

# Water Supply Reliability Workshop

November 15, 2013



**Moulton Niguel Water**

Leading the Way in Service

# Agenda

- Review of Water Reliability
- Baker Water Treatment Plant
  - Project Overview
  - Project Agreement
  - Project Cost and Financing
- Long Range Water Resources Plan
  - Water Demand Analysis
  - Reliability Assessment

# District's Priorities for FY 13-14

- Implement Asset Management Plan
- Implement the ERP
- Develop a Multi-Year Financial Plan (Budget)
- Implement the Labor Agreements
- Complete Operations Headquarters Assessment
- Outreach
- Procurement
- Initiate Cost-of-Service and Rates Review
- Recruitment & Staffing
- **Water Reliability**

# What is Water Reliability?

- MNWD definition of water reliability
  - Ability to sustain water deliveries to customers at acceptable service levels
- What is system reliability?
- What is supply reliability?

# MNWD System Reliability

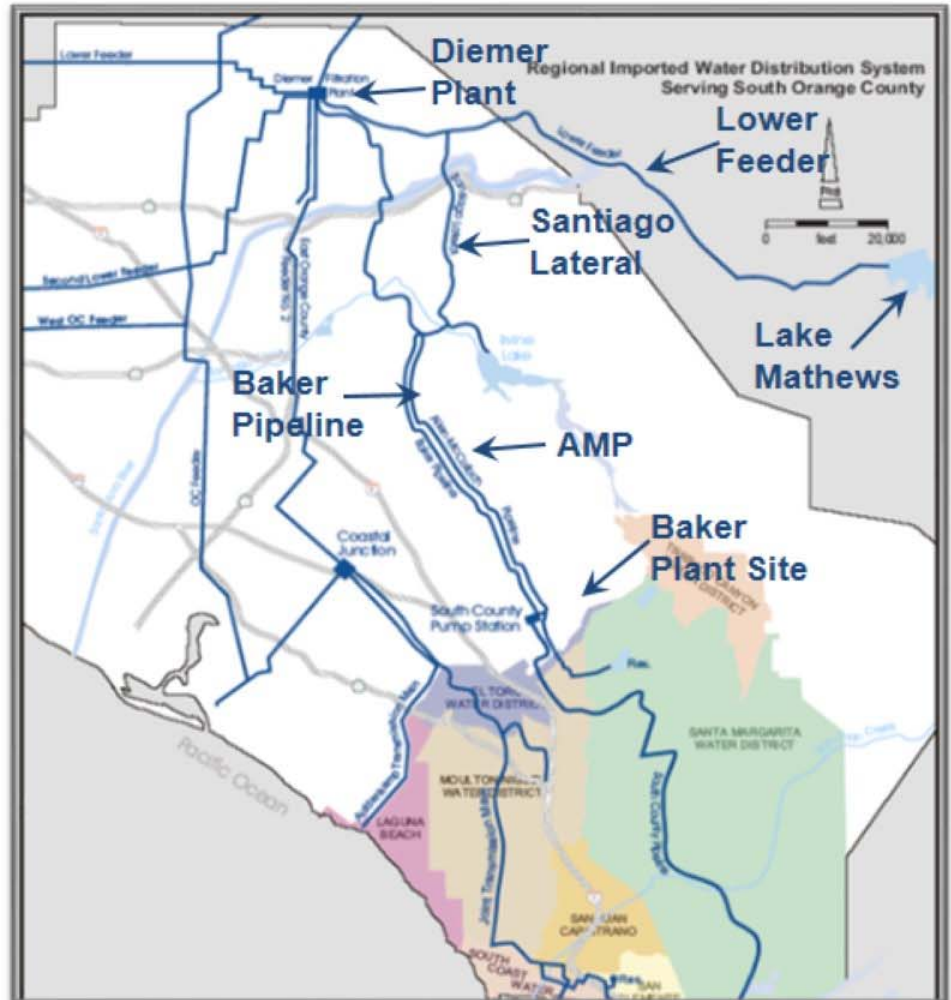
- MNWD Resolution No. 08-38
  - Adopted on November 13, 2008
  - Outlined a Goal for System Reliability
    - “Moulton Niguel Water District intends to develop adequate capacity and supplies through local facilities and regional projects, including both storage and water supply development, to provide at least a **31-day average** annual potable water supply to meet demands throughout the District in the event the MWD supply source to southern Orange County is interrupted on a short term basis as a result of emergency or planned water outages.”

# Baker Water Treatment Plant

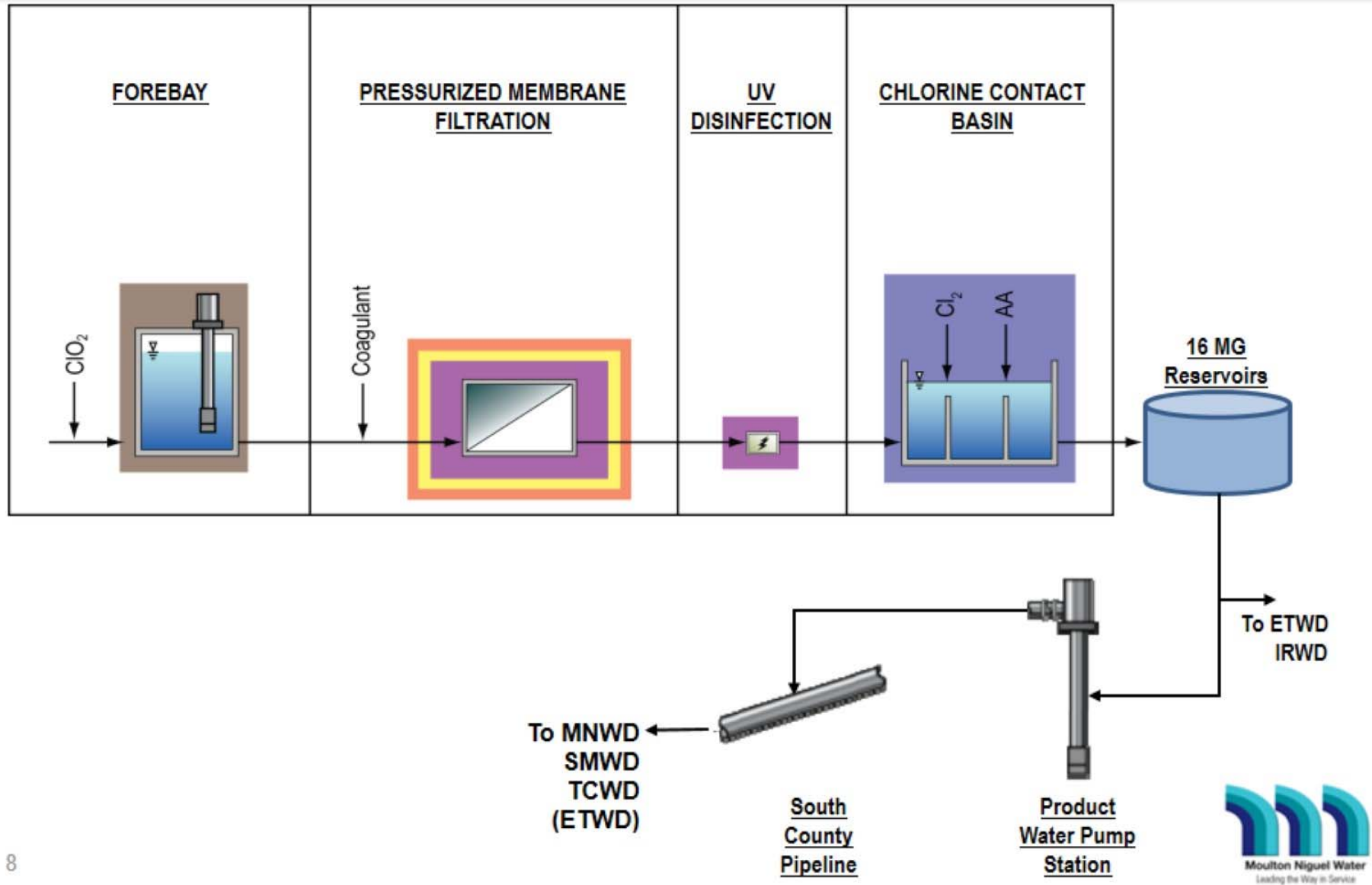


# What Will the Baker Water Treatment Plant Be?

- Improve potable water supply reliability for southern Orange County by constructing a local regional water treatment facility.
- Collaborate with multiple retail water agencies to optimize treatment capacity and conveyance.
- Design facility to treat raw water from three sources, blended or as individual sources.
- Project began in 2006 with a Memorandum of Understanding among the participants

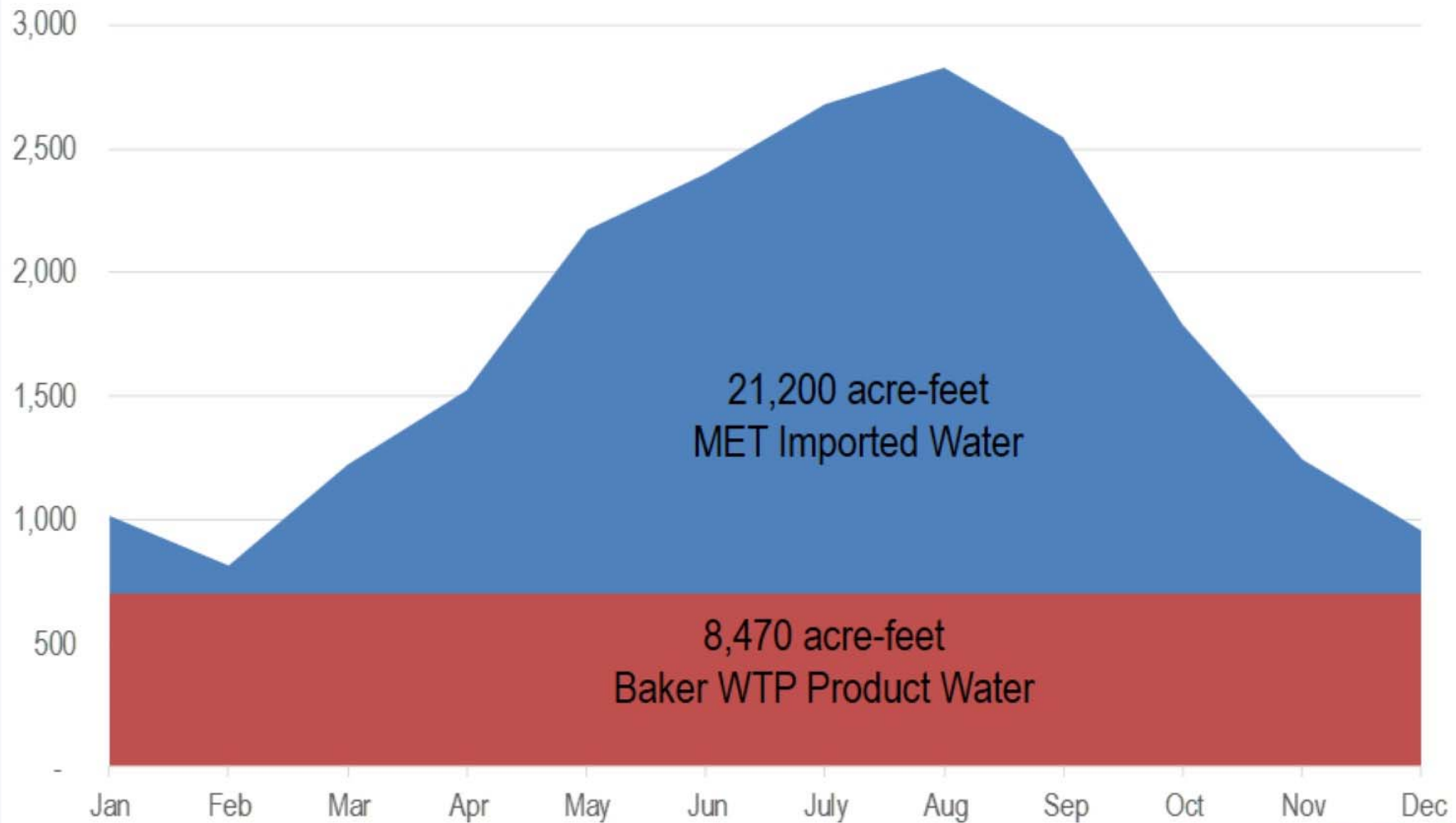


# Advanced Treatment Process





# Typical Monthly Demand



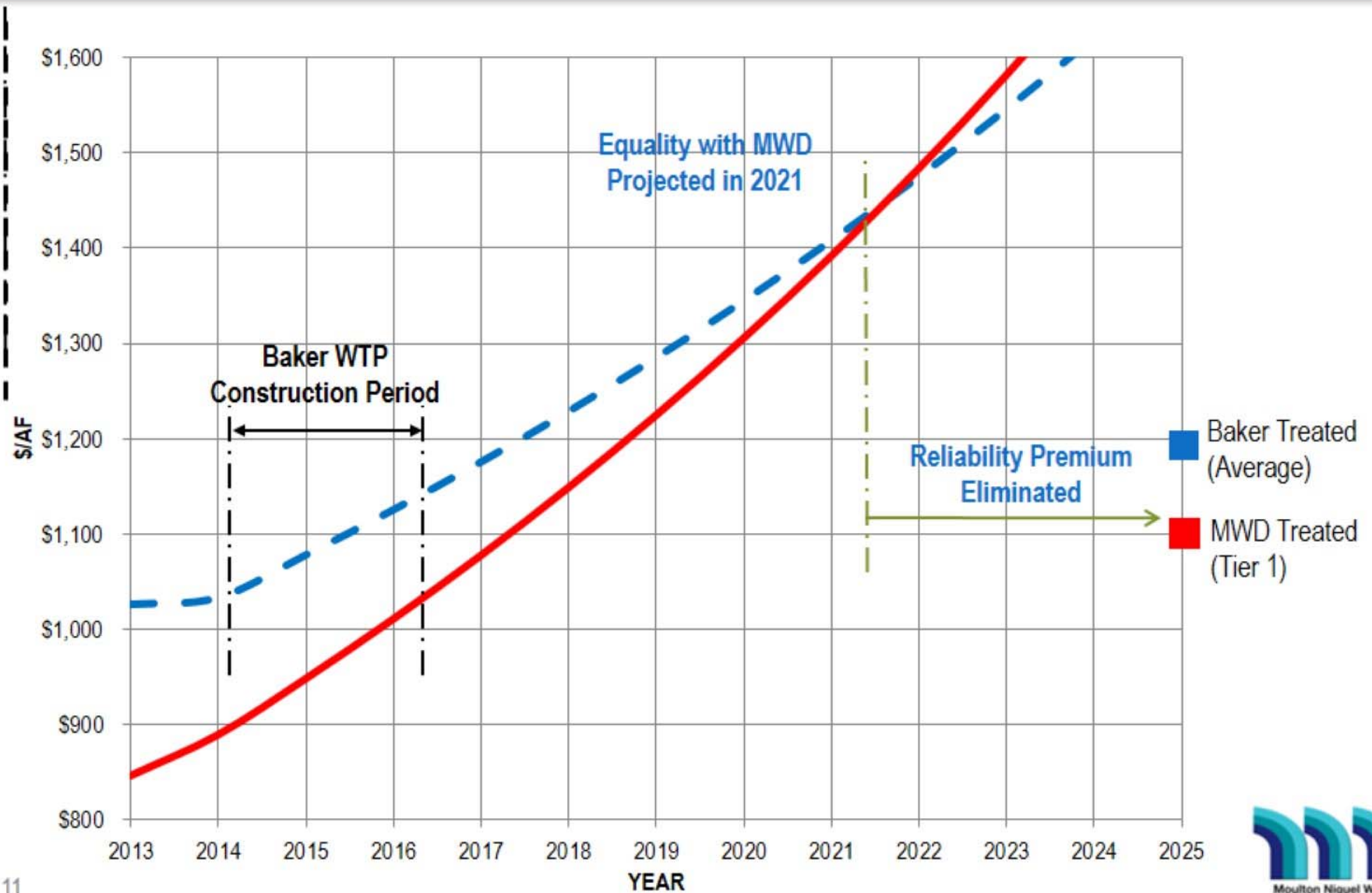
# Project Unit Cost Breakdown

| Baker WTP Component                   | Final Cost                   |
|---------------------------------------|------------------------------|
| Annual Capital Cost                   | \$2,176,048                  |
| Annual O&M Cost                       | \$1,494,336                  |
| <b>Total Annual Cost</b>              | <b>\$3,670,384</b>           |
| Water Delivery from Baker WTP         | 8,471 acre-feet per year     |
| Unit Cost of Treatment (\$/acre-foot) | \$433 per acre-foot          |
| MWDSC Untreated Water Cost            | \$593 per acre-foot          |
| <b>TOTAL Baker WTP Unit Cost (1)</b>  | <b>\$1,026 per acre-foot</b> |
| <b>MWD Tier 1 Water Cost (2014)</b>   | <b>\$890 per acre-foot</b>   |

Footnotes:

(1) Increase of \$27 per acre-foot from July 2013 Board Update

# Project Cost Projection



# Customer Impact

- Increased cost for water purchase in 2016 is \$960,000
  - Assumes escalations from cost projection slides
  - Assumes water demand projections from LRWRP analysis
- With nearly 55,000 customer accounts:
  - Average cost to customer is less than \$1.50 per month
  - Will vary based on actual costs and demands
  - May decrease over time with increasing MET rates
- Benefit to customers:
  - Increases system reliability during a MET outage from 8 days to 15 days under average conditions

# Total Project Cost

| Baker WTP Component             | Total Project Cost   | MNWD Total Cost     |
|---------------------------------|----------------------|---------------------|
| Feasibility Study               | \$605,222            | \$180,871           |
| Design                          | \$6,886,495          | \$2,058,033         |
| Construction Costs (1)          | \$84,991,848         | \$26,276,045        |
| Construction Administration (2) | \$10,133,649         | \$3,028,447         |
| Other Costs (3)                 | \$1,634,000          | \$502,921           |
| Pipeline Capacity               | -NA-                 | \$3,403,683         |
| <b>TOTAL (4)</b>                | <b>\$104,251,214</b> | <b>\$35,450,000</b> |

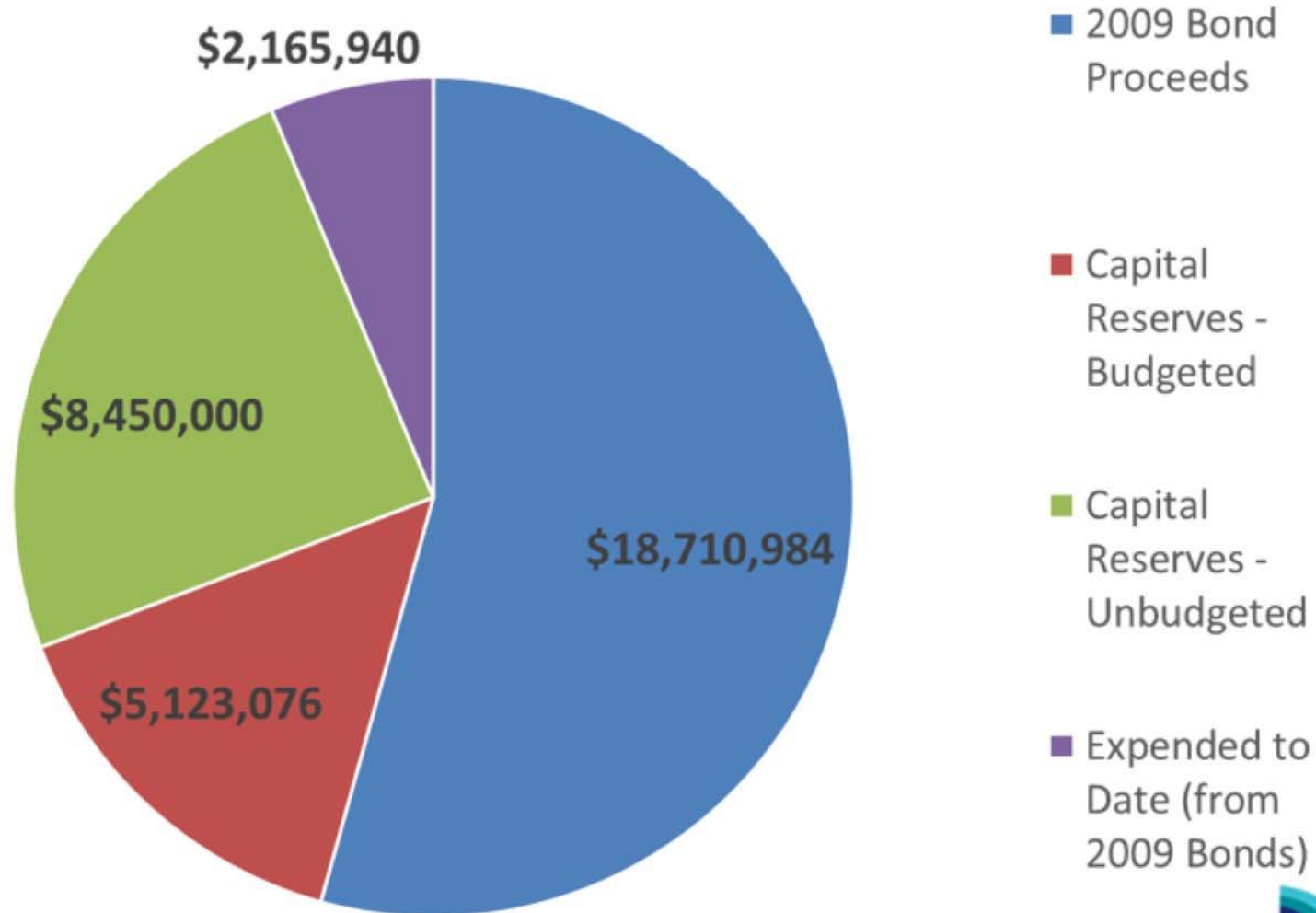
## Footnotes:

- (1) Construction Costs include 3% contingency
- (2) Construction Administration includes 4.75% contingency
- (3) Other costs include the sewer connection fee and the land use cost
- (4) Expended to date for the project is \$2.2 Million

# Project Cost Evolution

|                                | 2009 Prelim.<br>Design Report  | 90% Design<br>(May 2012)  | Final Design<br>(May 2013)   | Final Project<br>Costs   |
|--------------------------------|--|---|--|--|
| MNWD Project<br>Cost           | \$22.1 M   | \$26.0 M  | \$31.8 M   | \$34.5 M   |
| Baker WTP Unit<br>Cost (\$/AF) | \$833  | \$898   | \$999  | \$1,026  |
| MET Treated<br>Water (\$/AF)   | \$712  | \$794   | \$847  | \$890  |
| Project Transition             | Basis for 2009<br>Bond Sale;<br>Increase project<br>capacity to 43.5<br>cfs (MNWD @ 13<br>cfs) | Basis for current<br>budget;<br>Revisions to<br>include product<br>water to SCP and<br>addition of Solids<br>Handling | Updated design<br>cost estimates<br>from Engineer;<br>Increased the<br>estimated CM<br>and inspection<br>costs | Based on bids<br>received for<br>construction, CM,<br>and inspection<br>services |

# Project Financing



# Project Related Agreements

- Baker Water Treatment Plant
  - Original Agreement – Executed Nov. 2008
  - Amendment No. 1 – Executed Nov. 2009
  - Amended and Restated Agreement – Consideration on Nov. 21, 2013
- Baker Pipeline Capacity Transfer Agreement
  - Agreement – Approved Aug. 2013
- ETWD Interconnection Agreement
  - Agreement – Approved Oct. 2013



# Project Oversight

- Project Committee
  - Consists of one representative and alternate from each participating agency
  - Authorizations and approvals of the annual budget and for award of design and construction related contracts; various levels of change orders
  - Voting is weighted based on contractual capacity ownership
  - Meetings called as needed or at least once per year to review annual budgets

# Amended and Restated Agreement

- South County Pipeline, removal of Allen-McColloch Pipeline
- Treatment Facilities and Product Water Facilities
  - Defined - Pages 3 - 4
  - Cost Allocation - Pages 8 – 10
- Additional Items from Original Agreement
  - Sewer Conveyance – Page 11
  - Trabuco Canyon Pump Station – Page 12
- Supply from Irvine Lake – Page 17

# Project Approvals and Support

- Status of Agency Approvals
  - SMWD – 11/20
  - TCWD – 11/20
  - MNWD – 11/21
  - ETWD – 11/26
  - IRWD – 12/16 (Award of contracts)
- Letters of Support
  - Orange County Business Council
  - South Orange County Regional Chamber of Commerce

# Recommendation

- Staff Recommendation is to proceed with project approval
- Approval includes:
  - Resolution No. 13-\_\_
    - Approval of the Project Agreement – Amended and Restated
    - Final Authorization to Proceed with the Project
    - Authorizes the Assistant General Manager to represent the District on the Project Committee
    - Authorizes the Project Committee Representative to approve the bid award
  - Approval of \$35.45 Million Project Expense Authorization
  - Authorization to approve up to 3% in construction contract change orders

# Long Range Water Resources Plan

MNWD's Long Range Water Resources Plan will develop an overall water supply strategy for meeting current and future water demands in a reliable, cost-effective and practical manner. The plan will account for uncertainty, and its strategy will be based on an adaptive management approach that phases in investments when needed.

# Major Project Tasks

1. Forecast Water Demands
2. Develop Scenarios of the Future (e.g., with and without Delta fix, climate change, etc.)
3. Assess Supply and System Reliability Under Scenarios
4. Characterize New Supply Projects
5. Build Portfolios from Supply Projects
6. Evaluate Portfolios (using a decision model)
7. Develop Strategy

# Questions?



**Moulton Niguel Water**

Leading the Way in Service



October 9, 2013

The Honorable Douglas Reinhart  
President, Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 92618

The Honorable Ted Martin  
President, El Toro Water District  
24251 Los Alisos Blvd.  
Lake Forest, CA 92630

The Honorable Larry McKenney  
President, Moulton Niguel Water District  
27500 La Paz Road  
Laguna Niguel, CA 92677

The Honorable Sandra Jacobs  
President, Santa Margarita Water District  
26111 Antonio Parkway  
Rancho Santa Margarita, CA 92688

The Honorable Ed Mandich  
President, Trabuco Canyon Water District  
32003 Dove Canyon Drive  
Trabuco Canyon, CA 92679

**RE: Support for the Baker Pipeline Regional Water Treatment Plant**

Dear Presidents Reinhart, Martin, McKenney, Jacobs, and Mandich:

On behalf of the South Orange County Regional Chamber of Commerce, I am writing to express the Chamber's support of the Baker Pipeline Regional Water Treatment Plant. As you are aware, the development of alternative local water supplies for the citizens of southern Orange County is important to the economic vitality of our community, and to ensuring that an adequate water supply is available to the residents of South Orange County.

As a joint project between the Irvine Ranch Water District (IRWD), El Toro Water District, Moulton Niguel Water District, Santa Margarita Water District and Trabuco Canyon Water District, the Baker Pipeline Regional Water Treatment Plant is a collaborative project designed to improve drinking water supply reliability for southern Orange County by constructing a regional water treatment facility. By coordinating on this project, your five agencies have developed a project to repurpose IRWD's Baker Treatment Plant in order to treat water from Irvine Lake and the Santiago Lateral. When complete the project will produce enough water to serve 63,300 homes within your districts, and will provide an additional source of potable water to the region. The project is an excellent example of water districts working together for the benefit of the region.





Support for the Baker Pipeline Regional Water Treatment Plant  
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Beyond providing an additional source of potable water, the Baker Pipeline Regional Water Treatment Plan is important to South Orange County because it will provide a reliable local potable water supply in the event of an emergency or scheduled maintenance affecting the region's existing delivery system. South Orange County receives the majority of its potable water from the Municipal Water District of Orange County via the Metropolitan Water District's Diemer Filtration Plant and the Allen-McColloch Pipeline. If those facilities were to become impaired, South Orange County's water supply would be at risk. By being able to provide a backup supply during an emergency and allowing for redundancy within the region's water system, the Baker Pipeline Regional Water Treatment Plant greatly enhances both treated water supply and water system reliability in Orange County.

Given South Orange County's need for additional water supply reliability and the collaborative approach your agencies have taken to identify a creative solution to our region's needs, the South Orange County Regional Chamber of Commerce strongly supports the Baker Pipelines Regional Water Treatment Plant project.

Sincerely,

A handwritten signature in black ink, appearing to read "Wendy Bucknum", with a long horizontal flourish extending to the right.

Wendy Bucknum  
Chair

**November 30, 2013**

The Honorable Douglas Reinhart  
President, Irvine Ranch Water District  
15600 Sand Canyon Ave.  
Irvine, CA 92618

**RE: Support for the Baker Pipeline Regional Water Treatment Plant**

Dear President Reinhart:

On behalf of Orange County Business Council (OCBC), **I am writing to express OCBC's support of the Baker Pipeline Regional Water Treatment Plant.** As you are aware, the development of alternative local water supplies for the citizens of southern Orange County is important to the economic vitality of our community and to ensuring that an adequate water supply is available to the residents of South Orange County.

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**ORANGE COUNTY  
BUSINESS COUNCIL**

2 Park Plaza, Suit 100 | Irvine, CA 92614 | P 949.476.2242 | F 949.476.0043 | [www.ocbc.org](http://www.ocbc.org)

Given South Orange County's need for additional water supply reliability and the collaborative approach your agencies have taken to identify a creative solution to our region's needs, **OCBC strongly supports the Baker Pipelines Regional Water Treatment Plant project.** Please feel free to contact me if you have any questions at 949.794.7210 or [bstarr@ocbc.org](mailto:bstarr@ocbc.org).

Sincerely,

A handwritten signature in black ink, appearing to read "Bryan Starr".

Bryan Starr  
Senior Vice President Government Affairs

cc: Paul Cook, General Manager