unavailable for investing)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$101,815,514</td>
</tr>
</tbody>
</table>

**Debt Service Reserve (DSR) Funds Excluded from Portfolio Percentages:**

<table>
<thead>
<tr>
<th></th>
<th>Trinity Plus - Reserve (GIC) - Series 1998A COPs</th>
<th></th>
<th>(Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subtotal for Debt Service Reserve Funds (unavailable for CIP expenditures):</strong></td>
<td>12,240,775</td>
<td></td>
<td>$12,240,775</td>
</tr>
<tr>
<td><strong>Total Cash and Investments:</strong></td>
<td></td>
<td></td>
<td>$516,255,134</td>
</tr>
</tbody>
</table>

## PORTFOLIO INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Pooled Funds</th>
<th>Bond/CP Fund</th>
<th>Debt Service Reserve</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Yield to Maturity - 365 Days</td>
<td>0.57%</td>
<td>0.27%</td>
<td>5.55%</td>
<td>0.63%</td>
</tr>
<tr>
<td>Average Term</td>
<td>86</td>
<td>67</td>
<td>3</td>
<td>87</td>
</tr>
<tr>
<td>Average Days to Maturity (730 Days Maximum)</td>
<td>3%</td>
<td></td>
<td>1,230,000</td>
<td>280</td>
</tr>
</tbody>
</table>

* "The weighted average days to maturity of the total portfolio shall not exceed 730 days (two years) to maturity" per SDICWA Investment Policy.

**Pooled Funds include Operating, Pay Go, RSF, Equipment and Stored Water funds."
<table>
<thead>
<tr>
<th>Investment Type</th>
<th>Permitted By Board Policy</th>
<th>Portfolio Percentage</th>
<th>Book Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Agency Investment Fund (LAIF)</td>
<td>$50 Million</td>
<td>12.39%</td>
<td>$49,645,770</td>
</tr>
<tr>
<td>Banker's Acceptances</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Treasury Securities</td>
<td>15%- Minimum</td>
<td>16.69%</td>
<td>66,890,550</td>
</tr>
<tr>
<td>Agency Securities</td>
<td>85%</td>
<td>59.45%</td>
<td>238,171,594</td>
</tr>
<tr>
<td>Supranational Securities</td>
<td>10%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Reverse Repurchase Agreements</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Placement Service Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Negotiable Certificates of Deposit</td>
<td>15%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>Commercial Paper</td>
<td>25%</td>
<td>7.90%</td>
<td>31,664,481</td>
</tr>
<tr>
<td>Medium Term Notes/Corporates</td>
<td>30%</td>
<td>2.01%</td>
<td>8,044,563</td>
</tr>
<tr>
<td>Municipal Securities</td>
<td>20%</td>
<td>0.00%</td>
<td>-</td>
</tr>
<tr>
<td>JPA Pools (CAMP)</td>
<td>25%</td>
<td>1.43%</td>
<td>5,734,355</td>
</tr>
<tr>
<td>Money Market Funds</td>
<td>15%</td>
<td>0.13%</td>
<td>502,299</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100.00%</td>
<td>$400,654,612</td>
</tr>
<tr>
<td>Accrued Interest (unavailable for investing)</td>
<td></td>
<td></td>
<td>55,595</td>
</tr>
<tr>
<td>Checking/Petty Cash/Available Funds (unavailable for investing)</td>
<td></td>
<td></td>
<td>1,488,638</td>
</tr>
<tr>
<td><strong>Subtotal for Pooled Funds:</strong></td>
<td></td>
<td></td>
<td>$402,198,845</td>
</tr>
</tbody>
</table>
## Portfolio Master Summary

### PORTFOLIO INFORMATION

<table>
<thead>
<tr>
<th></th>
<th>Pooled Funds **</th>
<th>Bond/CP Fund</th>
<th>Debt Service Reserve</th>
<th>Total *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio Yield to Maturity - 365 Days</td>
<td>0.57%</td>
<td>0.27%</td>
<td>5.55%</td>
<td>0.63%</td>
</tr>
<tr>
<td>Average Term</td>
<td>861</td>
<td>1</td>
<td>1</td>
<td>671</td>
</tr>
<tr>
<td>Average Days to Maturity (730 Days Maximum)</td>
<td>370</td>
<td>1</td>
<td>1</td>
<td>288</td>
</tr>
</tbody>
</table>

* "The weighted average days to maturity of the total portfolio shall not exceed 730 days (two years) to maturity" per SDCWA Investment Policy.

** Pooled Funds include Operating, Pay Go, RSF, Equipment and Stored Water funds.
Portfolio Characteristics

Asset Allocation

- Pooled Funds

Portfolio Yield: April 2015 – March 2016

Credit Quality

- Pooled Funds

Projected Cash Flows (in Millions) *

- Pooled Funds

- Bond/CP Fund

U.S. Treasury Yield Curve

Market Notes

On March 16th, the FOMC maintained the target for the federal funds rate at a range of 0–25 basis points.
The next meeting is April 29th.
# Portfolio Characteristics

## San Diego County Water Authority

### Portfolio Characteristics as of March 31, 2015

<table>
<thead>
<tr>
<th>Asset Allocation</th>
<th>Maturity Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pooled Funds</strong></td>
<td><strong>5-Year</strong></td>
</tr>
<tr>
<td>Aggregated 55.4%</td>
<td>Million</td>
</tr>
<tr>
<td>Commercial Paper 7.9%</td>
<td>0-3 Month</td>
</tr>
<tr>
<td>Medium Term Notes/Corporate 2.0%</td>
<td>3-6 Month</td>
</tr>
<tr>
<td>JPA Pool (CAMP) 1.5%</td>
<td>6-9 Month</td>
</tr>
<tr>
<td>LAIF 32.4%</td>
<td>9-12 Month</td>
</tr>
<tr>
<td>Money Market 0.1%</td>
<td>12-18 Month</td>
</tr>
<tr>
<td>Treasuries 10.1%</td>
<td>18-24 Month</td>
</tr>
<tr>
<td>FHLMC 20.2%</td>
<td>&gt;24 Month</td>
</tr>
<tr>
<td>FHNB 4.2%</td>
<td></td>
</tr>
</tbody>
</table>

### Portfolio Yield: April 2014 - March 2015

<table>
<thead>
<tr>
<th>Credit Quality</th>
<th>Pooled Funds % of Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>US Treasury (AAA/AA)</td>
<td>16.7%</td>
</tr>
<tr>
<td>Agency (AAA/AA)</td>
<td>59.4%</td>
</tr>
<tr>
<td>Other (AAA)**</td>
<td>3.6%</td>
</tr>
<tr>
<td>AA***</td>
<td>9.9%</td>
</tr>
<tr>
<td>Not rated ****</td>
<td>12.8%</td>
</tr>
<tr>
<td><strong>5-Year</strong></td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Pooled Funds**: Includes money market funds & JPA pool (CAMP)

**Includes commercial paper and municipal term notes/Corporate; the Water Authority's Investment Policy does not permit investments with a rating below A.**

***Includes LAIF, which is part of the static investment pool, and is not rated.
Investment Manager Summary

San Diego County Water Authority
Account #10285

Portfolio Summary
As of 3/31/2015

<table>
<thead>
<tr>
<th>PORTFOLIO CHARACTERISTICS</th>
<th>ACCOUNT SUMMARY</th>
<th>TOP ISSUERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beg. Values as of 2/28/15</td>
<td>End Values as of 3/31/15</td>
</tr>
<tr>
<td></td>
<td>Market Value</td>
<td>Accrued Interest</td>
</tr>
<tr>
<td></td>
<td>4,007,577</td>
<td>19,476</td>
</tr>
<tr>
<td></td>
<td>Income Earned</td>
<td>Cont/WD</td>
</tr>
<tr>
<td></td>
<td>2,492</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7,415</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Issuer</th>
<th>% Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procter &amp; Gamble Company</td>
<td>25.2%</td>
</tr>
<tr>
<td>ChevronTexaco Corp</td>
<td>25.1%</td>
</tr>
<tr>
<td>Berkshire Hathaway</td>
<td>25.0%</td>
</tr>
<tr>
<td>Apple Inc</td>
<td>24.8%</td>
</tr>
</tbody>
</table>

100.0%

ISSUER ALLOCATION

Maturity Distribution

12-MONTH YIELD COMPARISON

San Diego County Water Authority
Update on Supply Conditions and Drought Response Actions

April 1, 2015 Manual Snow Survey (AP Photo/Rich Pedroncelli)

Water Planning Committee
April 20, 2015 Meeting

Presentation by:
Dana Friehauf, Water Resources Manager
Northern Sierra Snowpack
(As of April 1, 2015)

Snowpack's Water Content at Record Low

5% of Normal

Water Content (in)

1-Oct 1-Nov 1-Dec 1-Jan 1-Feb 1-Mar 1-Apr 1-May 1-Jun 1-Jul 1-Aug 1-Sep

Normal 2014-2015
Average Water Year Statewide Runoff
Percent of Average (Water Year: Oct 1 – Sept 30)

4th Consecutive Dry-Year 2012-2015

*DWR Apr. 1, 2015 Forecast for Water Year
Water Authority Drought Response
Orderly and Coordinated Approach to Managing Droughts

- 2006 Water Shortage and Drought Response Plan
  - Regional actions taken to lessen severity of shortage conditions in San Diego region
  - Includes allocation methodology
  - Activated February 2014

- 2008 Model Drought Response Ordinance
  - Levels with corresponding water-use restrictions
  - Consistent region-wide response
  - Declared Drought Alert Level in July 2014
Current Activities Influencing Potential Drought Response Actions in 2015/2016

- **Supply** availability from MWD
  - MWD allocation based on Level 3, 15% cutback
  - July 1, 2015 – June 30, 2016 allocation period
  - Surcharge for exceedance: $1,480/AF to $2,960/AF

- **Demand** reductions required statewide
  - Governor's April 1 Executive Order: 25% water savings mandate
  - SWRCB emergency conservation regulations
    - Establishes individual reduction targets for each member agency
Estimated FY 2016 M&I Potable Supply Scenario
MWD WSAP Level 3 - 15% cutback

Estimated FY 2016 Potable M&I Demand ~ 523 TAF *

MWD Initial Allocation
M&I
273 TAF

Water Authority CDP 41 TAF

Long-Term Colorado River Transfers
180 TAF

Local Supplies 27 TAF

* Based on actual FY 2014, escalated at 1/2% per year. Does not take into account SWRCB draft emergency regulation mandate.
## SWRCB Draft Emergency Regulation
### Determine Conservation Standard

Urban water suppliers assigned conservation standard (percent reduction) based on July – Sept 2014 residential per capita consumption.

<table>
<thead>
<tr>
<th>Tier</th>
<th>R-GPCD Range From</th>
<th>R-GPCD Range To</th>
<th>Conservation Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Reserved</td>
<td></td>
<td>4%</td>
</tr>
<tr>
<td>2</td>
<td>0</td>
<td>64.99</td>
<td>8%</td>
</tr>
<tr>
<td>3</td>
<td>65</td>
<td>79.99</td>
<td>12%</td>
</tr>
<tr>
<td>4</td>
<td>80</td>
<td>94.99</td>
<td>16%</td>
</tr>
<tr>
<td>5</td>
<td>95</td>
<td>109.99</td>
<td>20%</td>
</tr>
<tr>
<td>6</td>
<td>110</td>
<td>129.99</td>
<td>24%</td>
</tr>
<tr>
<td>7</td>
<td>130</td>
<td>169.99</td>
<td>28%</td>
</tr>
<tr>
<td>8</td>
<td>170</td>
<td>214.99</td>
<td>32%</td>
</tr>
<tr>
<td>9</td>
<td>215</td>
<td>612.00</td>
<td>36%</td>
</tr>
</tbody>
</table>
SWRCB Draft Emergency Regulation Proposed Conservation Standards

*Carlsbad conservation standard currently under review
SWRCB Draft Emergency Regulation
Reduce Total Potable Usage as Compared to 2013

- Agencies required to report monthly total potable urban usage compared to same month in 2013

- Compliance measured monthly beginning June 2015, but assessed on cumulative basis
  - If not in compliance, SWRCB may issue conservation order
    - Include additional actions to come into compliance

- Urban water suppliers can exempt commercial agricultural deliveries
  - Urban agency serves 20% or more commercial agricultural
Primary Concern – No Credit for Local Supply Projects

- Ratepayers are not receiving supply benefit from local investment
- Gaining support from ratepayers for future projects will be a challenge
- Investments consistent with Governor's Water Action Plan for California
  - Increase regional self-reliance through local supply development
- Must take into account investments in new drought-proof supplies
Influence of SWRCB Draft Emergency Regulation on Water Authority Regional Drought Response

- Member agency cutback level established by SWRCB statewide regulation

- Difficult to establish regional cutback level
  - Differing cutback levels (12% - 36%) throughout region

- Member agencies facing severe cutback levels
# Drought Management Actions

## Tentative Schedule

<table>
<thead>
<tr>
<th>Date</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 14</td>
<td>MWD Board approved Level 3, 15% supply cutback</td>
</tr>
<tr>
<td>April 18</td>
<td>SWRCB Draft regulations released for comment</td>
</tr>
<tr>
<td>April 22</td>
<td>Deadline for comments on draft regulations</td>
</tr>
<tr>
<td>April 28</td>
<td>SWRCB emergency rulemaking formal notice</td>
</tr>
<tr>
<td>May 5-6</td>
<td>SWRCB hearing and adoption</td>
</tr>
<tr>
<td><strong>May 14</strong></td>
<td><strong>Water Authority Special Board meeting</strong></td>
</tr>
<tr>
<td>June 1</td>
<td>Mandatory conservation regulation takes effect</td>
</tr>
<tr>
<td>July 1</td>
<td>MWD allocation period begins</td>
</tr>
</tbody>
</table>
Status of Ocean Plan Amendment for Desalination

Water Planning Committee
April 23, 2015

Presented by: Bob Yamada
Water Resources Manager
Ocean Plan Amendment for Desalination

- Proposed final amendment released on March 20, 2015 by SWRCB
  - Current effort under way since 2011; draft released last July
  - Water Authority engaged from onset

- Amendment addresses requirements for desalination intakes and discharges
  - Provide statewide guidance and consistency
SWRCB Desalination Ocean Plan Amendment

- Amendment applies to Carlsbad project
  - Planned renewal of existing Regional Board permit
  - Scheduled shutdown of Encina Power Station – Transition to stand-alone operations
  - Intake upgrade contemplated in the Water Purchase Agreement
Proposed Final Ocean Plan Amendment

- Revisions address many of the Water Authority’s concerns including:
  - Consideration of site-specific conditions
  - Path to compliance for alternative intakes and discharges
  - Use of the “CEQA” definition of feasible
  - A provision that accounts for previously approved mitigation
  - Reasonable duration (12 months) for key empirical studies
Lack of flexibility in determining brine mixing zone
  - Currently specifies a standard based on outfall discharge
  - Demonstration of an environmentally superior approach should be allowed

Discharge salinity regulations must account for natural variations in Pacific Ocean salinity
Next Steps

- Staff is engaged with SWRCB staff and Board members to address remaining concerns
- Final Amendment scheduled for adoption on May 6th
- Staff will report back at the regular May Board meeting on the results of the May 6th hearing
ABOUT THE POLL

- 1,000 San Diego County adults surveyed between March 16 & April 1, 2015
- Telephone (N=500) and online (N=500) consolidated into single data set (N=1,000)
- A sample of cell phone contacts was also included in the telephone component
- Overall margin of error equivalent to ±3.1%, 19 times out of 20
Public Interest in Water Issues
Top-of-Mind County Issues

“What do you feel is the most important issue facing San Diego County residents today?”

- Water supply/drought: 33% (2015), 16% (2014)
- Poor economy/unemployment: 10% (2015), 22% (2014)
- Chargers/Stadium: 5% (2015), 4% (2014)
- Immigration: 3% (2015), 6% (2014)
- Affordable housing: 3% (2015), 3% (2014)
- Cost of living: 5% (2015), 3% (2014)
- Infrastructure: 3% (2015), 3% (2014)
- Too much traffic: 3% (2015), 2% (2014)
- Crime/safety: 4% (2015), 5% (2014)
- Education: 2% (2015), 4% (2014)
- Poverty/homelessness: 2% (2015), 2% (2014)
- Enviromental/pollution: 2% (2015), 2% (2014)
- Other: 14% (2015), 17% (2014)
- (Unsure): 9% (2015), 16% (2014)
Importance of a Reliable Water Supply

88%: Essential for a healthy economy

86%: Needed for good quality of life

65%: Feel current supply is reliable, while 51% trust long-term supply
The Drought

U.S. Drought Monitor - Current

Abnormally Dry
Moderate Drought
Severe Drought
Extreme Drought
Exceptional Drought
Drought Severity and Response

More than 8-in-10 consider the drought to be “very serious.”

**Increased enforcement** is seen as a key to conservation.

71% are familiar with local water-use restrictions.
Support for Mandatory Water-Use Restrictions

“Water agencies should use mandatory rather than voluntary restrictions to cut water use to fight the current drought.”
Conservation Actions Since Start of Mandatory Water-Use Restrictions

“What specifically have you done … since August 2014?”*

- Shorter showers: 38%
- Reduce/skip outdoor watering: 32%
- Turn off taps promptly: 15%
- Full dishwasher/clothing loads: 13%
- Low water plants: 9%
- Reduce car washing: 8%
- Adjusted irrigation system/on timer: 8%
- Irrigate in off hours only: 6%
- Low flow toilets/less flushing: 6%
- Collect/reuse water: 4%
- Other: 12%
- Nothing: 9%
- (Unsure): 10%

*Multiple responses accepted
Support for Additional Measures

75% may consider replacing turf grass with low-water-use landscaping.

Almost as many (73%) support using advanced-treated recycled water as a supply supplement.
Views on Water Costs
More See Water as a Good Value

67% feel water is good value compared to other utilities.

43% feel cost of water is about right... an increase from 29% in 2014.
Support for Additional Investments

Are **increases in rates necessary** for enhanced supply reliability?

**44%** agree... up by 11% from 2014
“Some people feel San Diego County ratepayers should pay more to improve water supply reliability in the Bay-Delta. Others prefer focusing investments on developing more locally controlled water resources/water supplies here in the San Diego area. Both approaches require financial investments. Do you prefer one approach over the other, or both approaches, or neither?”
Water Conservation
Majority Feel They Can Save More

54% say they could do more to conserve water at home ...

especially younger residents.

However, 21% felt there was nothing more they could do to save more water.
“Can you tell me whether or not you personally do any of the following things to conserve water in your household?”

- **Limit shower time**: 54% (55+), 38% (35-54), 31% (18-34)
- **Install water-efficient fixtures**: 66% (55+), 49% (35-54), 34% (18-34)
- **Check for leaks in irrigation**: 76% (55+), 64% (35-54), 41% (18-34)
- **Water garden early morning/late evening**: 87% (55+), 76% (35-54), 76% (18-34)
- **Quickly repair leaky toilets/faucets**: 92% (55+), 83% (35-54), 70% (18-34)
- **Wait until full load**: 86% (55+), 82% (35-54), 82% (18-34)
Business Plan

Goals
Water Supply Diversification

84% support Water Authority’s supply diversification strategy.

Note: 40% are familiar with regional reliability enhancement efforts.
Water-Use Efficiency as Civic Duty

“It is my civic responsibility to use water efficiently.”

- % Agree -

2014 2015

60% 67%

60% 67%

82% 86%

22% 18%

Moderately
Strongly

20%
Drought Response Outreach Update

Legislation, Conservation and Outreach Committee
April 23, 2015

Jason Foster
Director, Public Outreach and Conservation
State Actions = Surge in Activity

- Media inquiries
- Speaking requests
- Program traffic
- Phone calls for help
Regional Messaging

• Discussed with General Managers April 14
• Recommended message platform:
  • Gov. has ordered water use cutbacks effective June 1
  • Step up conservation now
    • Reduce outdoor irrigation (2x/week or less)
    • Shorten showers
    • Fix leaks immediately
  • All in this together/individual efforts add up
  • Saving protects our economy, quality of life
  • Go to whenindrought.org for tips, local info
May/June Advertising

• TV
• Radio
  • Includes Spanish-language
• Digital/online
  • Targeted outreach (young adults, homeowners)
• Potential other outlets
  • Outdoor/print
• Refine messages/tactics with member agency outreach/communication staff
“The governor has ordered mandatory cuts in water use to start June 1. Your efforts to save more water do add up, so start saving now. Limit outdoor watering to twice a week or less, shorten your shower, and fix indoor and outdoor leaks immediately. We’re all in this together. Saving every day, every way protects our economy and quality of life as the drought continues. Go to whenindrought.org to find more tips, rebates and water restrictions for your area. A message from the San Diego County Water Authority and its 24 member agencies.”
Draft Signage

When in Drought

Save every day, every way.
The Governor Has Ordered
Water Use Cuts

Reduce Your Use Now!
• Water yards no more than 2x/week
• Fix all leaks immediately
• Shorten showers

For conservation tips, programs and local restrictions go to
whenindrought.org

San Diego County Water Authority

Supported by the San Diego County Water Authority and its 24 member agencies. Partial funding for the When in Drought campaign provided by a grant from the Department of Water Resources.
Draft Online Ads

We’re all in this together. Save more water now. whenindrought.org
Draft Online Ads

When in Drought
We’re all in this together.
Save more water now.
whenindrought.org
San Diego County Water Authority
Community Partnerships

- San Diego Community College District
- Unified Port of San Diego
- SDCAA - San Diego County Apartment Association
- Downtown San Diego Partnership
Proposition 84 Grant Application

• Applying for ~$7 million in final round:
  • Turf replacement rebates ($3 million)
  • Outreach and education ($1.8 million)
  • Detention facility retrofit ($685,000)
  • Agricultural water use efficiency ($520,000)
  • Water-use audits/surveys ($620,000)
  • Landscape classes/workshops ($380,000)

• 25% local match requirement
• Award notification end of 2015