2012-2017 Business Plan
Final Report

Administrative and Finance Committee
July 24, 2014

Maureen Stapleton
5 year horizon + Updated every 2 years = Responsive Business Plan
Business Plan History

2004

2014
Business Plan History

Diversification

2004

MWD 85%

2014

MWD 49% (estimated)
Business Plan History

Goal Success Rate

2004: 74%
2014: 84%
Business Plan Structure

Water Supply Portfolio

Water Facilities

Core Business
2012-2017 Business Plan Performance

160 GOALS

1. 74 goals completed (46%)
2. 60 goals on track (38%)
3. 24 goals not on track (15%)
4. 2 goals deleted or delayed (1%)
Water Supply Portfolio

- Favorable litigation rulings (QSA, MWD)
- Bay Delta Plan analysis
- $2M for water use efficiency programs
- Carlsbad Desalination Water Purchase Agreement
74 Goals - Completed

Water Facilities

- Regional Water Facilities Optimization and Master Plan Update
- San Vicente Dam Raise
- >$900K at Rancho Penasquitos hydroelectric revenue
- Five top ten right-of-way encroachments resolved
74 Goals - Completed

Core Business

- Climate Action Plan
- Small business participation of 25%
- Cost of Service study – Phase I & II
- Reached 3,000 teachers and 100,000 students
- Maximo software upgrade
- Succession Plan
60 Goals – On track

- San Vicente Marina
- IRWM funding for Drought
- Phase 2 MWD Litigation
- Potable reuse regulatory efforts
- Desalination project construction
  - Plant and Conveyance Pipeline
  - Pump Station/Twin Oaks/Pipeline 3 Improvements
60 Goals – On track

- Water Demand Forecast Model
- Climate change impacts on water planning
- 95% Expenditure of Grants
- San Vicente Bypass Pipeline
- 67% or greater awareness among residents that potable reuse is safe
24 Goals - Not on track

- Obtain long term wetland banking agreements
- Water Utility Climate Alliance whitepaper
- Public support for diversification at 80%
- MWD conservation funding
2 Goals - Delayed due to Board Decision

- Fiscal Sustainability
- Value of Water Campaign
Business Plan Next Steps

Today’s Update

- 2012
- 2013
- 2014
- 2015
- 2016
Business Plan Next Steps

Today’s Update


2014  2015  2016  2017  2018
Business Plan Next Steps

- www.sdcwa.org/mission-vision-values-strategies

Bay-Delta Conservation Plan: Supplemental Draft EIR/EIS Comment Letter

Imported Water Committee
July 24, 2014

Presented by:
Larry Purcell, Water Resources Manager
BDCP Document Review

- BDCP documents previously reviewed
  - Draft BDCP
  - Draft EIR/EIS
  - Draft Conceptual Engineering Report
- Current Document
  - Draft Implementing Agreement released for 60 day review period on May 30, 2014
Implementing Agreement

- Summary of BDCP in agreement form
- Describes roles and responsibilities for BDCP implementation
- Lists commitments:
  - Regulatory assurances
  - Funding
  - Governance
- Required for NCCP, typical for HCP
- Signed by permit applicants and wildlife agencies
Key Topics

- Regulatory Assurances
  - No surprises
  - Suspension/revocation protections
- Funding
  - Permittee vs. state/federal obligations
  - Contribution caps
- Governance
  - Responsible parties and authorities
  - Consensus decision-making
Subject Areas for Comment

Draft Implementing Agreement

- Governance
  - organization and authority
- Federal Agency Section 7 Coordination
- Funding
  - allocation and commitments
- Regulatory Assurances
  - suspension/revocation/termination
- Future BDCP Modifications
  - adaptive management
- Decision Tree
  - water operations
State Water Project Contract Extension Negotiations
**Why extend the SWP contract?**

- DWR is not issuing debt beyond the contract expiration date of December 31, 2035

![Graph showing Capital Charges Payment over years (2016-2046)](image)

*Source: MWD Presentation, April 7, 2014*

- Contractors seek compliance with water assessment requirements under SB 610 and SB 221
State Water Project Extension Negotiation Process

Negotiations to develop contract amendment began May 1, 2013

Open to public for observation and opportunity to provide comments
Concurrence Reached in AIP

- **Objective #1: Term of Contract**
  - Extended 50 years (2035 to 2085)

- **Objective #2: Maintain an appropriate level of reserves and funds**
  - Increase reserves
  - Provide flexibility to recover operations and maintenance costs
  - Increase ability to influence financial decisions, and
  - Create an account to provide transparency

- **Objective #3: Simplification of Billing**
Outstanding Issue – Objective 4

- Two Contractors sought language allowing opt-out of BDCP and DHCCP projects
- Issue separated to its own negotiation and environmental review process
  - Anticipated to begin December 2014
- Unclear if Objective 4 resolution needed in order to move forward with BDCP funding
Process Steps

- Final Agreement in Principle Signed
  - Fall 2014
- CEQA Review and Comments/Final EIR
  - Fall 2015
- Draft Contract Amendment in 2016
- Governing Boards Approve Contract Amendment 2016
- Legislative Review 2016

Objective 4: Funding of BDCP and Conservation Measure 1
Notification of a Drought Alert Condition and Declare Supply Enhancement Stage of Water Shortage and Drought Response Plan

Presented by:
Ken Weinberg, Director of Water Resources
Dana Friehauf, Acting Water Resources Manager

Water Planning Committee
July 24, 2014
Today’s Agenda and Actions

1. State Water Board *Emergency Regulation For Statewide Urban Water Conservation*

2. Relation to preparing for potentially dry 2015

3. Water Authority actions required to support member agency drought management
   - Moving to mandatory water use restrictions under regional Model Drought Response Ordinance
   - Declaring a Supply Enhancement Stage under the Water Shortage and Drought Response Plan
Governor Declares Drought Emergency
Water Authority takes Appropriate First Step

- Governor’s January 2014 proclamation calls for increased voluntary conservation and implementation of shortage contingency plans seeking statewide savings of 20%

- February 2014 Board actions on drought response
  1. Activate the Water Authority’s Water Shortage and Drought Response Plan, Voluntary Stage
  2. Notification of a Regional Drought Watch under Model Ordinance, voluntary
April 2014 Governor Executive Order
Redouble State Drought Actions

- Strengthens call for all Californians to avoid wasting water
- Contains a number of directives aimed at state agencies
- State Water Resources Control Board directives
  - Survey of urban agencies on actions to reduce water use and effectiveness of efforts
  - Adopt emergency regulations as it deems necessary to prevent the waste and unreasonable use of water
May 2014 – MWD Expects to take 1.1 MAF (~50%) from storage reserves in 2014

Due to reduced storage reserves, MWD may allocate supplies in 2015 if conditions continue to be dry.

MWD Storage Reserves (End-of-Year Balances)

Due to reduced storage reserves, MWD may allocate supplies in 2015 if conditions continue to be dry.
Record Heat Causes Water Use Increase

Fiscal Year Potable Water Use in Water Authority Service Area

FY 2014 was significantly warmer than FY 2013 and potable water use was 3.5% higher.
Average Daily Maximum Temperature at Lindbergh Field – Departure from Normal (°F)

November – June of FY 2014 was 4ºF warmer than normal. May 2014 was 7.3ºF warmer than normal.
San Diego’s ADMT was significantly higher than other areas of the State.
Demonstrated Conservation Savings Since 2007

Total Potable Water Use in Water Authority Service Area

2007 2008 2009 2010 2011 2012 2013 2014

Acre-Feet

350,000 450,000 550,000 650,000 750,000

20% Drop

22-month water shortage allocation

Fiscal Years

San Diego County Water Authority
SWRCB Emergency Regulations

- Emergency exists due to ongoing severe drought
- Immediate action is needed to:
  - Effectively increase urban water conservation
  - Preserve state’s water supplies
- Remain in effect for 270 days
  - Can be repealed by SWRCB due to changed conditions

Dry fields and bare trees in Central Valley

Lake Oroville January 2014
Water Waste Prohibitions

Following actions prohibited:

1. Watering of outdoor landscapes that cause excess runoff
2. Using hose to wash motor vehicle, without shut-off nozzle
3. Washing down driveways and sidewalks
4. Use of potable water in fountains or water features unless it is recirculating

(Except for health and safety purposes)
Mandatory Actions by Water Suppliers
Implement Mandatory Conservation Measures

- Requires all urban suppliers to implement Water Shortage Contingency Plans at mandatory level
  - Does not set a state-wide or regional percentage
  - Potential for additional regulations if savings not demonstrated

- Suppliers without plans/or less than 3,000 connections shall
  - Limit outdoor irrigation to no more than 2 days/week, OR
  - Implement measures to achieve a comparable conservation action

- Requires retail agency monthly water production reporting
Violations

1. Water waste prohibitions
   - Local agency could fine up to $500/day
   - Local agency retains enforcement discretion

2. Mandatory actions by water suppliers
   - Subject to cease and desist orders with fines up to $10,000/day

Goes into effect on or about August 1, 2014
2008 Water Authority Drought Response Model Ordinance

- Provide regional consistency
  - Effective messaging to public and media
  - Coordinate action among member agencies

- Core water-use restrictions
  - Prohibit wasteful water practices
  - Progressive severity of restrictions

- All member agencies updated ordinances
  - Vary slightly by local jurisdiction
  - Majority of agencies’ Drought Alert trigger based on Water Authority notification
### Water Authority Model Drought Response Ordinance

<table>
<thead>
<tr>
<th>Condition</th>
<th>Key Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Drought Watch</strong></td>
<td>Water waste prohibitions</td>
</tr>
<tr>
<td></td>
<td>Stop washing down paved surfaces</td>
</tr>
<tr>
<td></td>
<td>Eliminate inefficient landscape watering (no runoff)</td>
</tr>
<tr>
<td><strong>Voluntary</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Drought Alert</strong></td>
<td>Drought Watch restrictions apply</td>
</tr>
<tr>
<td><strong>Mandatory</strong></td>
<td>Limit watering time (10 min/station)</td>
</tr>
<tr>
<td><strong>Up to 20%</strong></td>
<td>Assigned watering days (3 days – summer /1 day – winter)</td>
</tr>
<tr>
<td><strong>Drought Critical</strong></td>
<td>Drought Watch and Alert restrictions apply</td>
</tr>
<tr>
<td><strong>Mandatory</strong></td>
<td>Assigned watering days (2 days – summer/1 day – winter)</td>
</tr>
<tr>
<td><strong>Up to 40%</strong></td>
<td>Restriction on issuance of meters</td>
</tr>
<tr>
<td></td>
<td>Establish customer water allocation</td>
</tr>
<tr>
<td><strong>Drought Emergency</strong></td>
<td>Drought Watch, Alert and Critical restrictions apply</td>
</tr>
<tr>
<td><strong>Mandatory</strong></td>
<td>Prohibit landscape irrigation (with some exceptions)</td>
</tr>
<tr>
<td><strong>Above 40%</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Water Authority Water Shortage and Drought Response Plan Regional Stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Potential Trigger</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voluntary Supply Management</strong></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><strong>Supply Enhancement Option</strong></td>
<td>Entered into a <strong>prolonged drought</strong> where securing supplemental dry-year supplies is warranted to minimize impacts due to <strong>potential or actual shortages</strong></td>
</tr>
<tr>
<td><strong>Cutbacks and Allocations</strong></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>
## Correlation between Regional 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>Voluntary Supply Management</td>
<td>Drought Watch</td>
<td>Voluntary</td>
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<tr>
<td>Supply Enhancement Option</td>
<td>Drought Alert</td>
<td>Mandatory</td>
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<td>Drought Critical</td>
<td>Mandatory</td>
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<tr>
<td></td>
<td>Drought Emergency</td>
<td>Mandatory</td>
</tr>
</tbody>
</table>
Basis for Staff Recommendation

- Metropolitan will need to withdraw ~50% of its storage reserves in 2014
- Critical to preserve storage reserves should dry conditions continue through 2015 and beyond
- Continued above average temperatures could influence water use
- 19 member agencies’ ordinances require Water Authority notification to comply with SWRCB emergency regulations
- If supplemental supplies available in 2015 be prepared to consider acquiring
Revised Staff Recommendation

1. Approve notification to the Water Authority member agencies of a **Drought Alert** condition, which under the Model Drought Ordinance includes mandatory water use restrictions; and

2. Declare implementation of **Supply Enhancement Stage** of the San Diego County Water Authority’s Water Shortage and Drought Response Plan.

Staff will monitor improved supplemental supply availability and, pending water supply conditions, will identify potential water transfer opportunities in preparation for 2015.

- Includes assessment of extracting Central Valley groundwater storage reserves
Shortage Allocations 1990-1992: 31% Shortage for 13 months

Stages of MWD’s Interim Interruptible Conservation Program (Shortage Allocation Plan)

Overall Shortage

- Stage 1 Nov. 20, 1990
- Stage 2 Dec. 11, 1990
- Stage 3 Jan. 5, 1991
- Stage 5 Feb. 12, 1991
- Added Stage 6 March 4, 1991
- Stage 5 April 9, 1991
- Stage 1 April 1, 1992
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<tr>
<th></th>
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<tbody>
<tr>
<td>San Marcos Vent</td>
<td></td>
<td></td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Pipeline 3 Relining</td>
<td></td>
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</tr>
<tr>
<td>Twin Oaks Plant Modifications</td>
<td></td>
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<td>✔</td>
</tr>
<tr>
<td>Conveyance Pipeline</td>
<td></td>
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<tr>
<td>Carlsbad Treatment Plant</td>
<td></td>
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<td></td>
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<tr>
<td>System Commissioning</td>
<td></td>
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<td>✔</td>
</tr>
</tbody>
</table>
Relining of Pipeline 3

- All portals complete
- 64% (1,071 liners) of steel liners installed
- Welding over 50% complete
- Continue fabrication and inspection of steel liners
- Project on schedule
TOVWTP Modifications

- Clearwell Upgrades
- New 54-inch Dia. Piping
- Chemical Feed Facilities Upgrades
- TWFCF Upgrades
- New 54-inch Dia. Connection and Valve Vault
- Existing Pipeline 3
54-inch steel pipeline connecting Pipeline 3 to clearwells
Modify Clearwell 1
Modify Clearwell 2
Complete meter vault
Complete chemical feed facilities
Complete isolation valve vault
Installation of ammonia valve
Conveyance Pipeline Progress to Date

- Safety: (207,000 work-hours) Two lost time injuries.
- Design: Over 100% complete
- Amount of pipe installed 23,000 29,500 feet (out of 53,000)
- Current work areas
  - Trench work at Faraday Avenue – Multiple locations (Carlsbad)
  - Trench work at Melrose Avenue (Carlsbad)
  - Tunnel work north on Avenida Encinas (Carlsbad)
  - Macario Tunnel
  - Tunnel on Faraday Ave
  - Work beginning on pipeline interconnect facility
Desalination Plant

Desalination Conveyance Pipeline 10 miles of new 54-inch Pipe

TOVWTP Improvements

Pipeline 3 Relining (27,100 feet)

Pipeline 3 Work

Current Work

Aqueduct Connection Facilities

Current Trench Work on Faraday

Trench /tunnel On Faraday

Progress on Lionshead & Melrose

Current Tunnel Work

Pacific Ocean
Desalination Plant Progress

- Safety: No injuries
- Total working on project: 329
- Amount of concrete poured: 29,400 33,617 Cubic yards (77%) (87.4%)
- Amount of reinforcement steel: 3,164 3,517 tons (81%) (90.6%)
- Amount of conduit/pipe placed: 18,934 28,645 feet (24%) (36%)
- Design is 99% 100% complete
- Overall: 41% 50% complete
- Initiating planning for new intake due to power plant closure
Agreement involves City of Carlsbad, SDG&E, and NRG

Existing power plant ceases operation in 2017
Existing power plant removed by 2020
City of Carlsbad and SDG&E agree to support NRG constructing peaker plant east of RR tracks

New intake must be in place by 2017
Intake Upgrade

- Anticipated under the WPA

- WPA limits Water Authority cost exposure
  - Capital cost ceiling: 21.3M (Indexed)
  - Annual operating cost increase ceiling: $2.66M (Indexed)

- Water Authority has option to finance capital costs or have Poseidon finance them.

- Water Authority and Poseidon to agree on a price.
  - Poseidon must substantiate all costs
Environmental Process/Permitting

- CEQA document
  - Water Authority likely lead agency

- NEPA: To be determined

- Permits
  - RWQCB
  - Army Corps (if necessary)
  - Cal F&W
  - California Coastal Commission
  - State Lands Commission
  - Carlsbad (Land use)
Carlsbad Desalination Project Site
Plant Flow Configuration – Existing Conditions

1. Under the desalination Project's minimum flow requirement of 304 MGD of seawater enters the power plant intake facilities and after screening is pumped through the plant's condensers to the discharge channel.

2. The Carlsbad desalination plant intake structure is connected to the end of this discharge canal and under minimum flow requirements would divert 104 MGD of the 304 MGD of cooling water for production of fresh water.

3. 50 MGD of the diverted cooling seawater would be converted to fresh drinking water via reverse osmosis membrane separation.

4. The remaining 54 MGD would have salinity approximately two times higher than that of the ocean water (65 ppt vs. 33.5 ppt).

5. This seawater concentrate would be returned to the power plant discharge canal downstream of the point of intake for blending with the remaining cooling water prior to conveyance to the Pacific Ocean.

6. The Regional Water Quality Control Board found that the 40 ppt salinity concentration will not violate Ocean Plan acute or chronic toxicity standards. Receiving water salinity concentrations outside the zone of initial dilution (1,000' radius from the end of the discharge canal) will approach ambient conditions, and salinity concentrations within the zone of initial dilution will be 40 ppt or less.

7. The Regional Water Quality Control Board found that the survival or reproduction of marine organisms would not be significantly affected at salinity concentrations of 40 ppt or less. To ensure that marine organisms are not harmed by the desalination plant discharge, the RWQCB issued a discharge permit for the project that limits average day effluent salinity concentrations in the discharge pond to 40 ppt.
Plant Flow Configuration – Following Retirement of Encina Generating Station
Preliminary Intake Upgrade Schedule

June – August 2014:  Concept Design; Initial environmental assessment

Aug. 2014 - July 2016:  Environmental Review/Permitting

July 2016 – June 2017:  Design and Construction
SWRCB Desalination Ocean Plan Amendments

- Draft amendments released on July 3
  - Addresses requirements for desalination intakes and discharges
- Intake Upgrade will be subject to final amendments
- Paths to compliance for projects like Carlsbad provided
  - Open ocean intakes; alternative discharge configurations
  - Regional Board to determine if alternative compliance standards have been met
- Staff is working with Poseidon and CalDesal to develop comments
- Public Workshop scheduled for August 6 and Public Hearing scheduled for August 19
- Report to Water Planning in August on amendments, workshop and hearing
Carlsbad Desalination Conveyance Facilities
“Contract Administration Memoranda”

<table>
<thead>
<tr>
<th>Contract Administration Memoranda Number/Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Credit</strong>: San Marcos Street Improvements not required</td>
<td>($190,000)</td>
</tr>
<tr>
<td>2. <strong>Credit</strong>: Department of Public Health cutoff wall and monitoring wells not required</td>
<td>($125,000)</td>
</tr>
<tr>
<td>3. <strong>Add</strong>: Property for air release and vacuum valve structures</td>
<td>$100,000</td>
</tr>
<tr>
<td>4. <strong>Add</strong>: Costs to permit and develop Macario tunnel design</td>
<td>$185,000</td>
</tr>
<tr>
<td>5. <strong>Administrative</strong>: Schedule of Values</td>
<td>No Cost</td>
</tr>
<tr>
<td>6. <strong>Add</strong>: Carlsbad Valve Vault (Reimbursable)</td>
<td>$29,300</td>
</tr>
<tr>
<td>7. <strong>Add</strong>: Vallecitos 9 Flow Control (Reimbursable)</td>
<td>$219,300</td>
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<tr>
<td>Contract Administration Memoranda Number/Description</td>
<td>Value</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Allowance for pipe thickness, steel etc. to handle pipeline pressure</td>
<td>$10,000,000</td>
</tr>
<tr>
<td>• Steel for mainline</td>
<td>$4,850,000</td>
</tr>
<tr>
<td>• Bends &amp; Elbows &amp; Tunnel (estimated)</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Current Balance</td>
<td>$4,150,000</td>
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</table>
# Carlsbad Desalination Project Budget Summary

<table>
<thead>
<tr>
<th>Task/Activity</th>
<th>Lifetime Budget ($ Millions)</th>
<th>Expended ($ Millions)</th>
<th>% Expended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desalination Plant Water Purchase Agreement</td>
<td>$3.97</td>
<td>$1.38</td>
<td>35%</td>
</tr>
<tr>
<td>Desalination Product Water Conveyance Pipeline</td>
<td>$10.40</td>
<td>$6.13</td>
<td>59%</td>
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<tr>
<td>Pipeline 3 Desalination Relining</td>
<td>$36.46</td>
<td>$15.44</td>
<td>42%</td>
</tr>
<tr>
<td>San Marcos Vent Desalination Modifications</td>
<td>$3.20</td>
<td>$2.52</td>
<td>79%</td>
</tr>
<tr>
<td>Twin Oaks Treatment Plant Modifications</td>
<td>$17.35</td>
<td>$16.25</td>
<td>94%</td>
</tr>
<tr>
<td>Carlsbad MWD New Facilities for Desal</td>
<td>$0.12</td>
<td>$ –</td>
<td></td>
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<tr>
<td>Vallecitos WD New Facilities for Desal</td>
<td>$0.22</td>
<td>$ –</td>
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<tr>
<td>Carlsbad Desalination Project Contingencies</td>
<td>$2.2</td>
<td>$ –</td>
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<tr>
<td>De-appropriated</td>
<td>$6.3</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$80.0</strong></td>
<td><strong>$41.73</strong></td>
<td><strong>52.2 %</strong></td>
</tr>
</tbody>
</table>
Contracts for the Pipelines 3, 4, and 5 Relining at the San Luis Rey River

Engineering & Operations Committee
July 24, 2014
Pipeline Relining
Staff Recommendation

- Authorize the General Manager to award a construction contract to L.H. Woods & Sons, Inc. in the amount of $9,750,000 for Pipelines 3, 4, and 5 Relining at the San Luis Rey River.

- Authorize the General Manager to award a professional services contract to Pure Technologies US, Inc., for a total not-to-exceed amount of $385,100 to perform Acoustic Fiber Optic modifications for the Pipelines 4, and 5.